

ELECTRICAL SYSTEM FOR TREATMENT OF A SUBJECT

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority under 35 U.S.C. § 119(e) to U.S. Provisional Patent Application Serial No. 62/923,908, filed on October 21, 2019 and U.S. Provisional Patent Application Serial No. 62/934,212, filed on November 12, 2019, and which are hereby incorporated by reference in their entirety.

FIELD OF INVENTION

[0002] This invention relates to systems and methods for treatment of a subject using low energy high frequency radiation. The electronic system and programmed control thereof has therapeutic application for influencing cellular functions (or malfunctions), including directly or indirectly influencing cancerous cell growth or proliferation thereof in warm-blooded mammalian subjects. The device and method of the invention provide treatments of different cancer types by the application to the patient of electromagnetic fields that are amplitude-modulated at particular and cancer-specific frequencies.

BACKGROUND OF INVENTION

[0003] Reference is made to European Patent EP 0 592 851 B1 and corresponding patents and patent applications and to the various publications referred to therein, related to effects of very low energy electromagnetic fields on subjects. A number of further publications related to effects of very low energy electromagnetic fields on patients suffering from insomnia and/or anxiety disorders have taken place and are as follows:

- Koziol, J. A., Erman, M., Pasche B., Hajdukovic R., Mitler, M. M., (1993), "Assessing a changepoint in a sequence of repeated measurements with application to a low-energy emission therapy sleep study". *J. Applied Statistics* 20: 393-400;
- Amato, D., Pasche, B., (1993), "An evaluation of the safety of low energy emission therapy". *Compr Ther* 19: 242-247;
- Higgs, L., Reite, M., Barbault, A., Lebet, J. P., Rossel, C., Amato, D., Dafni, U., Pasche. B., (1994), "Subjective and Objective Relaxation Effects of Low Energy Emission Therapy". *Stress Medicine* 10: 5-13;

- Reite, M., Higgs, L., Lebet, J. P., Barbault, A., Rossel, C., Kuster, N., Dafni, U., Amato, D., Pasche, B., (1994), "Sleep Inducing Effect of Low Energy Emission Therapy". *Bioelectromagnetics* 15: 67-75.
- Lebet, J. P., Barbault, A., Rossel, C., Tomic, Z., Reite, M., Higgs, L., Dafni, U., Amato, D., Pasche, B., (1996), "Electroencephalographic changes following low energy emission therapy". *Ann Biomed Eng* 24: 424-429;
- Pasche, B., Erman, M., Hayduk, R., Mitler, M., Reite, M., Higgs, L., Dafni, U., Amato, D., Rossel, C., Kuster, N., Barbault, A., Lebet, J. P., (1996), "Effects of Low Energy Emission Therapy in chronic psychophysiological insomnia". *Sleep* 19: 327-336;
- Kelly, T. L., Kripke, D. F., Hayduk, R., Ryman, D., Pasche, B., Barbault, A., (1997), "Bright light and LEET effects on circadian rhythms, sleep and cognitive performance". *Stress Medicine* 13: 251-258; and
- Pasche, B., Barbault, A., (2003), "Low-Energy Emission Therapy Current Status and Future Directions. In *Bioelectromagnetic Medicine*", Rosch, P. J., Markov, M. S. (eds.), pages 321-327, Marcel Dekker, Inc.: New York, N.Y.

[0004] The above publications are related to an earlier device, system and use thereof described in said EP 0 592 851 B1.

[0005] Electromagnetic energy generating devices and use of electromagnetic energies for treating living mammalian subjects harboring cancerous cells described in the literature include: U.S. Pat. No. 5,908,441 issued Jun. 1, 1999 to James E. Bare and the references cited therein and so-called "NovoCure technology" involving in vivo implantation of electrodes to either side of tumorous growths. The method of this patent is invasive as it involves implantation of electrodes into the patient. This may also render the method unsuitable for treatment of some tumor types. This patent does not contemplate very low energy emissions of electromagnetic energy involving amplitude-modulated high frequency carrier signals as required in terms of the present invention.

[0006] U.S. Pat. No. 5,690,692 issued Nov. 25, 1997 entitled "Bio-Active Frequency Generator and Method" describes a programmable control which instructs a frequency synthesizer to enable generation of an electrical current at a specific precise frequency signal or at a series of specific precise frequency signals having a square wave form to within an accuracy of 0.001 Hz. This patent contemplates amplifying the voltage of the generated signals and applying the signals to a subject at the specific precise frequency or sequentially at the series of specific precise frequencies by means of electrodes held by or otherwise connected to the subject (which may be a mammal or a food). This patent also does not contemplate very low energy emissions of electromagnetic

energy involving amplitude-modulated high frequency carrier signals as required in terms of the present invention.

[0007] U.S. Pat. No. 8,977,365 issued March 10, 2015 entitled “Electronic System For Influencing Cellular Functions In A Warm-Blooded Mammalian Subject” describes an electronic system activatable by electrical power is useful for influencing cellular functions or malfunctions in a warm-blooded mammalian subject. The system includes one or more controllable low energy HF (High Frequency) carrier signal generator circuits, one or more data processors for receiving control information, one or more amplitude modulation control generators and one or more amplitude modulation frequency control generators. The amplitude modulation frequency control generators are adapted to accurately control the frequency of the amplitude modulations to within an accuracy of at least 1000 ppm, most preferably to within about 1 ppm, relative to one or more determined or predetermined reference amplitude modulation frequencies. While the improved electronic system and programmed control thereof in accordance with U.S. Pat. No. 8,977,365, were shown to directly or indirectly influence cancerous cell growth or proliferation thereof in warm-blooded mammalian subjects, this patent utilized an analog synthesizer for generating a carrier signal and lead to a classy output signal.

[0008] The device and method of the instant invention is generally non-invasive, without the need of implanted electrodes. The method and device provided herein applies very low energy emissions of electromagnetic energy with precisely determined amplitude-modulated frequencies to a patient, particularly for the treatment of cancer.

[0009] There is a great need for improved cancer therapies to expand the treatment options for cancer. The need is particularly acute for the treatment of cancers that are difficult to treat or are resistant to treatment, such as refractory cancers, cancers in which other treatment options have lost effectiveness, and metastasized cancers and particularly in metastasis to the bone and brain. The systems and methods of the current disclosure provide treatments of cancer which fulfill these and other needs as discussed in detail below.

SUMMARY OF THE INVENTION

[0010] The systems and methods of the current disclosure are directed to the treatment of different types of cancer by application of low energy emission therapy. Such systems and methods have been determined to find therapeutic application not only for influencing cellular functions (or

malfunctions) leading to central nervous system (CNS) disorders, but more particularly for influencing other cellular functions (or malfunctions), including directly or indirectly influencing cancerous cell growth or proliferation thereof in warm-blooded mammalian subjects. The direct or indirect influence on cancerous cell growth may involve, but is not necessarily limited to, any of prophylactic avoidance of cancerous cell formation, influencing of cell functions such as for example influencing leukocyte cell functions which can lead to inhibition of cancerous cell growth or proliferation thereof, and/or killing of cancerous cells harbored by a warm-blooded mammalian subject.

[0011] In one aspect, the invention provides an apparatus for treating a subject suffering from cancer, the apparatus comprising (i) a conductive applicator configured to apply to the subject low energy high frequency radiation, wherein the low energy high frequency radiation comprises one or more amplitude-modulated output signals; and (ii) a frequency synthesizer coupled to the conductive applicator and configured to generate the one or more amplitude-modulated output signals by generating a carrier frequency signal having a carrier frequency from about 1 KHz to 5000 MHz; and one or more amplitude modulation frequency signals having amplitude modulation frequencies from about 0.1 Hz to about 150,000 Hz, wherein the amplitude modulation frequencies are selected to be cancer-specific frequencies.

[0012] The frequency synthesizer may be a digital frequency synthesizer comprising (i) a digital carrier frequency synthesizer configured to output the carrier frequency signal; (ii) a digital modulation frequency synthesizer configured to output the one or more amplitude modulation frequency signals; (iii) an arithmetic logic unit (ALU) configured to numerically compute one or more digital modulated signals from the carrier frequency signal and a modulation frequency digital signal in real-time; and (iv) a digital to analog converter (DAC) configured to convert the one or more digital modulated signals to the one or more amplitude-modulated output signals.

[0013] In another aspect, the invention, provides a method of treating a subject suffering from cancer, the method comprising exposing the subject to low energy high frequency radiation, wherein the low energy high frequency radiation comprises one or more amplitude-modulated output signals, wherein the one or more amplitude-modulated output signal(s) have a carrier frequency from about 1 KHz to 5000 MHz; and have amplitude modulation frequencies from about 0.1 Hz to about 150,000 Hz, and wherein the amplitude modulation frequencies are selected to be cancer-specific frequencies; and wherein the subject is treated with one or more, or 10 or more, 15

or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more of cancer-specific amplitude modulation frequencies disclosed herein.

[0014] In another aspect, the devices and methods disclosed herein use a specific absorption rate (SAR) of the low energy high frequency radiation absorbed by the patient that is from about 1 microWatt per kilogram of tissue to about 50 Watts per kilogram of tissue, is from about 100 microWatts per kilogram of tissue to about 10 Watts per kilogram of tissue, or is from about 0.02 milliWatt per kilogram of tissue to about 400 milliWatts per kilogram of tissue. The low energy high frequency radiation may be applied to the subject undergoing treatment via an electrically conductive probe, which may be configured for contact with a mucosa of the subject or with the skin of the subject.

[0015] In another aspect the frequency synthesizer is a digital frequency synthesizer comprising a digital carrier frequency synthesizer configured to output the carrier frequency signal; a digital modulation frequency synthesizer configured to output the one or more amplitude modulation frequency signals; an arithmetic logic unit (ALU) configured to numerically compute one or more digital modulated signals from the carrier frequency signal and a modulation frequency digital signal in real-time; and a digital to analog converter (DAC) configured to convert the one or more digital modulated signals to the one or more amplitude-modulated output signals.

[0016] The methods and devices disclosed herein may be used for the treatment of a wide variety of cancers, including breast cancer, neuroendocrine tumors, non-Hodgkin lymphoma, adenocarcinoma, head and neck cancer, gastric cancer, glioblastoma, squamous cell carcinoma, hepatocellular carcinoma, cholangiocarcinoma, mesothelioma, thyroid cancer, prostate cancer, rhabdomyosarcoma, lung cancer, kidney cancer, ovarian cancer, bladder cancer, leiomyosarcoma, myeloma, lymphoma, leukemia, chronic lymphoid cancer, brain cancer, and colorectal cancer.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017] FIG. 1 shows an example system for application of a low energy electromagnetic radiation to a subject.

[0018] FIG. 2 illustrates a block diagram of an example emission device for application of a low energy electromagnetic radiation to a subject.

[0019] FIG. 3 illustrates a block diagram of an example digital frequency synthesizer of the emission device of FIG. 2.

[0020] FIG. 4 illustrates a block diagram of a controller of the emission device of FIG. 2.

[0021] FIG. 5 illustrates an example amplitude-modulated output signal.

[0022] FIG. 6 illustrates a block diagram of internal hardware included in any of the electronic components of the emission device of FIG. 2.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0023] As used in this document, the singular forms “a,” “an,” and “the” include plural references unless the context clearly dictates otherwise. Unless defined otherwise, all technical and scientific terms used herein have the same meanings as commonly understood by one of ordinary skill in the art. As used in this document, the term “comprising” (or “comprises”) means “including (or includes), but not limited to.” When used in this document, the term “exemplary” is intended to mean “by way of example” and is not intended to indicate that a particular exemplary item is preferred or required.

[0024] In this document, when terms such “first” and “second” are used to modify a noun or phrase, such use is simply intended to distinguish one item from another, and is not intended to require a sequential order unless specifically stated. The term “about” when used in connection with a numeric value, is intended to include values that are close to, but not exactly, the number. For example, in some embodiments, the term “about” may include values that are within +/- 10 percent of the value.

[0025] The present disclosure relates generally to a method and apparatus for using low energy emission therapy, which involves application of low energy radio frequency (RF) electromagnetic fields to a warm-blooded mammalian subject for the treatment of various forms of cancer, using particular frequencies of radio frequency (RF) radiation. The disclosures of EP 0 592 851 B1 and U.S. Pat. No. 8,977,365 (“the ‘365 patent”) are incorporated herein in entirety by reference.

[0026] Terminology that is relevant to this document includes:

[0027] An “electronic device” or a “computing device” refers to a device or system that includes a processor and memory. Each device may have its own processor and/or memory, or the processor and/or memory may be shared with other devices as in a virtual machine or container arrangement. The memory will contain or receive programming instructions that, when executed by the

processor, cause the electronic device to perform one or more operations according to the programming instructions. Examples of electronic devices include personal computers, servers, mainframes, virtual machines, containers, gaming systems, televisions, digital home assistants and mobile electronic devices such as smartphones, fitness tracking devices, and wearable virtual reality devices. Electronic devices also may include Internet-connected wearables such as smart watches, smart clothing and smart eyewear. Electronic devices also may be embedded in products that are designed to be used by a human during treatment, such as a spoon shaped probe, and may be connected to a subject by any means that provides an adequate transmission of the frequencies to the subject, including but not limited to devices in direct contact with a mucosa of a subject such as a spoon shaped or other shaped probe, devices in contact with the subject's skin such as a band or patch or a means to transmit the frequencies without direct contact with the subject. In a client-server arrangement, the client device and the server are electronic devices, in which the server contains instructions and/or data that the client device accesses via one or more communications links in one or more communications networks. In a virtual machine arrangement, a server may be an electronic device, and each virtual machine or container also may be considered an electronic device. In the discussion below, a client device, server device, virtual machine or container may be referred to simply as a "device" for brevity. Additional elements that may be included in electronic devices will be discussed below in the context of FIG. 6.

[0028] The terms "processor" and "processing device" refer to a hardware component of an electronic device that is configured to execute programming instructions. Except where specifically stated otherwise, the singular terms "processor" and "processing device" are intended to include both single-processing device embodiments and embodiments in which multiple processing devices together or collectively perform a process.

[0029] The terms "memory," "memory device," "data store," "data storage facility" and the like each refer to a non-transitory device on which computer-readable data, programming instructions or both are stored. Except where specifically stated otherwise, the terms "memory," "memory device," "data store," "data storage facility" and the like are intended to include single device embodiments, embodiments in which multiple memory devices together or collectively store a set of data or instructions, as well as individual sectors within such devices.

[0030] As used herein, the term "treat", "treating" or "stimulating" refers to any process, action, application, therapy, or the like, wherein a subject (or patient), including a human being, is

provided medical aid with the object of improving the subject's condition, directly or indirectly, or slowing the progression of a condition or disorder in the subject, or ameliorating at least one symptom of the disease or disorder under treatment.

[0031] The term "patient" or "subject", as used herein, refers to any animal, preferably a mammal, and more preferably a human, and includes, but is not limited to, domestic and farm animals, primates, and humans, for example, human beings, non-human primates, cows, horses, pigs, sheep, goats, dogs, cats, or rodents like rats and mice.

[0032] The device and method of the invention provide treatments of disease states in a patient, and particularly of cancer types, by the application to the patient of particular and disease-specific low energy high frequency radiation. The device uses a high precision frequency synthesizer to generate radio frequency EMF that is amplitude-modulated at identified tumor-specific frequencies for application to the patient during therapy.

[0033] The system of the current disclosure is employed to influence cellular functions or malfunctions in a warm-blooded mammalian subject. The system comprises one or more controllable low energy electromagnetic energy generator circuits for generating one or more radio frequency output signals. One or more controller circuits comprising or communicating with the one or more generator circuits are provided, which are also for receiving control information from a source of programmed control information. The one or more generator circuits may include a programmable field-programmable gate array (FPGA) configured for digital synthesis of a complete modulated digital signal using one or more direct digital synthesizers (DDS). FPGA generates the modulated digital signal by numerical computation based on a carrier frequency digital signal and a modulation frequency digital signal. The complete modulated digital signal generated by the FPGA is, in terms of an important improvement of the present invention, preferably adapted to accurately control the frequency of the amplitude modulations to within an accuracy of 1 part per 10,000, more preferably within an accuracy of 1 part per 100,000 and most preferably within an accuracy of 1 parts per million (ppm), with a long term stability of ± 5.3 ppm, relative to one or more determined or predetermined reference amplitude modulation frequencies selected from within a range of 0.1 Hz to 150,000 Hz, more preferably within 100 Hz to 99,000 Hz. The FPGA synthesis of complete modulated digital signal also allows for other types of modulation and combination of different modulation frequencies simultaneously. Moreover, such a digital synthesis also allows the resolution to be independent of the actual

modulation frequency. The complete modulated digital signal may be converted to an analog RF output signal using a suitable digital to analog (DAC) converter. The system furthermore comprises a connection or coupling position for connection or coupling to or being connected or coupled to an electrically conductive applicator for applying to the warm-blooded mammalian subject the one or more amplitude-modulated low energy emissions at said accurately controlled modulation frequencies.

[0034] While the current disclosure describes the use of modulated digital signals, analog form and analog modulation signals may also be used, as described in the '365 patent.

[0035] As used herein, the term, "accurately controlled" means that the modulated low energy electromagnetic emissions preferably should be modulated to within a resolution of at most about 0.1 Hz, more preferably, about 0.05 Hz, most preferably about 3 to about 5 milli Hz (0.003-0.005 Hz) of intended determined or predetermined modulation frequencies. For example, if one of the one or more determined or predetermined modulation frequencies to be applied to the warm-blooded mammalian subject is about 2000 Hz, the accurate control should lead to such modulated low energy emission being generated at a frequency of between about 1999.995 – 1999.997 and about 2000.003 – 2000.005 Hz.

[0036] Of importance is the condition for emissions to be at a very low and safe energy level and result in low levels of absorption. The reason believed to be that physiological exchanges or flow of electrical impulses within warm-blooded animals (which are to be affected by application of the emissions of the present invention) are similarly at very low energy levels. In any event, in the region (at or near to the position of contact or close-by induction of the electrically conductive applicator with a subject receiving treatment), the specific absorption rate (SAR) should be between about 0.02 and about 400 milliW/kg.

[0037] Furthermore of importance to achieve the intended biological therapeutic effect is that the stability of the emissions be maintained during emission, and that such stability should preferably be at least about 10^{-5} , more preferably at least about 10^{-6} , and most preferably at least about 10^{-7} , stability being determined as the relative deviation of frequency divided by the desired frequency, e.g., $0.01 \text{ Hz (deviation)} / 1,000 \text{ Hz (desired freq.)} = 10^{-5}$.

[0038] Referring now to FIG. 1, a system **100** for treatment of cancer in a subject may include an emission device **101** in communication with a subject **110**. The emission device **101** may be configured to provide a modulated RF electromagnetic radiation (hereinafter "output signal") at

desired frequencies to the subject **110** via a probe **102**. In certain embodiments, the output signal has various control parameters such as, without limitation, duration of a session, sequence of applied frequencies in a session, and duration of each applied frequency. The applied frequencies and their corresponding duration may be determined based on the type of tumor being treated. Specifically, the selection of such output signals is based on output signals predetermined to provide beneficial therapeutic effects in multiple subjects or patients pre-diagnosed with an identified poor health condition. The above-mentioned output signals may be provided by the emission device **101** adapted to generate EMF output signals at certain predetermined modulation frequencies. Different types of modulation may be used such as, without limitation, amplitude modulation, frequency modulation, and phase modulation. Preferably, the output signals are generated at tumor-specific amplitude modulation (AM) frequencies.

[0039] In certain embodiments, the probe **102** may be an electrically conductive applicator for applying one or more electromagnetic emissions to the warm-blooded mammalian subject via, for example, a conductive, inductive, capacitive, radiated coupling, or combinations thereof. One form of applicator may comprise an electrically conductive probe, for example, a mouthpiece which is inserted into the mouth of a subject undergoing treatment. The probe may be adapted for application to any mucosa of the subject (such as by being located within oral, nasal, optical, urethral, anal, and/or vaginal cavities or surfaces), adapted for physical contact with the skin of the patient (e.g., an insulated probe in contact with the ears, head, neck, etc. of a subject), or any other means.

[0040] In other embodiments, the EMF output signals are applied to the subject through an antenna which is not in direct physical contact with the subject. In such embodiments, the subject may be in a chamber exposed to the EMF output signals or the subject may be kept in proximity to the broadcasting antenna for the EMF output signals during the duration of the treatment(s).

[0041] The probe **102** may be connected to the emission device **101** through, for example, a coaxial cable **104**.

[0042] Referring now to FIG. 2, a block diagram illustrating an example emission device **101** is shown. As shown in FIG. 2, the emission device **101** includes a controller **201**, a memory **202**, an oscillator **203**, a digital frequency synthesizer **204**, a digital-to-analog (DAC) converter **205**, an amplifier **206**, a filter **207**, a directional coupler **208**, impedance transformer **209**, a power source

210, and a communications interface **211**. Optionally, the emission device **101** may also include a display **212**, a user interface **213**, and other output component(s) **214** (e.g., LEDs, speaker, etc.).

[0043] In certain embodiments, the controller **201** may operate as a controller for the emission device **101** to control one or more operations of one or more components of the emission device **101**. The controller **201** may be communicatively coupled to various components of the emission device **101** via, for example, an address bus, a data bus, and input/output lines, or the like (not shown here). The timing for the controller **201** may be provided by a system clock (not shown here) that runs at any suitable clock frequency for the type of processor. In general, controller **201** is configured to control one or more operations of one or more components of the emission device **101** to produce a desired form of modulated low energy electromagnetic emission for application to a subject through probe **102**.

[0044] The level of power applied is preferably controlled by the controller **201** to cause the specific absorption rate (SAR) of energy absorbed by the patient to be from about 1 microWatt per kilogram of tissue to about 50 Watts per kilogram of tissue. Preferably, the power level is controlled to cause an SAR of from about 100 microWatts per kilogram of tissue to about 10 Watts per kilogram of tissue. Most preferably, the power level is controlled to cause an SAR of from about 0.02 milliWatt per kilogram of tissue to about 400 milliWatts per kilogram of tissue. These SARs may be in any tissue of the patient.

[0045] The frequencies of electromagnetic radiation may be tumor-specific and are described below in more detail.

[0046] Referring now to **FIG. 4**, a typical controller **400** is shown with a processor **402**, Random Access Memory (RAM) **403**, nonvolatile memory **404**, device specific circuits **401**, and input output (I/O) interface **405**. Alternatively, the RAM **403** and/or nonvolatile memory **404** may be contained in the processor **402** as could the device specific circuits **401** and I/O interface **405**. The processor **402** may comprise, for example, an off-the-shelf microprocessor, custom processor, Field Programmable Gate Array (FPGA), Application Specific Integrated Circuit (ASIC), discrete logic, etc. The RAM **403** is typically used to hold variable data, stack data, executable instructions, etc.

[0047] According to various approaches, the nonvolatile memory **404** may comprise any type of nonvolatile memory such as, but not limited to, Electrically Erasable Programmable Read Only Memory (EEPROM), flash Programmable Read Only Memory (PROM), battery backup RAM,

hard disk drives, etc. However, the nonvolatile memory **404** is typically used to hold the executable firmware and any nonvolatile data containing programming instructions that can be executed to cause the processor **402** to perform certain functions.

[0048] In some embodiments, the I/O interface **405** may include a communication interface that allows the processor **402** to communicate with devices external to the controller. Examples of the communication interface may comprise, but are not limited to, serial interfaces such as RS-232, USB (Universal Serial Bus), Small Computer Systems Interface (SCSI), Ethernet, RS-422 or a wireless communication interface such as Wi-Fi, Bluetooth, near-field communication (NFC) or other wireless interfaces. The controller **400** may communicate with an external device via the communication interface **405** in any communication protocols such as Automation/Drive Interface (ADI).

[0049] According to various approaches described and/or suggested herein, a controller may have a single processor or controller, or it may include multiple processors or controllers, or multiple cores in a processor chip.

[0050] The memory **202** may be any storage device capable of storing information for later retrieval, and may be configured to store data for the operation of the emission device **101**. For example, memory **202** may be a magnetic media based storage device (such as a card, tape, disk, or drum), a semiconductor memory-based storage device (such as an erasable programmable read only memory (EPROM), an electrical erasable programmable read only memory (EEPROM) or a non-volatile random access memory (RAM)), a mechanical information storage device (such as a punched card, cam, or the like), and/or an optical storage device (such as a compact disk read only memory (CD ROM)).

[0051] The memory **202** may include control information that specifies various controllable parameters (to be used by the controller **201**) of the modulated low energy radiation to be applied to a subject through probe **102**. Such controllable parameters include, for example, but are not necessarily limited to, the frequency and amplitude of the output signal, the duration of the emission, the power level of the emission, the duty cycle of the emission (i.e., the ratio of on time to off time of pulsed emissions applied during a treatment), the sequence of application of different modulation frequencies for a particular application, and the total number of treatments and duration of each treatment prescribed for a particular subject, and combinations thereof.

[0052] For example, FIG. 5 illustrates an example amplitude-modulated output signal that may be applied to a subject in a sequence of application of different modulation frequencies, ranging from the lowest frequency to the highest frequency, with each modulation frequency applied for a predetermined time duration. As discussed above, while the current disclosure describes the use of digital signals (carrier frequency signal and/or modulation frequency signal), use of analog signals for generating the modulation frequencies of this disclosure are within the scope of this disclosure. Methods and systems for generation of analog signals is described in the '365 patent.

[0053] In certain embodiments, the carrier frequency digital signal and the modulation frequency digital signal (described below) may be selected to drive the probe **102** with an amplitude-modulated output signal. The carrier frequency digital signal may be from about 1 KHz to 5000 MHz, or from about 0.1 - 1000 MHz, or from about 1-500 MHz, or from about 1-100 MHz, or from about 5-50 MHz, or from about 10 MHz to about 40 MHz, or from about 15 MHz to about 30 MHz, or any other frequency that is capable of leveraging a subject's body as an antenna (e.g., 27 MHz). The one or more modulation frequencies may be simultaneously emitted or sequenced to form the modulation signal. The modulation frequency digital signal may be about 0.1 Hz to 150,000 Hz, more preferably within 100 Hz to 99,000 Hz, and may be determined and selected based on the type of disease state or cancer to be treated (as described below).

[0054] In certain embodiments, the memory **202** may also store event data, user information (e.g., authentication data, medical information, etc.), troubleshooting instructions, or the like, corresponding to the emission device **101**. Examples of event data may include, without limitation, error logs, use history and associated data, treatment information, battery information, etc. Such event data may be used to monitor patient compliance, detect problems with the functions and the handling of the device, or the like. The information or data stored in the memory **202** may be retrieved using the communications interface **211** directly and/or indirectly (e.g., via a docking station for charging the emission device **101**). Such information may then be used by a physician or other clinician to assess patient treatment compliance and effect. Treatment information may include, for example: the number of treatments applied for a given time period; the actual time and date of each treatment; the number of attempted treatments; the treatment compliance (i.e., whether the probe was in place or not in place during the treatment session); and the cumulative dose of a particular modulation frequency.

[0055] The digital frequency synthesizer **204** may be a programmable logic device (PLD) such as a field programmable gate array (FPGA), and may be configured to provide digital synthesis of a complete modulated output signal. Those skilled in the art will appreciate that the digital synthesis implementations could be comparably used when implemented on other PLDs. FIG. 3 illustrates a block diagram of an example digital frequency synthesizer **204**.

[0056] As shown in FIG. 3, the digital frequency synthesizer **204** may include a carrier frequency direct digital synthesizer (DDS) **301**, a modulation frequency DDS **302**, one or more control registers **303**, a phase-locked loop (PLL) frequency multiplier **304**, and an arithmetic logic unit (ALU) **305**.

[0057] Direct digital synthesis (DDS) is an increasingly popular technique for the generation of radio frequency (RF) signals due to its high performance and low cost. A DDS creates RF signals by using a reference clock supplied from an external source and data programmed into registers of the DDS. The DDS uses the reference clock to create an internal system clock as a multiple of the reference clock. The DDS uses the system clock to read the data programmed into the registers to create a digital signal output. The DDS also generates a synchronization clock to be used by external hardware to synchronize external hardware with the internal system clock of the DDS. The carrier frequency DDS **301** and the modulation frequency DDS **302** may include a core architecture consisting of a phase accumulator, which uses the data programmed into control registers **303** to set the output frequency and phase offset, and a phase to amplitude sine or cosine lookup table at the output eliminates high frequency sampling images to output a pure sine wave digital signal. In certain embodiments, carrier frequency DDS **301** may be an M-bit DDS (e.g., a 32-bit sinus DDS), and the modulation frequency DDS **302** may be an N-bit DDS (e.g., a 32-bit sinus DDS). Digital signal forms that have been successfully employed include square wave forms, sinusoidal wave forms, rectified sinusoidal, triangular, or other wave forms and/or combinations thereof.

[0058] The control registers **303** may receive data and/or instructions for setting the output frequency and phase offset of the output digital signals from the controller **201**.

[0059] The carrier frequency DDS **301** may generate an M-bit carrier frequency digital signal, and the modulation frequency DDS **302** may generate an N-bit modulation frequency digital signal. The N-bit modulation frequency digital signal may be modified to control the modulation factor of the modulation frequency digital signal before being input into the ALU **305**. In an

embodiment, the ALU **305** may numerically compute a modulated digital output signal from the carrier frequency digital signal and the modulation frequency digital signal in real-time. For example, the digital frequency synthesizer **204** may output a K-bit (e.g., 12-bit) parallel modulated digital output signal. It should be noted the ALU **305** may be configured to numerically compute a digital output signal for providing amplitude modulation, frequency modulation, and/or phase modulation.

[0060] The modulated digital output signal may optionally undergo further amplitude modulation in a digital multiplier (not shown here) before conversion to an analog RF output.

[0061] The digital frequency synthesizer **204** also includes a PLL frequency multiplier configured to generate the internal system clock for the carrier frequency DDS **301** and the modulation frequency DDS **302**, using a reference clock generated by a clock oscillator **203**. The clock oscillator **203** may be a precision temperature compensated crystal oscillator with an initial accuracy of +/- 1 ppm. In an exemplary embodiment, the internal system clock may be set to 128 MHz and reference clock may be set to 16 MHz.

[0062] It should be noted that while FIG. 3 illustrates one modulation frequency DDS **302**, the disclosure is not so limiting, and the digital frequency synthesizer may include one or more modulation frequency generators to allow for transmitting multiple modulation frequency digital signals simultaneously.

[0063] Referring back to FIG. 2, the modulated digital output signal from the digital frequency synthesizer **204** may be input into DAC converter **205** to generate an analog RF signal. The RF signal from the DAC converter **205** passes through an amplifier **206** (e.g., a linear RF power amplifier in bridge configuration), an optional transformer (e.g., a balun) (not shown here), a filter circuit **207** (e.g., a 5th order elliptic cauer filter), followed by output to the probe **102**. The filter circuit **207** may be connected to probe **102** via a coaxial cable **104** and impedance transformer **209** (configured to substantially match the impedance of the subject with the impedance of the output of the emission device **101**). It has been determined through impedance measurements that when probe **102** is applied to the mouth of a patient, the probe/patient combination exhibits a complex impedance on the order of $150 + j_{200}$ Ohms. Impedance transformer **209** serves to match this complex impedance with the impedance of coaxial cable, and therefore the output impedance of the filter circuit **207**. This promotes power transmission, and minimizes reflections. In a further example, a conductive, isolated probe **102** has been used at a frequency around 433 MHz coupling

to the outer ear channel. Due to the different probe design in such a frequency band and with this coupling method, the values of matching elements would be different or could even be omitted. Probe **102** may then be regarded as a capacitive coupler or as an antenna matched to the capacitive load.

[0064] In certain embodiments, the output from the filter circuit **207** may pass through a directional coupler **208**. The output signals from the directional coupler **208** may be fed into two ADC inputs of the controller **201**, where the amplitude and the ratio of the two signals allow the controller **201** to continuously monitor both the output power/frequency of the signal in the probe **102** and the quality of the probe's contact to the subject. This information may be used by the controller **201** to determine whether electromagnetic emissions at the desired frequency and power are present. Controller **201** then takes appropriate action, for example, display an error message on display **212**, provide appropriate corrective signals to one or more components of the emission device **101**, determine and control the amount of power applied to the subject, assess patient treatment compliance, record indicia of the patient treatment compliance on memory **202** for later analysis and assessment by a physician or other clinician.

[0065] The directional coupler **208** may operate to couple a portion of the energy emitted by filter circuit **207** through an output connector into detecting circuits. The output connector is connected to a primary input of the directional coupler, and co-axial cable is connected to a primary output of directional coupler. Direction coupler includes two secondary outputs, each of which is connected to a detecting circuit. First detecting circuit functions to detect the amount of power applied to the patient, and second detecting circuit functions to detect the amount of power reflected from the patient. First detecting circuit is connected through a resistive divider to the positive input of a differential amplifier. Second detecting circuit is connected through the resistive divider to the negative input of differential amplifier. The output of differential amplifier is indicative of the difference between the power transmitted to the patient by filter circuit, and the power reflected from the patient, and thus is indicative of an amount of power absorbed by the patient. The output of differential amplifier is applied to an analog to digital converter (ADC) or comparator, the output of which connected to controller **201**.

[0066] The fully digital synthesis of the modulated digital signal in the digital frequency synthesizer **204** combined with the linear output stage allows for modulation of the applied radiation using other modulation types in addition to amplitude modulation.

[0067] The emission device **101** may also include a power source **210** for supplying power to one or more components of the emission device **101**. The power source **210** may be an energy storage system like a battery, a super capacitor, lithium ion cell, fuel cell or another energy storage. The power source **210** may be recharged using direct or inductive charging from a power source such as an AC power outlet, a docking station, or the like. In certain embodiments, the controller **201** may monitor the power level of the power source **210**, and may provide an alert to a user when the power level reaches a threshold level. In addition, the controller **201** may perform actions such as switch off (and/or initiate low power mode) the emission device **101**, or one or more of its components of the emission device **101** based on the power level.

[0068] Optionally, a docking station may be included in the system (not shown here) configured to recharge the power source **210**. The docking station may include components such as a communications interface, a user authentication module, an activation module (for activating the emission device **101**, or any other now or hereafter known components.

[0069] The emission device **101** may also include a communications interface **211** that allows the controller **201** to communicate with devices external to the emission device **101** such as a server, an electronic device, a docking station, etc. Examples of the communication interfaces may comprise, but are not limited to, serial interfaces such as RS-232, Universal Serial Bus (USB), Small Computer Systems Interface (SCSI), Ethernet, RS-422 or a wireless communication interface such as Wi-Fi, Bluetooth, near-field communication (NFC) or other wireless interfaces. The controller **201** may communicate with an external device via the communication interface **211** in any communication protocols such as Automation/Drive Interface (ADI).

[0070] As discussed above, the emission device **101** may also include optional components such as a display **212** (which can display various indications/alerts of the operation of emission device **101**), a user interface **213** (e.g., a keyboard, microphone, touch interface, etc. configured to user instructions), and other output component(s) **214** (e.g., LEDs, speakers, or the like).

[0071] In certain embodiments, the emission device **101** may include an activation module (not shown here) for activating the emission device **101** for a particular treatment session. The treatment session may be user specific and determined based on authentication information received from a user. For example, the treatment session may be activated for a user depending upon the disease state of the user. Various parameters of a treatment session may include, without limitation, the total duration of the emission for a treatment session, the power level of the emission, the duty

cycle of the emission (i.e., the ratio of on time to off time of pulsed emissions applied during a treatment), the sequence of application of different modulation frequencies for a particular application, and the total number of treatments and duration of each treatment prescribed for a particular subject, and combinations thereof.

[0072] The activation module may receive authentication information from a user, via for example, the user interface (e.g., fingerprint, retina scan, login credentials, etc.), an activation card (e.g., an RFID chip card, an ISO chip card, a contact less (NFC) card, etc.) in communication with an activation interface of the emission device **101** and/or an external device in communication with the emission device **101** such as the docking station.

[0073] The controller **201** of the emission device **101** may operate to analyze the information provided by the directional coupler to determine and control the amount of power applied to the patient, to assess patient treatment compliance, and to possibly to record indicia of the patient treatment compliance on memory **202** for later analysis and assessment by a physician or other clinician.

[0074] Exemplary of treatments performed on patients have included brain, bladder, colorectal, kidney, mesothelium, neuroendocrine, liver, biliary tract, lung, breast, ovary, pancreas, prostate and thyroid tumor types. The treatments involved applying carrier signal, amplitude-modulated at specifically defined frequencies ranging from about 0.1 to about 150,000 Hz at very high precision and stability. The carrier signal may be from about 1 KHz to 5000 MHz, or from about 0.1 - 1000 MHz, or from about 1-500 MHz, or from about 1-100 MHz, or from about 5-50 MHz, or from about 10 MHz to about 40 MHz, or from about 15 MHz to about 30 MHz, or any other frequency that is capable of leveraging a subject's body as an antenna (e.g., 27 MHz). The one or more modulation frequencies may be simultaneously emitted or sequenced to form the modulation signal. The modulation frequency digital signal may be about 0.1 Hz to about 150,000 Hz, more preferably within about 100 Hz to about 99,000 Hz. The one or more modulation frequencies may be determined and selected based on the type of disease state or cancer to be treated. Further examples of treatment modes (at specific accurately controlled AM frequencies) for specified types of tumors are described in detail below.

[0075] FIG. 6 depicts an example of internal hardware that may be included in any of the electronic components of the emission device **101**. An electrical bus **600** serves as an information highway interconnecting the other illustrated components of the hardware. Processor **605** is a

central processing device of the system, configured to perform calculations and logic operations required to execute programming instructions. As used in this document and in the claims, the terms “processor” and “processing device” may refer to a single processor or any number of processors in a set of processors that collectively perform a set of operations, such as a central processing unit (CPU), a graphics processing unit (GPU), a remote server, or a combination of these. Read only memory (ROM), random access memory (RAM), flash memory, hard drives and other devices capable of storing electronic data constitute examples of memory devices **625**. A memory device may include a single device or a collection of devices across which data and/or instructions are stored.

[0076] An optional display interface **630** may permit information from the bus **600** to be displayed on a display device **635** in visual, graphic or alphanumeric format. An audio interface and audio output (such as a speaker) also may be provided. Communication with external devices may occur using various communication devices **640** such as a wireless antenna, an RFID tag and/or short-range or near-field communication transceiver, each of which may optionally communicatively connect with other components of the device via one or more communication system. The communication device **640** may be configured to be communicatively connected to a communications network, such as the Internet, a local area network or a cellular telephone data network.

[0077] The hardware may also include a user interface sensor **645** that allows for receipt of data from input devices **650** such as a keyboard, a mouse, a joystick, a touchscreen, a touch pad, a remote control, a pointing device and/or microphone. Digital image frames also may be received from a camera **620** that can capture video and/or still images. The hardware may also include one or more sensors **660** such as position sensors (global positioning systems), temperature sensors, pulse rate sensors, heart pressure monitors, resistance sensors, or the like.

[0078] Frequencies that are effective for treatment of a particular disease state or cancer may be discovered using any now or hereafter known methods. Frequency discovery may include exposing one or more subjects pre-diagnosed with a particular health condition (for example, a particular cancer type) to precise modulation frequencies that are applied to the subject or subjects and measuring variations in one or more physiological responses of the patient(s). The frequencies determined in this manner may also be screened against healthy subjects to determine disease-specific modulation frequencies. Control measurements may be obtained by exposing one or more

subjects that do not suffer from a particular health condition (for example, a particular cancer type) to modulation frequencies that are applied to the subject or subjects and measuring variations in one or more physiological responses of the patient(s). For example, frequency discovery may include measuring variations in skin electrical resistance, pulse amplitude and/or blood pressure of a subject while being exposed to modulation frequencies generated using the methods and systems disclosed herein. For frequency discovery, the subject may be exposed to modulation frequencies from about 0.1 Hz to about 150,000 Hz incrementally (e.g., using increments of about 50 Hz to about 150 Hz, preferably about 75 Hz to about 125 Hz), and variations in skin electrical resistance, pulse amplitude and/or blood pressure may be measured. Whenever a change is observed in the measured skin electrical resistance (threshold change), pulse amplitude (for about 1-2 beats), and/or blood pressure (threshold change), exposure to the corresponding modulation frequencies may be repeated using increasingly smaller increments (e.g., 10^{-4} - 10^{-3} Hz). Frequencies eliciting the best biofeedback responses are selected as tumor-specific frequencies. For example, if the variations in the amplitude of the pulse are used, best biofeedback responses may be defined by the magnitude of increased amplitude and/or the number of beats with increased amplitude. Such frequency detection may be performed in subjects at different disease stages: disease progression, stable disease and/or partial response. The selection of specific frequencies may be performed according to the method described in Barbault et al. 2009 J. Exp. Clin. Cancer Res. 28(1): 51.

[0079] Using the above methods, it has been determined that the methods and systems of this disclosure provide a safe and promising novel treatment modality for multiple types of cancer such as, without limitation, breast cancer, pancreatic cancer, non-small cell and small cell lung cancer, neuroendocrine tumors, non-Hodgkin lymphoma, adenocarcinoma, head and neck cancer, gastric cancer, glioblastoma, squamous cell carcinoma, hepatocellular carcinoma, cholangiocarcinoma, mesothelioma, thyroid cancer, prostate cancer, rhabdomyosarcoma, multiple myeloma, leukemia, and colorectal cancer.

[0080] Amplitude-modulated frequencies discovered to be effective in treatment of different types of cancer are listed below. In general, it may be preferred that all frequencies determined to be specific to a particular cancer-type be applied in the treatment of subjects suffering from the indicated form of cancer. However, a limited number of the determined frequencies also leads to beneficial effects, for example 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more,

35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more of the listed frequencies.

Table A

262-262.7 Hz	266.3-267 Hz	295-295.6 Hz	334-334.7 Hz
374-374.7 Hz	408-408.7 Hz	415-415.7 Hz	418-418.7 Hz
419.8-420.4 Hz	420-420.7 Hz	420.4-420.8 Hz	429-429.7 Hz
429.7-430.3 Hz	439-439.7 Hz	441-441.7 Hz	442-442.7 Hz
465-465.7 Hz	485-485.7 Hz	527-527.7 Hz	556-556.7 Hz
561-561.7 Hz	568-568.7 Hz	572-572.7 Hz	581-581.7 Hz
594-594.7 Hz	605-605.7 Hz	611-611.7 Hz	612-612.7 Hz
624.32-624.8 Hz	626-626.7 Hz	627-627.7 Hz	631-631.7 Hz
633-633.7 Hz	638-638.7 Hz	677.4-678 Hz	679-679.7 Hz
709-709.7 Hz	717-717.7 Hz	727-727.7 Hz	733-733.7 Hz
737-737.7 Hz	759-759.7 Hz	761-761.7 Hz	810-810.7 Hz
811-811.7 Hz	817-817.7 Hz	826-826.7 Hz	829-829.7 Hz
830-830.7 Hz	834-834.7 Hz	836-836.7 Hz	883-883.7 Hz
959-959.7 Hz	961-961.7 Hz	963.8-964.25 Hz	964.5-965 Hz
966-966.7 Hz	969-969.7 Hz	972-972.7 Hz	974.4-975 Hz
977-977.7 Hz	996-996.7 Hz	1027-1027.7 Hz	1045-1045.7 Hz
1157-1157.7 Hz	1179.2-1179.8Hz	1195-1195.7 Hz	1213-1213.7 Hz
1220-1220.7 Hz	1252-1252.7 Hz	1314-1314.7 Hz	1336-1336.7 Hz
1352-1352.7 Hz	1369-1369.7 Hz	1436-1436.7 Hz	1467-1467.7 Hz
1622-1622.7 Hz	1652-1652.7 Hz	1668-1668.7 Hz	1728-1728.7 Hz
1759-1759.7 Hz	1771.7-1772.3 Hz	1772.3-1772.8 Hz	1785-1785.7 Hz
1808-1808.6 Hz	1815-1815.7 Hz	1823-1823.7 Hz	1858-1858.7 Hz
1868-1868.7 Hz	1881-1881.7 Hz	1897-1897.7 Hz	1903-1903.7 Hz
1914-1914.7 Hz	1928-1928.7 Hz	1963-1963.7 Hz	1966-1966.7 Hz
1967-1967.7 Hz	1973-1973.7 Hz	1989-1989.7 Hz	2021-2021.7 Hz
2023-2023.7 Hz	2035-2035.7 Hz	2044-2044.7 Hz	2065-2065.7 Hz
2094-2094.7 Hz	2111-2111.7 Hz	2128-2128.7 Hz	2189-2189.7 Hz
2284-2284.7 Hz	2287-2287.7 Hz	2313-2313.7 Hz	2321-2321.7 Hz
2328-2328.7 Hz	2346-2346.7 Hz	2359-2359.7 Hz	2372.3-2372.8 Hz
2373-2373.7 Hz	2380-2380.7 Hz	2429-2429.7 Hz	2439.7-2440.3 Hz
2455-2455.7 Hz	2459-2459.7 Hz	2469.2-2469.7Hz	2483-2483.7 Hz
2513-2513.7 Hz	2518-2518.7 Hz	2612-2612.7 Hz	2627-2627.7 Hz
2629-2629.7 Hz	2632-2632.7 Hz	2636-2636.7 Hz	2647-2647.7 Hz
2648-2648.7 Hz	2653.3-2654 Hz	2653.7-2654.4Hz	2679-2679.7 Hz
2697-2697.7 Hz	2706-2706.7 Hz	2707-2707.7 Hz	2714-2714.7 Hz
2720.3-2721 Hz	2726-2726.7 Hz	2738-2738.7 Hz	2747-2747.7 Hz
2754-2754.7 Hz	2759-2759.7 Hz	2762-2762.7 Hz	2774-2774.7 Hz
2778-2778.7 Hz	2807-2807.7 Hz	2811-2811.7 Hz	2824-2824.7 Hz
2825-2825.7 Hz	2826-2826.7 Hz	2830-2830.7 Hz	2834-2834.7 Hz
2836-2836.7 Hz	2840-2840.7 Hz	2842-2842.7 Hz	2854-2854.6 Hz

2854-2854.7 Hz	2858.8-2859.35Hz	2860-2860.7 Hz	2864-2864.7 Hz
2865-2865.7 Hz	2878-2878.7 Hz	2890-2890.7 Hz	2893-2893.7 Hz
2940-2940.7 Hz	2971-2971.6 Hz	2975-2975.7 Hz	2981-2981.7 Hz
3030-3030.7 Hz	3056-3056.7 Hz	3085.7-3086.3Hz	3121-3121.7 Hz
3133-3133.7 Hz	3135-3135.7 Hz	3143-3143.7 Hz	3171-3171.7 Hz
3188-3188.7 Hz	3207-3207.7 Hz	3209-3209.7 Hz	3213-3213.7 Hz
3218-3218.7 Hz	3222-3222.7 Hz	3227.3-3228 Hz	3228-3228.7 Hz
3234-3234.7 Hz	3244-3244.7 Hz	3245-3245.7 Hz	3250.3-3250.8Hz
3251-3251.7 Hz	3261-3261.7 Hz	3267-3267.7 Hz	3269-3269.7 Hz
3272-3272.7 Hz	3279.3-3280 Hz	3280.6-3281.3 Hz	3281.6-3282.1 Hz
3322-3322.7 Hz	3360-3360.7 Hz	3371-3371.7 Hz	3428-3428.7 Hz
3446-3446.7 Hz	3466-3466.7 Hz	3522-3522.7 Hz	3529-3529.7 Hz
3537-3537.7 Hz	3548-3548.7 Hz	3556-3556.7 Hz	3562-3562.7 Hz
3571-3571.7 Hz	3595-3595.7 Hz	3609-3609.7 Hz	3618-3618.7 Hz
3621-3621.7 Hz	3622.5-3623 Hz	3627-3627.7 Hz	3630-3630.7 Hz
3631-3631.7 Hz	3633-3633.7 Hz	3634-3634.7 Hz	3637.7-3638.3Hz
3644-3644.7 Hz	3646-3646.7 Hz	3646.4-3647 Hz	3656-3656.7 Hz
3661-3661.7 Hz	3663-3663.7 Hz	3667-3667.7 Hz	3678-3678.7 Hz
3681.7-3682.3Hz	3687-3687.7 Hz	3694-3694.7 Hz	3731-3731.7 Hz
3743-3743.7 Hz	3749.3-3750 Hz	3756-3756.7 Hz	3762-3762.7 Hz
3787-3787.7 Hz	3817-3817.7 Hz	3823-3823.7 Hz	3833-3833.7 Hz
3839-3839.7 Hz	3842.4-3843 Hz	3854-3854.7 Hz	3877-3877.7 Hz
3908.7-3909.22Hz	3910-3910.7 Hz	3915-3915.7 Hz	3922-3922.7 Hz
3936-3936.7 Hz	3940-3940.7 Hz	3946-3946.7 Hz	3947-3947.7 Hz
3948-3948.7 Hz	3954-3954.7 Hz	3958-3958.6 Hz	3962-3962.7 Hz
3981-3981.7 Hz	4007-4007.7 Hz	4013-4013.7 Hz	4027-4027.7 Hz
4048-4048.7 Hz	4055-4055.7 Hz	4135-4135.7 Hz	4148-4148.7 Hz
4152-4152.7 Hz	4155-4155.7 Hz	4190-4190.7 Hz	4198-4198.7 Hz
4224-4224.7 Hz	4233-4233.7 Hz	4249-4249.7 Hz	4281-4281.7 Hz
4283-4283.7 Hz	4323-4323.7 Hz	4368.3-4369 Hz	4386.4-4387 Hz
4409-4409.7 Hz	4410-4410.7 Hz	4418-4418.7 Hz	4425-4425.7 Hz
4430-4430.7 Hz	4425.7-4426.22Hz	4438.7-4439.2 Hz	4441-4441.7 Hz
4459-4459.7 Hz	4465-4465.7 Hz	4476-4476.7 Hz	4477.4-4478 Hz
4523-4523.7 Hz	4548-4548.7 Hz	4580.11-4580.7Hz	4584-4584.7 Hz
4621-4621.7 Hz	4632-4632.7 Hz	4637-4637.7 Hz	4657-4657.6 Hz
4707-4707.7 Hz	4708-4708.7 Hz	4713-4713.7 Hz	4714-4714.7 Hz
4722-4722.7 Hz	4723-4723.7 Hz	4725-4725.7 Hz	4731-4731.7 Hz
4733-4733.7 Hz	4748-4748.7 Hz	4776-4776.7 Hz	4792-4792.7 Hz
4805.3-4806 Hz	4806-4806.7 Hz	4809-4809.7 Hz	4812-4812.7 Hz
4813-4813.7 Hz	4821-4821.7 Hz	4822-4822.7 Hz	4823-4823.7 Hz
4833-4833.7 Hz	4841-4841.7 Hz	4844-4844.7 Hz	4850-4850.7 Hz
4866-4866.7 Hz	4870-4870.7 Hz	4874-4874.7 Hz	4890-4890.7 Hz
4924-4924.7 Hz	4941-4941.7 Hz	4946-4946.7 Hz	4948-4948.7 Hz
4997-4997.7 Hz	4998-4998.7 Hz	5034-5034.7 Hz	5063-5063.7 Hz
5089-5089.7 Hz	5116-5116.7 Hz	5139-5139.7 Hz	5142-5142.7 Hz

5152-5152.7 Hz	5154-5154.7 Hz	5156-5156.7 Hz	5165.4-5166 Hz
5205-5205.7 Hz	5209-5209.7 Hz	5209.4-5210 Hz	5221-5221.7 Hz
5229-5229.7 Hz	5232-5232.7 Hz	5239-5239.7 Hz	5243-5243.7 Hz
5259-5259.7 Hz	5265-5265.7 Hz	5270-5270.7 Hz	5286-5286.7 Hz
5322-5322.7 Hz	5336-5336.7 Hz	5378.2-5378.7Hz	5407.3-5408 Hz
5414-5414.7 Hz	5424-5424.7 Hz	5427-5427.7 Hz	5438-5438.7 Hz
5484.4-5485 Hz	5510-5510.7 Hz	5533-5533.7 Hz	5618-5618.7 Hz
5640.4-5641 Hz	5671-5671.7 Hz	5714-5714.7 Hz	5716-5716.7 Hz
5741-5741.7 Hz	5742-5742.7 Hz	5752-5752.7 Hz	5766-5766.7 Hz
5881-5881.7 Hz	5884-5884.7 Hz	5976-5976.7 Hz	5996-5996.7 Hz
6010-6010.7 Hz	6024-6024.7 Hz	6058-6058.7 Hz	6070-6070.7 Hz
6074-6074.7 Hz	6094-6094.7 Hz	6112-6112.7 Hz	6117-6117.7 Hz
6159-6159.7 Hz	6167-6167.7 Hz	6179-6179.7 Hz	6220.3-6221 Hz
6252-6252.7 Hz	6297-6297.7 Hz	6298.4-6299 Hz	6317-6317.7 Hz
6330-6330.7 Hz	6333-6333.7 Hz	6334-6334.7 Hz	6346-6346.7 Hz
6380.4-6381 Hz	6392-6392.7 Hz	6413-6413.7 Hz	6414-6414.7 Hz
6416.3-6417 Hz	6419.3-6420 Hz	6423-6423.7 Hz	6432-6432.7 Hz
6436-6436.7 Hz	6438-6438.7 Hz	6441-6441.7 Hz	6443-6443.7 Hz
6444-6444.7 Hz	6468-6468.7 Hz	6469-6469.7 Hz	6479.4-6480 Hz
6488-6488.7 Hz	6492.3-6493 Hz	6513-6513.7 Hz	6537-6537.7 Hz
6648-6648.7 Hz	6717-6717.7 Hz	6727.4-6728 Hz	6730-6730.7 Hz
6748-6748.7 Hz	6751-6751.7 Hz	6781-6781.7 Hz	6782-6782.7 Hz
6808-6808.7 Hz	6809-6809.6 Hz	6825-6825.7 Hz	6832-6832.7 Hz
6840-6840.7 Hz	6841-6841.7 Hz	6847-6847.7 Hz	6864-6864.7 Hz
6869-6869.7 Hz	6897-6897.7 Hz	6911.3-6912 Hz	6912-6912.7 Hz
6914-6914.7 Hz	6968.4-6969 Hz	6974-6974.7 Hz	6982-6982.7 Hz
6986-6986.7 Hz	7013-7013.7 Hz	7037-7037.7 Hz	7042-7042.7 Hz
7080-7080.7 Hz	7098-7098.7 Hz	7109-7109.7 Hz	7110-7110.7 Hz
7112-7112.7 Hz	7117-7117.7 Hz	7136-7136.7 Hz	7137-7137.7 Hz
7145.4-7146 Hz	7149-7149.7 Hz	7151-7151.7 Hz	7158-7158.7 Hz
7160-7160.7 Hz	7169-7169.7 Hz	7191.7-7192.3Hz	7222.4-7223 Hz
7225-7225.7 Hz	7234-7234.7 Hz	7239-7239.7 Hz	7246-7246.7 Hz
7253-7253.7 Hz	7268-7268.7 Hz	7274-7274.7 Hz	7283-7283.7 Hz
7338-7338.7 Hz	7367-7367.7 Hz	7378-7378.7 Hz	7404.4-7405 Hz
7424-7424.7 Hz	7440-7440.7 Hz	7481-7481.7 Hz	7510-7510.7 Hz
7526-7526.6 Hz	7531-7531.7 Hz	7546-7546.7 Hz	7551-7551.7 Hz
7560-7560.7 Hz	7646-7646.7 Hz	7652-7652.7 Hz	7655-7655.7 Hz
7673-7673.7 Hz	7676-7676.7 Hz	7719-7719.7 Hz	7748-7748.7 Hz
7787-7787.7 Hz	7808-7808.7 Hz	7811-7811.7 Hz	7855-7855.7 Hz
7857-7857.7 Hz	7865-7865.7 Hz	7879-7879.7 Hz	7906-7906.7 Hz
7910-7910.7 Hz	7913-7913.7 Hz	7923-7923.7 Hz	7927-7927.7 Hz
7930-7930.7 Hz	7936-7936.7 Hz	7951-7951.7 Hz	7970-7970.7 Hz
7981-7981.7 Hz	7994-7994.7 Hz	8012.3-8013 Hz	8013-8013.7 Hz
8024-8024.7 Hz	8026-8026.7 Hz	8032-8032.7 Hz	8039-8039.7 Hz
8043-8043.7 Hz	8074-8074.7 Hz	8079-8079.7 Hz	8097-8097.7 Hz

8125-8125.7 Hz	8145-8145.7 Hz	8158-8158.7 Hz	8217.4-8218 Hz
8251-8251.7 Hz	8314-8314.7 Hz	8332-8332.7 Hz	8347-8347.7 Hz
8355-8355.7 Hz	8373-8373.7 Hz	8386-8386.7 Hz	8388-8388.7 Hz
8412-8412.7 Hz	8413-8413.7 Hz	8421-8421.7 Hz	8427-8427.7 Hz
8445-8445.7 Hz	8447-8447.7 Hz	8467-8467.7 Hz	8478.3-8479 Hz
8480-8480.7 Hz	8484-8484.7 Hz	8509.4-8510 Hz	8522-8522.7 Hz
8546-8546.7 Hz	8562-8562.7 Hz	8576-8576.7 Hz	8698-8698.7 Hz
8731-8731.7 Hz	8734-8734.7 Hz	8740-8740.7 Hz	8755-8755.7 Hz
8756-8756.7 Hz	8757-8757.7 Hz	8765-8765.7 Hz	8771-8771.7 Hz
8789.3-8790 Hz	8809-8809.7 Hz	8810-8810.7 Hz	8814-8814.7 Hz
8823-8823.7 Hz	8824-8824.7 Hz	8827.4-8828 Hz	8829-8829.7 Hz
8837-8837.7 Hz	8841-8841.7 Hz	8843-8843.7 Hz	8845-8845.7 Hz
8846-8846.7 Hz	8853-8853.7 Hz	8859.3-8860 Hz	8872-8872.7 Hz
8877-8877.7 Hz	8881-8881.7 Hz	8889-8889.7 Hz	8926-8926.7 Hz
8935-8935.6 Hz	8949-8949.7 Hz	9023-9023.7 Hz	9071-9071.7 Hz
9075-9075.7 Hz	9078-9078.7 Hz	9084-9084.7 Hz	9106-9106.7 Hz
9109-9109.7 Hz	9112-9112.7 Hz	9122-9122.7 Hz	9123-9123.7 Hz
9133-9133.7 Hz	9136-9136.7 Hz	9146-9146.7 Hz	9155.7-9156.2Hz
9157-9157.7 Hz	9161-9161.7 Hz	9169-9169.7 Hz	9174-9174.7 Hz
9179-9179.7 Hz	9194-9194.7 Hz	9230-9230.7 Hz	9236-9236.7 Hz
9247-9247.7 Hz	9273-9273.7 Hz	9506-9506.7 Hz	9512-9512.7 Hz
9573-9573.7 Hz	9588-9588.7 Hz	9635-9635.7 Hz	9656-9656.7 Hz
9681-9681.7 Hz	9695-9695.7 Hz	9731-9731.7 Hz	9846-9846.7 Hz
9851-9851.7 Hz	9886-9886.7 Hz	9921-9921.7 Hz	9929-9929.7 Hz
9935-9935.7 Hz	9947-9947.7 Hz	9961-9961.7 Hz	9970-9970.7 Hz
10013-10013.7 Hz	10064-10064.7 Hz	10073-10073.7 Hz	10137-10137.7 Hz
10140-10140.7 Hz	10159-10159.7 Hz	10339.8-10340.4Hz	10342-10342.6 Hz
10345-10345.7 Hz	10352-10352.7 Hz	10362-10362.7 Hz	10378-10378.7 Hz
10384-10384.7 Hz	10387-10387.7 Hz	10395-10395.7 Hz	10427-10427.7 Hz
10436-10436.7 Hz	10439-10439.7 Hz	10484-10484.7 Hz	10488-10488.7 Hz
10541-10541.7 Hz	10566-10566.7 Hz	10566.4-10567 Hz	10633-10633.7 Hz
10641-10641.7 Hz	10645-10645.7 Hz	10661-10661.7 Hz	10665.4-10666 Hz
10671-10671.7 Hz	10673-10673.7 Hz	10690-10690.7 Hz	10708-10708.7 Hz
10727-10727.7 Hz	10731-10731.7 Hz	10735-10735.7 Hz	10740-10740.7 Hz
10745-10745.7 Hz	10748-10748.7 Hz	10762-10762.7 Hz	10768-10768.7 Hz
10776-10776.7 Hz	10781-10781.7 Hz	10788-10788.7 Hz	10802-10802.7 Hz
10805-10805.7 Hz	10809-10809.7 Hz	10813.2-10813.8Hz	10830-10830.7 Hz
10831-10831.7 Hz	10831.7-10832.1Hz	10834-10834.7 Hz	10844-10844.7 Hz
10845-10845.7 Hz	10848.7-10849.3Hz	10851-10851.7 Hz	10854-10854.7 Hz
10859-10859.7 Hz	10870-10870.7 Hz	10873-10873.7 Hz	10876-10876.7 Hz
10878-10878.7 Hz	10889-10889.7 Hz	10891-10891.7 Hz	10894-10894.7 Hz
10906-10906.7 Hz	10947-10947.7 Hz	10974-10974.7 Hz	10993-10993.7 Hz
11023-11023.7 Hz	11031-11031.7 Hz	11042-11042.7 Hz	11046-11046.7 Hz
11074-11074.7 Hz	11081-11081.7 Hz	11083-11083.7 Hz	11109.3-11110 Hz
11110-11110.7 Hz	11117-11117.7 Hz	11124-11124.7 Hz	11134-11134.7 Hz

11155-11155.7 Hz	11159-11159.7 Hz	11163-11163.7 Hz	11164-11164.7 Hz
11174-11174.7 Hz	11209-11209.7 Hz	11219-11219.7 Hz	11225-11225.7 Hz
11234-11234.7 Hz	11243-11243.7 Hz	11247-11247.7 Hz	11253-11253.7 Hz
11255-11255.7 Hz	11260-11260.7 Hz	11264-11264.7 Hz	11267-11267.7 Hz
11275-11275.7 Hz	11277.3-11278 Hz	11284-11284.7 Hz	11295-11295.7 Hz
11336-11336.7 Hz	11381-11381.7 Hz	11387-11387.7 Hz	11414-11414.7 Hz
11416-11416.7 Hz	11429-11429.7 Hz	11438-11438.7 Hz	11469-11469.7 Hz
11524-11524.7 Hz	11530-11530.7 Hz	11533-11533.7 Hz	11551.3-11552 Hz
11556-11556.7 Hz	11569-11569.7 Hz	11576-11576.7 Hz	11582-11582.7 Hz
11590-11590.7 Hz	11619-11619.7 Hz	11621-11621.7 Hz	11628-11628.7 Hz
11630-11630.7 Hz	11637-11637.7 Hz	11638-11638.7 Hz	11681-11681.7 Hz
11699-11699.7 Hz	11719-11719.7 Hz	11730.6-11731.1Hz	11745-11745.7 Hz
11779-11779.7 Hz	11785-11785.7 Hz	11809-11809.7 Hz	11831-11831.7 Hz
11867-11867.7 Hz	11872-11872.7 Hz	11905-11905.7 Hz	11911-11911.7 Hz
11913-11913.7 Hz	11929-11929.7 Hz	11931-11931.7 Hz	11934-11934.7 Hz
11946-11946.7 Hz	11949-11949.7 Hz	11956-11956.7 Hz	11974-11974.7 Hz
11993-11993.7 Hz	11994-11994.7 Hz	12118-12118.7 Hz	12120.2-12120.7Hz
12135-12135.7 Hz	12137-12137.7 Hz	12144-12144.7 Hz	12152-12152.7 Hz
12165-12165.7 Hz	12182-12182.7 Hz	12184-12184.7 Hz	12302-12302.7 Hz
12309-12309.7 Hz	12318-12318.7 Hz	12330-12330.7 Hz	12342-12342.7 Hz
12356-12356.7 Hz	12364-12364.7 Hz	12373-12373.7 Hz	12391-12391.7 Hz
12498-12498.7 Hz	12557-12557.7 Hz	12572-12572.7 Hz	12575-12575.7 Hz
12588-12588.7 Hz	12589-12589.7 Hz	12617-12617.7 Hz	12629-12629.7 Hz
12637-12637.7 Hz	12645-12645.7 Hz	12649-12649.7 Hz	12682-12682.7 Hz
12711-12711.7 Hz	12752-12752.7 Hz	12783-12783.7 Hz	12880-12880.7 Hz
12929-12929.7 Hz	13117-13117.7 Hz	13127-13127.7 Hz	13215-13215.7 Hz
13222-13222.7 Hz	13241-13241.7 Hz	13252-13252.7 Hz	13307-13307.7 Hz
13329-13329.7 Hz	13330.7-13331.2Hz	13373-13373.7 Hz	13375-13375.7 Hz
13377-13377.7 Hz	13386-13386.7 Hz	13408-13408.7 Hz	13418-13418.7 Hz
13434-13434.7 Hz	13475-13475.7 Hz	13562-13562.6 Hz	13571-13571.7 Hz
13609-13609.7 Hz	13611-13611.7 Hz	13615-13615.7 Hz	13617-13617.7 Hz
13636.2-13636.7Hz	13644-13644.7 Hz	13661-13661.7 Hz	13670-13670.7 Hz
13679-13679.7 Hz	13686.4-13687 Hz	13694-13694.7 Hz	13713-13713.7 Hz
13714-13714.7 Hz	13734-13734.7 Hz	13736-13736.7 Hz	13738.3-13739 Hz
13742-13742.7 Hz	13746-13746.7 Hz	13747-13747.7 Hz	13751-13751.7 Hz
13755-13755.7 Hz	13760-13760.7 Hz	13761-13761.7 Hz	13767-13767.7 Hz
13773-13773.7 Hz	13774-13774.7 Hz	13775-13775.7 Hz	13780-13780.7 Hz
13805-13805.7 Hz	13819-13819.7 Hz	13828-13828.7 Hz	13834-13834.7 Hz
13847-13847.7 Hz	13856-13856.7 Hz	13857.4-13858 Hz	13858-13858.7 Hz
13871-13871.7 Hz	13903-13903.7 Hz	13947-13947.7 Hz	13978.3-13979 Hz
13981-13981.7 Hz	14005-14005.7 Hz	14009-14009.7 Hz	14016.4-14017 Hz
14027-14027.7 Hz	14034-14034.7 Hz	14052-14052.7 Hz	14070-14070.7 Hz
14078-14078.7 Hz	14111-14111.7 Hz	14114-14114.7 Hz	14116-14116.7 Hz
14153-14153.7 Hz	14156-14156.7 Hz	14160-14160.7 Hz	14164-14164.7 Hz
14170.7-14171.3Hz	14174-14174.7 Hz	14182-14182.7 Hz	14249-14249.7 Hz

14279-14279.7 Hz	14281-14281.7 Hz	14285-14285.7 Hz	14308-14308.7 Hz
14333.4-14333.9Hz	14350-14350.7 Hz	14356-14356.7 Hz	14376-14376.7 Hz
14417-14417.7 Hz	14422-14422.7 Hz	14432-14432.7 Hz	14441-14441.7 Hz
14443-14443.7 Hz	14456-14456.7 Hz	14462-14462.7 Hz	14479-14479.7 Hz
14483-14483.7 Hz	14489-14489.7 Hz	14511-14511.7 Hz	14523-14523.7 Hz
14524-14524.7 Hz	14531-14531.7 Hz	14532-14532.7 Hz	14540-14540.7 Hz
14545-14545.7 Hz	14553-14553.7 Hz	14558-14558.7 Hz	14564-14564.7 Hz
14570-14570.7 Hz	14574-14574.7 Hz	14585-14585.7 Hz	14589-14589.7 Hz
14621-14621.7 Hz	14630-14630.7 Hz	14670.4-14671 Hz	14671-14671.7 Hz
14674-14674.7 Hz	14690-14690.7 Hz	14716-14716.7 Hz	14729-14729.7 Hz
14756-14756.7 Hz	14796-14796.7 Hz	14813-14813.7 Hz	14835-14835.7 Hz
14858-14858.7 Hz	14863-14863.7 Hz	14867-14867.7 Hz	14877-14877.7 Hz
14885-14885.7 Hz	14911-14911.7 Hz	14912-14912.7 Hz	14913.4-14914 Hz
14922-14922.7 Hz	14940-14940.7 Hz	14940.4-14941 Hz	14957-14957.7 Hz
14961-14961.7 Hz	14974-14974.7 Hz	14982-14982.7 Hz	15006-15006.7 Hz
15033-15033.7 Hz	15035-15035.6 Hz	15056-15056.7 Hz	15067-15067.7 Hz
15071-15071.7 Hz	15109-15109.7 Hz	15112-15112.7 Hz	15126-15126.7 Hz
15133-15133.7 Hz	15154-15154.7 Hz	15173-15173.7 Hz	15179-15179.7 Hz
15195-15195.7 Hz	15223-15223.7 Hz	15224-15224.7 Hz	15225-15225.6 Hz
15226-15226.7 Hz	15230-15230.7 Hz	15233-15233.7 Hz	15236-15236.7 Hz
15244-15244.7 Hz	15250-15250.7 Hz	15253-15253.7 Hz	15263-15263.7 Hz
15269-15269.7 Hz	15278-15278.7 Hz	15329-15329.7 Hz	15432-15432.7 Hz
15435-15435.7 Hz	15460-15460.7 Hz	15515-15515.7 Hz	15521-15521.7 Hz
15528-15528.7 Hz	15531-15531.7 Hz	15536-15536.7 Hz	15539-15539.7 Hz
15545-15545.7 Hz	15546.3-15547 Hz	15550.4-15551 Hz	15563-15563.7 Hz
15576-15576.7 Hz	15589-15589.7 Hz	15615-15615.7 Hz	15621-15621.7 Hz
15624-15624.7 Hz	15642-15642.7 Hz	15647-15647.7 Hz	15663-15663.7 Hz
15669-15669.7 Hz	15678-15678.7 Hz	15698-15698.7 Hz	15711-15711.7 Hz
15724-15724.7 Hz	15729-15729.7 Hz	15740-15740.7 Hz	15749-15749.7 Hz
15773-15773.7 Hz	15817-15817.7 Hz	15823-15823.7 Hz	15824-15824.7 Hz
15825-15825.7 Hz	15835-15835.7 Hz	15836-15836.7 Hz	15857-15857.7 Hz
15867-15867.7 Hz	15897-15897.7 Hz	15919-15919.7 Hz	15942-15942.7 Hz
15982-15982.7 Hz	16071-16071.7 Hz	16082-16082.7 Hz	16096-16096.7 Hz
16143-16143.7 Hz	16176-16176.7 Hz	16274-16274.7 Hz	16309-16309.7 Hz
16329-16329.7 Hz	16347-16347.7 Hz	16381-16381.7 Hz	16515-16515.7 Hz
16679-16679.7 Hz	16804-16804.7 Hz	16821-16821.7 Hz	17095-17095.7 Hz
17106-17106.7 Hz	17123-17123.7 Hz	17167-17167.7 Hz	17214-17214.7 Hz
17229-17229.7 Hz	17246-17246.7 Hz	17268-17268.7 Hz	17271-17271.7 Hz
17283-17283.7 Hz	17333-17333.7 Hz	17379-17379.7 Hz	17417-17417.7 Hz
17418-17418.7 Hz	17435-17435.7 Hz	17455-17455.7 Hz	17472-17472.7 Hz
17473-17473.7 Hz	17474-17474.7 Hz	17485-17485.7 Hz	17515-17515.7 Hz
17556-17556.7 Hz	17578.4-17579 Hz	17581-17581.7 Hz	17621-17621.7 Hz
17636-17636.7 Hz	17655-17655.7 Hz	17673-17673.7 Hz	17737-17737.7 Hz
17739-17739.7 Hz	17749-17749.7 Hz	17757-17757.7 Hz	17808-17808.7 Hz
17825-17825.7 Hz	17832-17832.7 Hz	17944-17944.7 Hz	17962-17962.7 Hz

17974-17974.7 Hz	17978-17978.7 Hz	18021-18021.7 Hz	18040-18040.7 Hz
18087-18087.7 Hz	18090-18090.7 Hz	18126-18126.7 Hz	18140-18140.7 Hz
18157-18157.7 Hz	18171-18171.7 Hz	18182-18182.7 Hz	18211-18211.7 Hz
18221-18221.7 Hz	18222-18222.7 Hz	18246-18246.7 Hz	18260-18260.7 Hz
18274-18274.7 Hz	18279-18279.7 Hz	18294-18294.7 Hz	18372-18372.7 Hz
18375-18375.7 Hz	18396-18396.7 Hz	18411-18411.7 Hz	18454-18454.7 Hz
18462-18462.7 Hz	18521-18521.7 Hz	18533-18533.7 Hz	18567-18567.7 Hz
18585-18585.7 Hz	18596-18596.7 Hz	18618-18618.7 Hz	18635-18635.7 Hz
18641-18641.7 Hz	18655-18655.7 Hz	18670.3-18671 Hz	18672-18672.7 Hz
18678-18678.7 Hz	18678.7-18679.3Hz	18686-18686.7 Hz	18742-18742.7 Hz
18831-18831.7 Hz	18842-18842.7 Hz	18884-18884.7 Hz	18895-18895.7 Hz
18897-18897.7 Hz	18922-18922.7 Hz	19026-19026.7 Hz	19059-19059.7 Hz
19125-19125.7 Hz	19269-19269.7 Hz	19342-19342.7 Hz	19365-19365.7 Hz
19384-19384.7 Hz	19393-19393.7 Hz	19419-19419.7 Hz	19426-19426.7 Hz
19433-19433.7 Hz	19437-19437.7 Hz	19446-19446.7 Hz	19447-19447.7 Hz
19453-19453.7 Hz	19464-19464.7 Hz	19476-19476.7 Hz	19489.3-19490 Hz
19510-19510.7 Hz	19577-19577.7 Hz	19686-19686.4 Hz	19715-19715.7 Hz
19724-19724.7 Hz	19744-19744.7 Hz	19782-19782.7 Hz	19817-19817.7 Hz
19819-19819.7 Hz	19823-19823.7 Hz	19827-19827.7 Hz	19829-19829.7 Hz
19861-19861.7 Hz	19867-19867.7 Hz	19889-19889.7 Hz	20097-20097.7 Hz
20123-20123.7 Hz	20128-20128.7 Hz	20144-20144.7 Hz	20149.3-20150 Hz
20173-20173.7 Hz	20219-20219.7 Hz	20229-20229.7 Hz	20237-20237.7 Hz
20254-20254.7 Hz	20256-20256.7 Hz	20278.4-20279 Hz	20284-20284.7 Hz
20286-20286.7 Hz	20324-20324.7 Hz	20499-20499.7 Hz	20513-20513.7 Hz
20634-20634.7 Hz	20747-20747.7 Hz	20818-20818.7 Hz	20825-20825.7 Hz
20908-20908.7 Hz	20948-20948.7 Hz	21119-21119.7 Hz	21167-21167.7 Hz
21291.4-21292 Hz	21372-21372.7 Hz	21389-21389.7 Hz	21430-21430.7 Hz
21445-21445.7 Hz	21466-21466.7 Hz	21467-21467.7 Hz	21490-21490.7 Hz
21546-21546.7 Hz	21567-21567.7 Hz	21616-21616.7 Hz	21636-21636.7 Hz
21663-21663.7 Hz	21664-21664.7 Hz	21708-21708.7 Hz	21714-21714.7 Hz
21720-21720.7 Hz	21778-21778.7 Hz	21833-21833.7 Hz	21840-21840.7 Hz
21844-21844.7 Hz	21854-21854.7 Hz	21865-21865.7 Hz	21870-21870.7 Hz
21876-21876.7 Hz	21887-21887.7 Hz	21890-21890.7 Hz	21894-21894.7 Hz
21963-21963.7 Hz	22020-22020.7 Hz	22073-22073.7 Hz	22119-22119.7 Hz
22167-22167.7 Hz	22312-22312.7 Hz	22338-22338.7 Hz	22344-22344.7 Hz
22350-22350.7 Hz	22353-22353.7 Hz	22355-22355.7 Hz	22361-22361.7 Hz
22411-22411.7 Hz	22419-22419.7 Hz	22422-22422.7 Hz	22423.4-22424 Hz
22425-22425.7 Hz	22430-22430.7 Hz	22437-22437.7 Hz	22443-22443.7 Hz
22444-22444.7 Hz	22454-22454.7 Hz	22459-22459.7 Hz	22484-22484.7 Hz
22491-22491.7 Hz	22519-22519.7 Hz	22535-22535.7 Hz	22538-22538.7 Hz
22548-22548.7 Hz	22559.3-22560 Hz	22582-22582.7 Hz	22597-22597.7 Hz
22709-22709.7 Hz	22730-22730.6 Hz	22742-22742.7 Hz	22743-22743.7 Hz
22763-22763.7 Hz	22822-22822.7 Hz	22832-22832.7 Hz	22840.3-22841 Hz
22846-22846.7 Hz	22859-22859.7 Hz	22863-22863.7 Hz	22867-22867.7 Hz
22879-22879.7 Hz	22932-22932.7 Hz	22973-22973.7 Hz	22983-22983.7 Hz

23012-23012.7 Hz	23044-23044.7 Hz	23111-23111.7 Hz	23117-23117.7 Hz
23137-23137.7 Hz	23216-23216.7 Hz	23237-23237.7 Hz	23246-23246.7 Hz
23249-23249.7 Hz	23258-23258.7 Hz	23259-23259.7 Hz	23261-23261.7 Hz
23284-23284.7 Hz	23344-23344.7 Hz	23412-23412.7 Hz	23444-23444.7 Hz
23509-23509.7 Hz	23526-23526.7 Hz	23548-23548.7 Hz	23560-23560.7 Hz
23589-23589.7 Hz	23624-23624.7 Hz	23652-23652.7 Hz	23659-23659.7 Hz
23667-23667.7 Hz	23686-23686.7 Hz	23730-23730.7 Hz	23921-23921.7 Hz
23946-23946.7 Hz	23957-23957.7 Hz	24014-24014.7 Hz	24060-24060.7 Hz
24073-24073.7 Hz	24085-24085.7 Hz	24112-24112.7 Hz	24117-24117.7 Hz
24142-24142.7 Hz	24146-24146.7 Hz	24174-24174.7 Hz	24196-24196.7 Hz
24198-24198.7 Hz	24228-24228.7 Hz	24275-24275.7 Hz	24413-24413.7 Hz
24508-24508.7 Hz	24609.3-24610 Hz	24789-24789.7 Hz	24811-24811.7 Hz
24841-24841.7 Hz	24869-24869.7 Hz	25199-25199.7 Hz	25449-25449.7 Hz
25454-25454.7 Hz	26044-26044.7 Hz	26073-26073.7 Hz	26113-26113.7 Hz
26142-26142.7 Hz	26163-26163.7 Hz	26164-26164.7 Hz	26212-26212.7 Hz
26343-26343.7 Hz	26403-26403.7 Hz	26465-26465.7 Hz	26534-26534.7 Hz
26722-26722.7 Hz	26861-26861.7 Hz	26954-26954.7 Hz	27114-27114.7 Hz
27214-27214.7 Hz	27291-27291.7 Hz	27328-27328.6 Hz	27478-27478.7 Hz;
27713-27713.7 Hz	28212-28212.7 Hz	28222-28222.7 Hz	28272-28272.7 Hz
28361-28361.7 Hz	28537-28537.7 Hz	28653-28653.7 Hz	28744-28744.7 Hz
30075-30075.7 Hz	30304-30304.7 Hz	30373-30373.7 Hz	30463.3-30464 Hz
30666-30666.7 Hz	30713-30713.7 Hz	30759-30759.7 Hz	30942-30942.7 Hz
31051-31051.7 Hz	31572-31572.7 Hz	31633-31633.7 Hz	31685-31685.7 Hz
31713-31713.7 Hz	31847-31847.7 Hz	32143-32143.7 Hz	32493-32493.7 Hz
32591.3-32592 Hz	32866-32866.7 Hz	32870-32870.7 Hz	33366-33366.7 Hz
33414-33414.7 Hz	33536-33536.7 Hz	33546-33546.7 Hz	33553-33553.7 Hz
33765-33765.7 Hz	34405-34405.7 Hz	34557.3-34558 Hz	34562-34562.7 Hz
34614-34614.7 Hz	34854-34854.7 Hz	34984-34984.6 Hz	35296-35296.7 Hz
35324-35324.7 Hz	35543-35543.7 Hz	35826-35826.7 Hz	36343-36343.7 Hz
36410-36410.7 Hz	37527-37527.7 Hz	37546-37546.7 Hz	37680-37680.7 Hz
38144-38144.7 Hz	38216-38216.7 Hz	38483-38483.7 Hz	38659-38659.7 Hz
38682-38682.7 Hz	39035-39035.7 Hz	39053-39053.7 Hz	39153-39153.7 Hz
39183-39183.7 Hz	39223-39223.7 Hz	39423-39423.7 Hz	39510-39510.7 Hz
39586-39586.7 Hz	39729-39729.7 Hz	40111-40111.7 Hz	40133-40133.7 Hz
40394-40394.7 Hz	40489-40489.7 Hz	40595-40595.7 Hz	40693-40693.7 Hz
40734-40734.7 Hz	40762-40762.7 Hz	40896-40896.7 Hz	40899-40899.7 Hz
41062-41062.7 Hz	41172-41172.7 Hz	41244-41244.7 Hz	41279-41279.7 Hz
41325-41325.7 Hz	41424-41424.7 Hz	41473-41473.7 Hz	41534-41534.7 Hz
41557-41557.7 Hz	41561-41561.7 Hz	41574-41574.7 Hz	41623-41623.7 Hz
41735-41735.7 Hz	41859-41859.7 Hz	41861-41861.7 Hz	41883-41883.7 Hz
42146-42146.7 Hz	42293-42293.7 Hz	42402-42402.7 Hz	42544-42544.7 Hz
42692.3-42693 Hz	42713-42713.7 Hz	42812-42812.7 Hz	42813-42813.7 Hz
42913-42913.7 Hz	42923-42923.7 Hz	43162-43162.7 Hz	43166-43166.7 Hz
43172-43172.7 Hz	43243-43243.7 Hz	43325-43325.7 Hz	43379-43379.7 Hz
43413-43413.7 Hz	43542-43542.7 Hz	43603-43603.7 Hz	43633-43633.7 Hz

43692-43692.7 Hz	43851-43851.7 Hz	44162-44162.7 Hz	44517-44517.7 Hz
44531-44531.7 Hz	44575.3-44576 Hz	44652-44652.7 Hz	44692-44692.7 Hz
44742-44742.7 Hz	44773-44773.7 Hz	44855-44855.7 Hz	44913-44913.7 Hz
45163-45163.7 Hz	45362-45362.7 Hz	45393-45393.7 Hz	45474-45474.7 Hz
45490-45490.7 Hz	45526-45526.7 Hz	46112-46112.7 Hz	46143-46143.7 Hz
46282-46282.7 Hz	46285-46285.7 Hz	46340-46340.7 Hz	46662-46662.7 Hz
46666-46666.7 Hz	46672.3-46673 Hz	46673-46673.7 Hz	46689-46689.6 Hz
46746-46746.7 Hz	46793-46793.7 Hz	47036-47036.7 Hz	47297-47297.7 Hz
47693.4-47694 Hz	48103-48103.7 Hz	48173-48173.7 Hz	48204-48204.7 Hz
48314-48314.7 Hz	48535-48535.7 Hz	48583-48583.7 Hz	48653-48653.7 Hz
48683-48683.7 Hz	48793-48793.7 Hz	49434-49434.7 Hz	50072-50072.7 Hz
50229-50229.7 Hz	50243-50243.7 Hz	50254-50254.7 Hz	50292-50292.7 Hz
51008-51008.7 Hz	51592-51592.7 Hz	51946-51946.7 Hz	52063-52063.7 Hz
52097-52097.7 Hz	52752-52752.7 Hz	52786-52786.7 Hz	52812-52812.7 Hz
52912-52912.7 Hz	53079-53079.7 Hz	53947-53947.7 Hz	54293-54293.7 Hz
54297-54297.7 Hz	55072-55072.7 Hz	55592-55592.7 Hz	55723-55723.7 Hz
56093-56093.7 Hz	57927-57927.7 Hz	58094-58094.7 Hz	59089-59089.7 Hz
59288-59288.7 Hz	59907-59907.7 Hz	59997-59997.7 Hz	61287-61287.7 Hz
61789-61789.7 Hz	65586-65586.7 Hz	66553-66553.7 Hz	66969-66969.7 Hz
67683-67683.7 Hz	67697-67697.6 Hz	69481-69481.7 Hz	71204-71204.7 Hz
71447-71447.7 Hz	71635-71635.7 Hz	74017-74017.7 Hz	76227-76227.7 Hz
76537-76537.7 Hz	76659-76659.7 Hz	78229-78229.7 Hz	78477.4-78478 Hz
79658-79658.7 Hz	79867-79867.7 Hz	80715-80715.7 Hz	80993.3-80994 Hz
81999-81999.7 Hz	82024-82024.7 Hz	82845-82845.7 Hz	83612-83612.7 Hz
84086-84086.7 Hz	85810-85810.7 Hz	86521-86521.7 Hz	87507-87507.7 Hz
87798.3-87799 Hz	88281-88281.7 Hz	88898-88898.7 Hz	89748-89748.7 Hz
91245-91245.7 Hz	91271-91271.7 Hz	91877-91877.7 Hz	92182-92182.7 Hz
92361.3-92362 Hz	92787-92787.7 Hz	93332-93332.7 Hz	93530-93530.7 Hz
94494-94494.7 Hz	94968.3-94969 Hz	95245-95245.7 Hz	95742-95742.7 Hz
99281-99281.7 Hz	99846-99846.7 Hz		

[0081] In certain embodiments, the cancer specific AM frequencies provided in Table A may also be used in combination with one or more of the AM frequencies disclosed in the '365 patent. One or more of the AM frequencies of Table A may be combined with one or more of the frequencies as provided below in Tables 2, 4, 7, 13, 16 18, 20 and 23-32. In preferred embodiments, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more frequencies are used in the methods for the treatment of cancer, which frequencies are selected from Table A and, optionally from Tables 2, 4, 7, 13, 16 18, 20 and 23-32, provided that at least one or more frequencies are selected from Table A.

[0082] The device and method described herein for the treatment of different cancer types by the application to the patient of electromagnetic fields that are amplitude-modulated at particular and cancer-specific frequencies may be used as a stand-alone cancer therapy or use in conjunction with other now or hereafter known cancer treatment modalities. The device and method described herein, may be used in combination with surgical intervention, radiotherapy and/or chemotherapy.

[0083] When used in combination with other cancer therapies, the treatments methods described in this disclosure may be used as an adjuvant or neoadjuvant therapy in the treatment of cancer. For neoadjuvant therapy, the treatment methods described in this disclosure are administered to the subject before a main treatment. Such neoadjuvant therapy may be applied to reduce the extent and/or size of the cancer prior to the use of a more radical treatment intervention, or to lower the risk of re-occurrence and/or metastasis following the main treatment. The use of the disclosed methods as a neoadjuvant therapy may result in the main treatment being easier and more likely to succeed, thereby reducing the side-effects and/or improving the outcome of the more extensive treatment. The main treatment may be a surgical intervention, radiotherapy and/or chemotherapy.

[0084] The treatments methods described in this disclosure may be used as an adjuvant therapy, which is administered in addition to the main therapy to improve its effectiveness. The main therapy may be surgery, radiotherapy and/or chemotherapy. The adjuvant therapy may be administered concurrently with the main therapy and/or after the main therapy. The adjuvant therapy may be used to reduce or prevent recurrence of the cancer after a subject is treated by a main therapy, such as surgery, radiotherapy and/or chemotherapy.

[0085] Treatment of Breast Cancer

[0086] Breast cancer may be treated according to the methods disclosed herein by the application of breast cancer specific amplitude-modulated frequencies. Breast cancer specific frequencies are provided below in Table 1. A patient suffering from breast cancer may be treated with any number of the frequencies provided in Table 1, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more of the listed breast cancer specific frequencies may be used in the treatment of breast cancer. It should be noted that while the table below provides certain frequencies for treatment of breast cancer, the disclosure is not so

limiting, and other frequencies discovered to be effective in the treatment of breast cancer are within the scope of this disclosure. Furthermore, each of the frequencies listed below include values that are close to (i.e., within +/- 0.1 Hz), but not exactly, the number or range.

[0087] Table 1: Amplitude-modulated frequencies discovered to be effective for treatment of breast cancer.

374-374.7 Hz	419.8-420.4 Hz	420.4-420.8 Hz	429-429.7 Hz	1336-1336.7 Hz
1369-1369.7 Hz	1728-1728.7 Hz	1771.8-1772.3 Hz	1772.3-1772.8 Hz	2811-2811.7 Hz
2824-2824.7 Hz	2840-2840.7 Hz	2858.8-2859.35Hz	2860-2860.7 Hz	2878-2878.7 Hz
2890-2890.7 Hz	3209-3209.7 Hz	3322-3322.7 Hz	3360-3360.7 Hz	3663-3663.7 Hz
3839-3839.7 Hz	3842.4-3843 Hz	3854-3854.7 Hz	3936-3936.7 Hz	4323-4323.7 Hz
4329-4329.7 Hz	4416-4416.7 Hz	4430-4430.7 Hz	4477.4-4478 Hz	4480.9-4481.35Hz
4714-4714.7 Hz	4805.3-4806 Hz	4813-4813.7 Hz	4819-4819.7 Hz	4822-4822.7 Hz
4823-4823.7 Hz	4833-4833.7 Hz	4890-4890.7 Hz	5154-5154.7 Hz	5243-5243.7 Hz
5407.3-5408 Hz	5716-5716.7 Hz	5976-5976.7 Hz	6024-6024.7 Hz	6070-6070.7 Hz
6094-6094.7 Hz	6414-6414.7 Hz	6717-6717.7 Hz	6751-6751.7 Hz	6968.4-6969 Hz
7013-7013.7 Hz	7042-7042.7 Hz	7080-7080.7 Hz	7145.4-7146 Hz	7151-7151.7 Hz
7158-7158.7 Hz	7225-7225.7 Hz	8332-8332.7 Hz	8824-8824.7 Hz	8837-8837.7 Hz
9935-9935.7 Hz	9961-9961.7 Hz	10013-10013.7 Hz	10064-10064.7 Hz	10339.8-10340.4 Hz
10384-10384.7 Hz	10745-10745.7 Hz	10788-10788.7 Hz	10834-10834.7 Hz	10854-10854.7 Hz
10873-10873.7 Hz	10894-10894.7 Hz	11163-11163.7 Hz	11414-11414.7 Hz	11421-11421.7 Hz
11429-11429.7 Hz	11719-11719.7 Hz	11745-11745.7 Hz	11931-11931.7 Hz	11974-11974.7 Hz
11993-11993.7 Hz	12118-12118.7 Hz	12137-12137.7 Hz	12144-12144.7 Hz	12318-12318.7 Hz
12342-12342.7 Hz	12364-12364.7 Hz	12557-12557.7 Hz	12588-12588.7 Hz	13329-13329.7 Hz
13377-13377.7 Hz	13386-13386.7 Hz	13644-13644.7 Hz	13661-13661.7 Hz	13713-13713.7 Hz
14164-14164.7 Hz	14308-14308.7 Hz	14333.4-14333.9 Hz	14432-14432.7 Hz	14524-14524.7 Hz
14589-14589.7 Hz	14729-14729.7 Hz	14813-14813.7 Hz	14835-14835.7 Hz	14858-14858.7 Hz
14885-14885.7 Hz	15035-15035.6 Hz	15067-15067.7 Hz	15126-15126.7 Hz	15195-15195.7 Hz
15269-15269.7 Hz	15432-15432.7 Hz	15432-15432.7 Hz	15563-15563.7 Hz	15621-15621.7 Hz
15624-15624.7 Hz	15642-15642.7 Hz	15647-15647.7 Hz	15669-15669.7 Hz	15698-15698.7 Hz
15823-15823.7 Hz	16347-16347.7 Hz	17832-17832.7 Hz	18221-18221.7 Hz	18260-18260.7 Hz
19433-19433.7 Hz	19446-19446.7 Hz	19489.3-19490 Hz	19782-19782.7 Hz	19827-19827.7 Hz
21291.4-21292 Hz	21887-21887.7 Hz	22020-22020.7 Hz	22419-22419.7 Hz	22422-22422.7 Hz
22425-22425.7 Hz	22444-22444.7 Hz	22491-22491.7 Hz	22840.3-22841 Hz	22859-22859.7 Hz
22973-22973.7 Hz	22983-22983.7 Hz	23258-23258.7 Hz	23652-23652.7 Hz	24174-24174.7 Hz
24811-24811.7 Hz	26954-26954.7 Hz	27114-27114.7 Hz	30463.3-30464 Hz	34557.3-34558 Hz
34854-34854.7 Hz	38144-38144.7 Hz	38682-38682.7 Hz	41561-41561.7 Hz	41623-41623.7 Hz
41735-41735.7 Hz	42713-42713.7 Hz	44575.3-44576 Hz	46662-46662.7 Hz	48173-48173.7 Hz
50292-50292.7 Hz				

[0088] In certain embodiments, the frequencies listed above may also be used in combination with one or more of the frequencies disclosed in the '365 patent. Specifically, treatment modalities for treatment of breast cancer in accordance with this disclosure may include application of one,

some or all of the above listed frequencies with one or more of the frequencies disclosed in Table 2 for breast cancer. Alternatively and/or additionally, the frequencies disclosed in the '365 patent may be used for treatment of breast cancer using the methods and systems described herein.

[0089] Table 2: Amplitude-modulated frequencies for treatment of breast cancer.

78.76 Hz	181.821 Hz	331.3 Hz	414.817 Hz	430.439 Hz
440.933 Hz	618.8 Hz	628.431 Hz	655.435 Hz	677.972 Hz
721.313 Hz	752.933 Hz	813.205 Hz	818.342 Hz	825.145 Hz
839.521 Hz	841.211 Hz	843.312 Hz	891.901 Hz	929.095 Hz
929.1 Hz	929.131 Hz	958.929 Hz	1021 Hz	1021.311 Hz
1156.79 Hz	1372.207 Hz	1372.934 Hz	1555.282 Hz	1588.721 Hz
1624.802 Hz	1670.699 Hz	1821.729 Hz	1836.219 Hz	2193.937 Hz
2221.323 Hz	2278.312 Hz	2332.949 Hz	2357.832 Hz	2381.443 Hz
2417.323 Hz	2423.292 Hz	2431.334 Hz	2450.332 Hz	2551.313 Hz
2556.221 Hz	2598.853 Hz	2621.322 Hz	2740.191 Hz	2823.428 Hz
2831.386 Hz	2851.347 Hz	2885.322 Hz	2919.273 Hz	3074.333 Hz
3115.188 Hz	3239.212 Hz	3249.529 Hz	3405.182 Hz	3432.274 Hz
3434.693 Hz	3594.231 Hz	3647.619 Hz	3657.931 Hz	3742.957 Hz
3753.382 Hz	3830.732 Hz	3855.823 Hz	3916.321 Hz	3935.218 Hz
3975.383 Hz	3993.437 Hz	4153.192 Hz	4194.968 Hz	4241.321 Hz
4243.393 Hz	4253.432 Hz	4314.444 Hz	4318.222 Hz	4375.962 Hz
4393.419 Hz	4394.134 Hz	4417.243 Hz	4481.463 Hz	4482.223 Hz
4495.138 Hz	4549.808 Hz	4558.306 Hz	4751.908 Hz	4779.451 Hz
4838.674 Hz	4871.513 Hz	4878.687 Hz	4895.296 Hz	4962.213 Hz
4969.224 Hz	4979.321 Hz	5027.231 Hz	5059.792 Hz	5118.094 Hz
5176.287 Hz	5365.222 Hz	5376.392 Hz	5426.323 Hz	5431.542 Hz
5521.621 Hz	5536.242 Hz	5739.422 Hz	5745.218 Hz	5821.975 Hz
6037.432 Hz	6044.333 Hz	6086.256 Hz	6208.932 Hz	6212.808 Hz
6231.031 Hz	6280.321 Hz	6329.391 Hz	6476.896 Hz	6477.098 Hz
6497.319 Hz	6504.983 Hz	6651.276 Hz	6657.913 Hz	6757.901 Hz
6758.321 Hz	6855.286 Hz	6858.121 Hz	6898.489 Hz	6915.886 Hz
7092.219 Hz	7120.218 Hz	7127.311 Hz	7156.489 Hz	7208.821 Hz
7224.197 Hz	7282.169 Hz	7285.693 Hz	7376.329 Hz	7488.742 Hz
7541.319 Hz	7577.421 Hz	7621.085 Hz	7627.207 Hz	7650.939 Hz
7668.231 Hz	7691.212 Hz	7842.184 Hz	7849.231 Hz	7915.423 Hz
7932.482 Hz	7949.196 Hz	7967.311 Hz	8021.229 Hz	8070.181 Hz
8114.032 Hz	8149.922 Hz	8194.19 Hz	8245.801 Hz	8328.322 Hz
8330.534 Hz	8355.987 Hz	8408.121 Hz	8431.184 Hz	8452.119 Hz
8548.324 Hz	8749.383 Hz	8782.421 Hz	8784.424 Hz	8887.182 Hz
8894.222 Hz	8923.1 Hz	8923.361 Hz	8935.752 Hz	8936.1 Hz
9012.282 Hz	9012.896 Hz	9060.323 Hz	9072.409 Hz	9131.419 Hz
9199.232 Hz	9245.927 Hz	9270.322 Hz	9279.193 Hz	9393.946 Hz
10227.242 Hz	10340.509 Hz	10363.313 Hz	10449.323 Hz	10456.383 Hz
10468.231 Hz	10470.456 Hz	10472.291 Hz	10689.339 Hz	10832.222 Hz
11525.121 Hz	11541.915 Hz	11812.328 Hz	11812.419 Hz	11840.323 Hz
11925.089 Hz	12123.281 Hz	12267.281 Hz	12294.283 Hz	12334.419 Hz
12611.288 Hz	12629.222 Hz	12633.372 Hz	12648.221 Hz	13315.335 Hz

13331.358 Hz	13735.241 Hz	13826.325 Hz	13853.232 Hz	13915.231 Hz
13990.123 Hz	14122.942 Hz	14162.332 Hz	14519.232 Hz	14543.128 Hz
15651.323 Hz	17352.085 Hz	17970.122 Hz	18524.419 Hz	18619.331 Hz
18662.112 Hz	18679.492 Hz	18785.463 Hz	19385.893 Hz	19406.211 Hz
22479.333 Hz	30182.932 Hz			

[0090] One or more of the AM frequencies of Table 1 may be used in combination with one or more of the frequencies provided in Table 2. In preferred embodiments, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more frequencies are used in the methods for the treatment of breast cancer, which frequencies are selected from Table 1 and, optionally from Table 2, provided that at least one or more frequencies are selected from Table 1.

[0091] Treatment of neuroendocrine tumors

[0092] Neuroendocrine tumors may be treated according to the methods disclosed herein by the application of neuroendocrine tumor specific amplitude-modulated frequencies. Neuroendocrine tumors specific frequencies are provided below in Table 3. A patient suffering from neuroendocrine tumors may be treated with any number of the frequencies provided in Table 3, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more of the listed neuroendocrine tumor specific frequencies may be used in the treatment of neuroendocrine tumors. It should be noted that while the table below provides certain frequencies for treatment of neuroendocrine tumors, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of neuroendocrine tumors are within the scope of this disclosure. Furthermore, each of the frequencies listed below include values that are close to (i.e., within +/- 0.1 Hz), but not exactly, the number or range.

[0093] Table 3: Amplitude-modulated frequencies discovered to be effective for treatment of neuroendocrine tumors.

843-843.7 Hz	1656-1656.7 Hz	2423-2423.7 Hz	2480-2480.7 Hz	2707-2707.7 Hz
2890-2890.7 Hz	3080.3-3081 Hz	3661-3661.7 Hz	3678-3678.7 Hz	3976.4-3977 Hz
4048-4048.7 Hz	4055-4055.7 Hz	4368.3-4369 Hz	4459-4459.7 Hz	4621-4621.7 Hz
4837-4837.7 Hz	4866-4866.7 Hz	5165.4-5166 Hz	5265-5265.7 Hz	5270-5270.7 Hz
6436-6436.7 Hz	7037-7037.7 Hz	8008-8008.7 Hz	8024-8024.7 Hz	8097-8097.7 Hz
8427-8427.7 Hz	8478.3-8479 Hz	8480-8480.7 Hz	8492-8492.7 Hz	8853-8853.7 Hz
8877-8877.7 Hz	9122-9122.7 Hz	9131-9131.7 Hz	9174-9174.7 Hz	10073-10073.7 Hz

10848.7-10849.3 Hz	11267-11267.7 Hz	11336-11336.7 Hz	11524-11524.7 Hz	11551.3-11552 Hz
11927.4-11928 Hz	12309-12309.7 Hz	13617-13617.7 Hz	13674-13674.7 Hz	13774-13774.7 Hz
14350-14350.7 Hz	14456-14456.7 Hz	14479-14479.7 Hz	14540-14540.7 Hz	14553-14553.7 Hz
14756-14756.7 Hz	14922-14922.7 Hz	14961-14961.7 Hz	15226-15226.7 Hz	15817-15817.7 Hz
15825-15825.7 Hz	15835-15835.7 Hz	15836-15836.7 Hz	15897-15897.7 Hz	16071-16071.7 Hz
17417-17417.7 Hz	17418-17418.7 Hz	17473-17473.7 Hz	17474-17474.7 Hz	17621-17621.7 Hz
17655-17655.7 Hz	18655-18655.7 Hz	18672-18672.7 Hz	18678-18678.7 Hz	19393-19393.7 Hz
19426-19426.7 Hz	19817-19817.7 Hz	19819-19819.7 Hz	19861-19861.7 Hz	19867-19867.7 Hz
20818-20818.7 Hz	21708-21708.7 Hz	21720-21720.7 Hz	21865-21865.7 Hz	21876-21876.7 Hz
22119-22119.7 Hz	22454-22454.7 Hz	24073-24073.7 Hz	30304-30304.7 Hz	31685-31685.7 Hz
43633-43633.7 Hz	44773-44773.7 Hz	46662-46662.7 Hz	46793-46793.7 Hz	48103-48103.7 Hz
50243-50243.7 Hz				

[0094] In certain embodiments, the frequencies listed above may also be used in combination with one or more of the frequencies disclosed in the '365 patent. Specifically, treatment modalities for treatment of neuroendocrine tumors in accordance with this disclosure may include application of some or all of the above listed frequencies with one or more of the frequencies disclosed in the Table 4 for neuroendocrine cancer. Alternatively and/or additionally, the frequencies disclosed in the '365 patent may be used for treatment of neuroendocrine tumors using the methods and systems described herein.

[0095] Table 4: Amplitude-modulated frequencies for treatment of neuroendocrine tumors.

1766.335 Hz	2408.225 Hz	2441.502 Hz	2647.938 Hz	2741.261 Hz
3020.212 Hz	3128.822 Hz	3238.742 Hz	3296.431 Hz	3348.783 Hz
3360.971 Hz	3440.212 Hz	3533.328 Hz	3666.283 Hz	4079.282 Hz
4243.393 Hz	4426.387 Hz	5245.818 Hz	5536.242 Hz	5548.879 Hz
5739.422 Hz	5849.241 Hz	6291.631 Hz	6406.891 Hz	6780.679 Hz
7151.264 Hz	7482.245 Hz	7575.393 Hz	8359.932 Hz	9073.418 Hz

[0096] One or more of the AM frequencies of Table 3 may be combined with one or more of the frequencies as provided in Table 4. In preferred embodiments, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more frequencies are used in the methods for the treatment of breast cancer, which frequencies are selected from Table 3 and, optionally from Table 4, provided that at least one or more frequencies are selected from Table 3.

[0097] Treatment of non-Hodgkin lymphoma

[0098] Non-Hodgkin lymphoma may be treated according to the methods disclosed herein by the application of non-Hodgkin lymphoma specific amplitude-modulated frequencies. Non-

Hodgkin lymphoma tumor specific frequencies are provided below in Table 5. A patient suffering from non-Hodgkin lymphoma may be treated with any number of the frequencies provided in Table 5, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more of the listed non-Hodgkin lymphoma specific frequencies may be used in the treatment of non-Hodgkin lymphoma tumors. It should be noted that while the table below provides certain frequencies for treatment of non-Hodgkin lymphoma tumors, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of non-Hodgkin lymphoma tumors are within the scope of this disclosure. Furthermore, each of the frequencies listed below include values that are close to (i.e., within ± 0.1 Hz), but not exactly, the number or range.

[0099] Table 5: Amplitude-modulated frequencies discovered to be effective for treatment of non-Hodgkin lymphoma.

3222-3222.7 Hz	3228-3228.7 Hz	3272-3272.7 Hz	3618-3618.7 Hz	4523-4523.7 Hz
4556-4556.7 Hz	4584-4584.7 Hz	5116-5116.7 Hz	5142-5142.7 Hz	6413-6413.7 Hz
6419.3-6420 Hz	6441-6441.7 Hz	6474-6474.7 Hz	6911.3-6912 Hz	6912-6912.7 Hz
6943-6943.7 Hz	7551-7551.7 Hz	7811-7811.7 Hz	7857-7857.7 Hz	7865-7865.7 Hz
8125-8125.7 Hz	9106-9106.7 Hz	9161-9161.7 Hz	9179-9179.7 Hz	9230-9230.7 Hz
9236-9236.7 Hz	9247-9247.7 Hz	11730.6-11731.1 Hz	11785-11785.7 Hz	13222-13222.7 Hz
13751-13751.7 Hz	13780-13780.7 Hz	15006-15006.7 Hz	15033-15033.7 Hz	15056-15056.7 Hz
15729-15729.7 Hz	15773-15773.7 Hz	17229-17229.7 Hz	17246-17246.7 Hz	17268-17268.7 Hz
20256-20256.7 Hz	22444-22444.7 Hz	30666-30666.7 Hz	30713-30713.7 Hz	30843-30843.7 Hz
38216-38216.7 Hz				

[00100] Treatment of adenocarcinoma of pancreas

[00101] Adenocarcinoma of pancreas may be treated according to the methods disclosed herein by the application of adenocarcinoma of pancreas specific amplitude-modulated frequencies. Adenocarcinoma of pancreas specific frequencies are provided below in Table 6. A patient suffering from adenocarcinoma of pancreas may be treated with any number of the frequencies provided in Table 6, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more of the listed specific frequencies may be used in the treatment of adenocarcinoma of pancreas. It should be noted that while the table below provides

certain frequencies for treatment of adenocarcinoma of pancreas, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of adenocarcinoma of pancreas are within the scope of this disclosure. Furthermore, each of the frequencies listed below include values that are close to (i.e., within +/- 0.1 Hz), but not exactly, the number or range.

[00102] Table 6: Amplitude-modulated frequencies discovered to be effective for treatment of adenocarcinoma of the pancreas.

403-403.7 Hz	441-441.7 Hz	527-527.7 Hz	624.32-624.8 Hz	633-633.7 Hz
727-727.7 Hz	759-759.7 Hz	785-785.7 Hz	811-811.7 Hz	829-829.7 Hz
841-841.7 Hz	962-962.7 Hz	964.5-965 Hz	972-972.7 Hz	974.4-975 Hz
977-977.7 Hz	1179.2-1179.8 Hz	1250.3-1251 Hz	1314-1314.7 Hz	1352-1352.7 Hz
1622-1622.7 Hz	1652-1652.7 Hz	1656-1656.7 Hz	1670.3-1671 Hz	1914-1914.7 Hz
2346-2346.7 Hz	2362-2362.7 Hz	2380-2380.7 Hz	2469.2-2469.7 Hz	2627-2627.7 Hz
2706-2706.7 Hz	2720.3-2721 Hz	2726-2726.7 Hz	2754-2754.7 Hz	2778-2778.7 Hz
2842-2842.7 Hz	2864-2864.7 Hz	2940-2940.7 Hz	2988-2988.7 Hz	3234-3234.7 Hz
3280.6-3281.3 Hz	3366-3366.7 Hz	3428-3428.7 Hz	3446-3446.7 Hz	3466-3466.7 Hz
3523-3523.7 Hz	3605-3605.7 Hz	3622.5-3623 Hz	3627-3627.7 Hz	3631-3631.7 Hz
3656-3656.7 Hz	3663-3663.7 Hz	3667-3667.7 Hz	3687-3687.7 Hz	4152-4152.7 Hz
4233-4233.7 Hz	4249-4249.7 Hz	4281-4281.7 Hz	4368.3-4369 Hz	4417-4417.7 Hz
4425-4425.7 Hz	4440.4-4441 Hz	4465-4465.7 Hz	4480.9-4481.35 Hz	4580.11-4580.7 Hz
4621-4621.7 Hz	4637-4637.7 Hz	4657-4657.6 Hz	4725-4725.7 Hz	4733-4733.7 Hz
4749-4749.7 Hz	4841-4841.7 Hz	4924-4924.7 Hz	4946-4946.7 Hz	5063-5063.7 Hz
5089-5089.7 Hz	5378.2-5378.7 Hz	5424-5424.7 Hz	5438-5438.7 Hz	6112-6112.7 Hz
6159-6159.7 Hz	6161.3-6162 Hz	6167-6167.7 Hz	6179-6179.7 Hz	6220.3-6221 Hz
6346-6346.7 Hz	6380.4-6381 Hz	6808-6808.7 Hz	6825-6825.7 Hz	6847-6847.7 Hz
6850-6850.7 Hz	6878-6878.7 Hz	7036-7036.7 Hz	7037-7037.7 Hz	7118-7118.7 Hz
7160-7160.7 Hz	7432-7432.7 Hz	7541-7541.7 Hz	7676-7676.7 Hz	7936-7936.7 Hz
8024-8024.7 Hz	8032-8032.7 Hz	8043-8043.7 Hz	8447-8447.7 Hz	8734-8734.7 Hz
8756-8756.7 Hz	8757-8757.7 Hz	8809-8809.7 Hz	8823-8823.7 Hz	8841-8841.7 Hz
8845-8845.7 Hz	8846-8846.7 Hz	8872-8872.7 Hz	9133-9133.7 Hz	9155.7-9156.2 Hz
9520-9520.7 Hz	9859-9859.7 Hz	10342-10342.6 Hz	10352-10352.7 Hz	10378-10378.7 Hz
10436-10436.7 Hz	10566.4-10567 Hz	10633-10633.7 Hz	10641-10641.7 Hz	10671-10671.7 Hz
10708-10708.7 Hz	10859-10859.7 Hz	10876-10876.7 Hz	11174-11174.7 Hz	11220-11220.7 Hz
11247-11247.7 Hz	11264-11264.7 Hz	11284-11284.7 Hz	11630-11630.7 Hz	11994-11994.7 Hz
12120.2-12120.7 Hz	12135-12135.7 Hz	12152-12152.7 Hz	12184-12184.7 Hz	12711-12711.7 Hz
13375-13375.7 Hz	13571-13571.7 Hz	13636.2-13636.7 Hz	13738.3-13739 Hz	13947-13947.7 Hz
14116-14116.7 Hz	14279-14279.7 Hz	14376-14376.7 Hz	14462-14462.7 Hz	14519-14519.7 Hz
14558-14558.7 Hz	14729-14729.7 Hz	14940.4-14941 Hz	14957-14957.7 Hz	15179-15179.7 Hz

15225-15225.6 Hz	15536-15536.7 Hz	15576-15576.7 Hz	15597-15597.7 Hz	15663-15663.7 Hz
15678-15678.7 Hz	15711-15711.7 Hz	15724-15724.7 Hz	15740-15740.7 Hz	15749-15749.7 Hz
15824-15824.7 Hz	15867-15867.7 Hz	16143-16143.7 Hz	17214-17214.7 Hz	17253-17253.7 Hz
17271-17271.7 Hz	17283-17283.7 Hz	17739-17739.7 Hz	17944-17944.7 Hz	17962-17962.7 Hz
18279-18279.7 Hz	18678.7-18679.3 Hz	18921-18921.7 Hz	18922-18922.7 Hz	19059-19059.7 Hz
19464-19464.7 Hz	19686-19686.4 Hz	19724-19724.7 Hz	20123-20123.7 Hz	20128-20128.7 Hz
20144-20144.7 Hz	20149.3-20150 Hz	20219-20219.7 Hz	20254-20254.7 Hz	21546-21546.7 Hz
21616-21616.7 Hz	21664-21664.7 Hz	21840-21840.7 Hz	21876-21876.7 Hz	21894-21894.7 Hz
22355-22355.7 Hz	22430-22430.7 Hz	22597-22597.7 Hz	22742-22742.7 Hz	22822-22822.7 Hz
22846-22846.7 Hz	22867-22867.7 Hz	23237-23237.7 Hz	23284-23284.7 Hz	24228-24228.7 Hz
24275-24275.7 Hz	24508-24508.7 Hz	24609.3-24610 Hz	24841-24841.7 Hz	27478-27478.7 Hz
32143-32143.7 Hz	32493-32493.7 Hz	33546-33546.7 Hz	40133-40133.7 Hz	40595-40595.7 Hz
44913-44913.7 Hz	45474-45474.7 Hz	46672.3-46673 Hz	48204-48204.7 Hz	48314-48314.7 Hz
50072-50072.7 Hz	50254-50254.7 Hz	52812-52812.7 Hz	79867-79867.7 Hz	80993.3-80994 Hz
91877-91877.7 Hz	95742-95742.7 Hz.			

[00103] In certain embodiments, the frequencies listed above may also be used in combination with one or more of the frequencies disclosed in the '365 patent. Specifically, treatment modalities for treatment of adenocarcinoma of the pancreas in accordance with this disclosure may include application of some or all of the above listed frequencies with one or more of the frequencies disclosed in the Table 7. Alternatively and/or additionally, the frequencies disclosed in the '365 patent may be used for treatment of adenocarcinoma of pancreas state using the methods and systems described herein.

[00104] Table 7: Amplitude-modulated frequencies for treatment of pancreatic cancer.

331.3 Hz	331.365 Hz	436.3 Hz	436.332 Hz	447.942 Hz
476.127 Hz	559.292 Hz	589.187 Hz	624.218 Hz	727 Hz
734.921 Hz	809.313 Hz	845.309 Hz	870.4 Hz	963.221 Hz
1156.79 Hz	1157 Hz	1179 Hz	1360.133 Hz	1372.207 Hz
1372.934 Hz	1804.126 Hz	1816.221 Hz	1873.477 Hz	1967.211 Hz

1990.482 Hz	2278.312 Hz	2315.921 Hz	2320.315 Hz	2334.178 Hz
2381.443 Hz	2469 Hz	2477.919 Hz	2542.221 Hz	2598.853 Hz
2647.938 Hz	2685.081 Hz	2716.095 Hz	2721.331 Hz	2732.231 Hz
2809.849 Hz	2823.428 Hz	2835.332 Hz	3134.313 Hz	3241.461 Hz
3255.219 Hz	3263.432 Hz	3286.255 Hz	3330.935 Hz	3373.892 Hz
3438.109 Hz	3449.219 Hz	3535.219 Hz	3549.215 Hz	3564.419 Hz
3619.412 Hz	3622.312 Hz	3638.432 Hz	3696.424 Hz	3943.214 Hz
3976.929 Hz	4014.889 Hz	4041.219 Hz	4044.195 Hz	4056.384 Hz
4085.971 Hz	4144.592 Hz	4153.192 Hz	4161.889 Hz	4243.393 Hz
4332.498 Hz	4341.423 Hz	4355.327 Hz	4417.885 Hz	4422.322 Hz
4451.297 Hz	4486.384 Hz	4558.306 Hz	4580 Hz	4685.082 Hz
4839.589 Hz	5151.402 Hz	5209.911 Hz	5262.282 Hz	5271.312 Hz
5387.73 Hz	5494.928 Hz	5521.221 Hz	5573.209 Hz	5609.382 Hz
5929.616 Hz	5948.897 Hz	5966.112 Hz	5976.825 Hz	6064.197 Hz
6086.256 Hz	6157.253 Hz	6215.298 Hz	6333.917 Hz	6365.242 Hz
6558.342 Hz	6568.278 Hz	6823.194 Hz	6853.391 Hz	6855.286 Hz
7213.204 Hz	7228.528 Hz	7238.232 Hz	7277.921 Hz	7280.422 Hz
7320.494 Hz	7366.412 Hz	7534.221 Hz	7548.713 Hz	7567.127 Hz
7620.851 Hz	7663.209 Hz	7725.203 Hz	7852.233 Hz	7920.879 Hz
7985.122 Hz	8008.323 Hz	8013.312 Hz	8045.484 Hz	8242.332 Hz
8351.622 Hz	8408.121 Hz	8455.894 Hz	8551.231 Hz	8743.321 Hz
8789.631 Hz	8868.809 Hz	9012.241 Hz	9028.994 Hz	9131.232 Hz
9658.296 Hz	9663.495 Hz	9680.737 Hz	9824.442 Hz	9942.321 Hz
10279.122 Hz	10388.49 Hz	10438.495 Hz	10518.311 Hz	10528.239 Hz
10582.095 Hz	10926.111 Hz	10948.411 Hz	10955.558 Hz	11538.193 Hz
11904.741 Hz	12255.229 Hz	12613.341 Hz	12819.942 Hz	13674.482 Hz
13731.322 Hz	14525.312 Hz	14537.218 Hz	14549.331 Hz	14845.453 Hz
14944.989 Hz	15246.315 Hz	18668.239 Hz	19321.231 Hz	19347.208 Hz
30182.932 Hz				

[00105] One or more of the AM frequencies of Table 6 may be used in combination with one or more of the frequencies provided in Table 7. In preferred embodiments, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more frequencies are used in the methods for the treatment of adenocarcinoma of the pancreas, which frequencies are selected from Table 6 and, optionally from Table 7, provided that at least one or more frequencies are selected from Table 6.

[00106] Treatment of head and neck cancer

[00107] Head and neck cancer may be treated according to the methods disclosed herein by the application of head and neck cancer specific amplitude-modulated frequencies. Head and neck cancer specific frequencies are provided below in Table 8. A patient suffering from head and neck cancer may be treated with any number of the frequencies provided in Table 8, however it is

generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more of the listed head and neck cancer specific frequencies may be used in the treatment of head and neck cancer. It should be noted that while the table below provides certain frequencies for treatment of head and neck cancer, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of head and neck cancer are within the scope of this disclosure. Furthermore, each of the frequencies listed below include values that are close to (i.e., within +/- 0.1 Hz), but not exactly, the number or range.

[00108] Table 8: Amplitude-modulated frequencies discovered to be effective for treatment of head and neck cancer.

1858-1858.7 Hz	2893-2893.7 Hz	5152-5152.7 Hz	6897-6897.7 Hz	7080-7080.7 Hz
7136-7136.7 Hz	7274-7274.7 Hz	8755-8755.7 Hz	9573-9573.7 Hz	9656-9656.7 Hz
10439-10439.7 Hz	10484-10484.7 Hz	10645-10645.7 Hz	10673-10673.7 Hz	11559-11559.7 Hz
14052-14052.7 Hz	17379-17379.7 Hz	19269-19269.7 Hz		

[00109] Treatment of gastric cancer

[00110] Gastric cancer may be treated according to the methods disclosed herein by the application of gastric cancer specific amplitude-modulated frequencies. Gastric cancer specific frequencies are provided below in Table 9. A patient suffering from gastric cancer may be treated with any number of the frequencies provided in Table 9, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more of the listed gastric cancer specific frequencies may be used in the treatment of gastric cancer. It should be noted that while the table below provides certain frequencies for treatment of gastric cancer, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of gastric cancer are within the scope of this disclosure. Furthermore, each of the frequencies listed below include values that are close to (i.e., within +/- 0.1 Hz), but not exactly, the number or range.

[00111] Table 9: Amplitude-modulated frequencies discovered to be effective for treatment of gastric cancer.

374-374.7 Hz	560-560.7 Hz	628-628.7 Hz	642.4-643 Hz	708.3-709 Hz
749-749.7 Hz	806-806.6 Hz	825-825.7 Hz	843-843.7 Hz	914-914.7 Hz
959-959.7 Hz	969-969.7 Hz	1157-1157.7 Hz	1436-1436.7 Hz	1656-1656.7 Hz
2379.3-2380 Hz	2417-2417.7 Hz	2436-2436.7 Hz	2455-2455.7 Hz	2478-2478.7 Hz

2747-2747.7 Hz	2762-2762.7 Hz	2774-2774.7 Hz	2856.4-2857 Hz	2891-2891.7 Hz
2981-2981.7 Hz	3104.3-3105 Hz	3133-3133.7 Hz	3522-3522.7 Hz	3537-3537.7 Hz
3549-3549.7 Hz	3556-3556.7 Hz	3595-3595.7 Hz	3927-3927.7 Hz	4154-4154.7 Hz
4548-4548.7 Hz	4723-4723.7 Hz	5286-5286.7 Hz	5494.4-5495 Hz	5548.3-5549 Hz
5742-5742.7 Hz	6010-6010.7 Hz	6064-6064.7 Hz	6329-6329.7 Hz	6444-6444.7 Hz
6469-6469.7 Hz	6488-6488.7 Hz	7222.4-7223 Hz	7646-7646.7 Hz	7748-7748.7 Hz
7855-7855.7 Hz	7927-7927.7 Hz	7951-7951.7 Hz	7970-7970.7 Hz	7979-7979.7 Hz
8039-8039.7 Hz	8055.4-8056 Hz	8926-8926.7 Hz	9109-9109.7 Hz	9123-9123.7 Hz
9136-9136.7 Hz	9146-9146.7 Hz	9157-9157.7 Hz	9194-9194.7 Hz	10137-10137.7 Hz
10345-10345.7 Hz	10727-10727.7 Hz	10802-10802.7 Hz	11533-11533.7 Hz	12165-12165.7 Hz
13241-13241.7 Hz	13307-13307.7 Hz	13330.7-13331.2 Hz	13408-13408.7 Hz	13434-13434.7 Hz
13714-13714.7 Hz	13746-13746.7 Hz	14016.4-14017 Hz	14160-14160.7 Hz	14483-14483.7 Hz
14511-14511.7 Hz	14670.4-14671 Hz	16309-16309.7 Hz	17418-17418.7 Hz	17455-17455.7 Hz
17485-17485.7 Hz	17581-17581.7 Hz	19125-19125.7 Hz	21430-21430.7 Hz	21714-21714.7 Hz
23946-23946.7 Hz	39586-39586.7 Hz	40734-40734.7 Hz	41172-41172.7 Hz	42146-42146.7 Hz
46143-46143.7 Hz				

[00112] Treatment of glioblastoma

[00113] Glioblastoma may be treated according to the methods disclosed herein by the application of glioblastoma specific amplitude-modulated frequencies. Glioblastoma specific frequencies are provided below in Table 10. A patient suffering from glioblastoma may be treated with any number of the frequencies provided in Table 10, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more of the listed glioblastoma specific frequencies may be used in the treatment of glioblastoma. It should be noted that while the table below provides certain frequencies for treatment of glioblastoma, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of glioblastoma are within the scope of this disclosure. Furthermore, each of the frequencies listed below include values that are close to (i.e., within +/- 0.1 Hz), but not exactly, the number or range.

[00114] Table 10: Amplitude-modulated frequencies discovered to be effective for treatment of glioblastoma.

262-262.7 Hz	295-295.6 Hz	415-415.7 Hz	418-418.7 Hz	423-423.7 Hz
434-434.7 Hz	440.4-441 Hz	476-476.7 Hz	556-556.7 Hz	608-608.7 Hz
612-612.7 Hz	627-627.7 Hz	656-656.7 Hz	694-694.7 Hz	708.3-709 Hz
741-741.7 Hz	752.4-753 Hz	757-757.6 Hz	759-759.7 Hz	776-776.7 Hz
796.3-797 Hz	836-836.7 Hz	941-941.7 Hz	1027-1027.7 Hz	1045-1045.7 Hz
1195-1195.7 Hz	1868-1868.7 Hz	1897-1897.7 Hz	2044-2044.7 Hz	2439-2439.7 Hz
2612-2612.7 Hz	2632-2632.7 Hz	2653.3-2654 Hz	2686-2686.7 Hz	2690-2690.7 Hz

2697-2697.7 Hz	2738-2738.7 Hz	3157-3157.7 Hz	3218-3218.7 Hz	3227.3-3228 Hz
3249-3249.7 Hz	3277.3-3278 Hz	3281.6-3282.1 Hz	3436-3436.7 Hz	3633-3633.7 Hz
3656-3656.7 Hz	3962-3962.7 Hz	4148-4148.7 Hz	4241-4241.7 Hz	4410-4410.7 Hz
4416-4416.7 Hz	4454-4454.7 Hz	4619-4619.7 Hz	4632-4632.7 Hz	4853-4853.7 Hz
5139-5139.7 Hz	5156-5156.7 Hz	5996-5996.7 Hz	6292-6292.7 Hz	6297-6297.7 Hz
6459-6459.7 Hz	6474-6474.7 Hz	6492.3-6493 Hz	6626.3-6627 Hz	6727.4-6728 Hz
6809-6809.6 Hz	6841-6841.7 Hz	6915.3-6916 Hz	6943-6943.7 Hz	7110-7110.7 Hz
7182.4-7183 Hz	7194.3-7195 Hz	7268-7268.7 Hz	7323-7323.7 Hz	7480-7480.7 Hz
7663-7663.7 Hz	7796-7796.7 Hz	7936-7936.7 Hz	8070-8070.7 Hz	8128.4-8129 Hz
8145-8145.7 Hz	8158-8158.7 Hz	8314-8314.7 Hz	8355-8355.7 Hz	8484-8484.7 Hz
9138.3-9139 Hz	9155.7-9156.2Hz	9921-9921.7 Hz	10427-10427.7 Hz	10468-10468.7 Hz
10478-10478.7 Hz	10719-10719.7 Hz	10802-10802.7 Hz	10809-10809.7 Hz	10851-10851.7 Hz
11556-11556.7 Hz	11913-11913.7 Hz	12828.3-12829 Hz	13686.4-13687 Hz	14249-14249.7 Hz
14515.4-14516 Hz	14586.3-14587 Hz	14796-14796.7 Hz	15067-15067.7 Hz	15112-15112.7 Hz
17095-17095.7 Hz	17167-17167.7 Hz	18090-18090.7 Hz	18670.3-18671 Hz	18895-18895.7 Hz
19026-19026.7 Hz	20237-20237.7 Hz	20254-20254.7 Hz	20286-20286.7 Hz	24196-24196.7 Hz
25199-25199.7 Hz	26073-26073.7 Hz	26163-26163.7 Hz	26164-26164.7 Hz	30759-30759.7 Hz
32591.3-32592 Hz	36343-36343.7 Hz	41883-41883.7 Hz	44517-44517.7 Hz	44531-44531.7 Hz
45490-45490.7 Hz	47297-47297.7 Hz	49434-49434.7 Hz	50229-50229.7 Hz	69481-69481.7 Hz
78477.4-78478 Hz	80993.3-80994 Hz	81999-81999.7 Hz	85810-85810.7 Hz	89748-89748.7 Hz
92182-92182.7 Hz	95245-95245.7 Hz			

[00115] Treatment of squamous cell carcinoma of the anal canal

[00116] Squamous cell carcinoma of the anal canal may be treated according to the methods disclosed herein by the application of squamous cell carcinoma of the anal canal specific amplitude-modulated frequencies. Squamous cell carcinoma of the anal canal specific frequencies are provided below in Table 11. A patient suffering from squamous cell carcinoma of the anal canal may be treated with any number of the frequencies provided in Table 11, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more of the listed squamous cell carcinoma of the anal canal specific frequencies may be used in the treatment of squamous cell carcinoma of the anal canal. It should be noted that while the table below provides certain frequencies for treatment of squamous cell carcinoma of the anal canal, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of squamous cell carcinoma of the anal canal are within the scope of this disclosure. Furthermore, each of the frequencies listed below include values that are close to (i.e., within +/- 0.1 Hz), but not exactly, the number or range.

[00117] Table 11: Amplitude-modulated frequencies discovered to be effective for treatment of squamous cell carcinoma of the anal canal.

295-295.6 Hz	304-304.7 Hz	436-436.7 Hz	581-581.7 Hz	679-679.7 Hz
694.3-695 Hz	708.3-709 Hz	796.3-797 Hz	1759-1759.7 Hz	1858-1858.7 Hz
1873-1873.7 Hz	2442-2442.7 Hz	2522-2522.7 Hz	2648-2648.7 Hz	2893-2893.7 Hz
2975-2975.7 Hz	2981-2981.7 Hz	3238-3238.7 Hz	3249.3-3250 Hz	3250.3-3250.8 Hz
3461-3461.7 Hz	3531-3531.7 Hz	3535-3535.7 Hz	3681-3681.7 Hz	4279-4279.7 Hz
4440.4-4441 Hz	4718-4718.7 Hz	4876-4876.7 Hz	5034-5034.7 Hz	5068-5068.7 Hz
5151-5151.7 Hz	5249-5249.7 Hz	5286-5286.7 Hz	5869-5869.7 Hz	5881-5881.7 Hz
6298.4-6299 Hz	6851-6851.7 Hz	6879-6879.7 Hz	6882.4-6883 Hz	6897-6897.7 Hz
6980.3-6981 Hz	7136-7136.7 Hz	7274-7274.7 Hz	7673-7673.7 Hz	7930-7930.7 Hz
7981-7981.7 Hz	8328-8328.7 Hz	8432-8432.7 Hz	8755-8755.7 Hz	8949-8949.7 Hz
9656-9656.7 Hz	10439-10439.7 Hz	10484-10484.7 Hz	11145-11145.7 Hz	11159-11159.7 Hz
11253-11253.7 Hz	11260-11260.7 Hz	11277.3-11278 Hz	11559-11559.7 Hz	11699-11699.7 Hz
11905-11905.7 Hz	12139-12139.7 Hz	13819-13819.7 Hz	13847-13847.7 Hz	13903-13903.7 Hz
17379-17379.7 Hz	18618-18618.7 Hz	18742-18742.7 Hz	21445-21445.7 Hz	21467-21467.7 Hz
22763-22763.7 Hz	33536-33536.7 Hz	37527-37527.7 Hz	37546-37546.7 Hz	53079-53079.7 Hz
58094-58094.7 Hz	59288-59288.7 Hz	59997-59997.7 Hz	88281-88281.7 Hz	

[00118] Treatment of hepatocellular carcinoma

[00119] Hepatocellular carcinoma may be treated according to the methods disclosed herein by the application of hepatocellular carcinoma specific amplitude-modulated frequencies. Hepatocellular carcinoma specific frequencies are provided below in Table 12. A patient suffering from hepatocellular carcinoma may be treated with any number of the frequencies provided in Table 12, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more of the listed hepatocellular carcinoma specific frequencies may be used in the treatment of hepatocellular carcinoma. It should be noted that while the table below provides certain frequencies for treatment of hepatocellular carcinoma, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of hepatocellular carcinoma are within the scope of this disclosure. Furthermore, each of the frequencies listed below include values that are close to (i.e., within +/- 0.1 Hz), but not exactly, the number or range.

[00120] Table 12: Amplitude-modulated frequencies discovered to be effective for treatment of hepatocellular carcinoma.

439-439.7 Hz	594-594.7 Hz	737-737.7 Hz	817-817.7 Hz	966-966.7 Hz
996-996.7 Hz	1785-1785.7 Hz	1823-1823.7 Hz	1881-1881.7 Hz	1963-1963.7 Hz
1973-1973.7 Hz	2189-2189.7 Hz	2321-2321.7 Hz	2372.3-2372.8 Hz	2459-2459.7 Hz

2647-2647.7 Hz	2825-2825.7 Hz	2836-2836.7 Hz	2860-2860.7 Hz	2971-2971.6 Hz
3171-3171.7 Hz	3188-3188.7 Hz	3749-3749.7 Hz	3762-3762.7 Hz	3823-3823.7 Hz
4007-4007.7 Hz	4013-4013.7 Hz	4454-4454.7 Hz	4997-4997.7 Hz	5151-5151.7 Hz
5239-5239.7 Hz	5322-5322.7 Hz	6317-6317.7 Hz	6330-6330.7 Hz	6334-6334.7 Hz
6432-6432.7 Hz	6840-6840.7 Hz	7098-7098.7 Hz	7169-7169.7 Hz	7239-7239.7 Hz
7338-7338.7 Hz	7378-7378.7 Hz	7481-7481.7 Hz	7510-7510.7 Hz	7719-7719.7 Hz
7748-7748.7 Hz	7787-7787.7 Hz	8388-8388.7 Hz	8412-8412.7 Hz	9588-9588.7 Hz
8522-8522.7 Hz	8845-8845.7 Hz	8935-8935.6 Hz	8949-8949.7 Hz	9273-9273.7 Hz
9695-9695.7 Hz	10387-10387.7 Hz	10641-10641.7 Hz	10731-10731.7 Hz	10740-10740.7 Hz
10762-10762.7 Hz	10768-10768.7 Hz	10776-10776.7 Hz	10805-10805.7 Hz	10831-10831.7 Hz
10889-10889.7 Hz	11209-11209.7 Hz	11243-11243.7 Hz	11247-11247.7 Hz	11275-11275.7 Hz
11295-11295.7 Hz	11569-11569.7 Hz	11590-11590.7 Hz	11946-11946.7 Hz	12498-12498.7 Hz
12572-12572.7 Hz	12649-12649.7 Hz	13215-13215.7 Hz	13252-13252.7 Hz	13735-13735.7 Hz
13856-13856.7 Hz	14114-14114.7 Hz	14170.7-14171.3 Hz	14532-14532.7 Hz	14574-14574.7 Hz
15521-15521.7 Hz	15528-15528.7 Hz	15546.3-15547 Hz	15589-15589.7 Hz	15982-15982.7 Hz
16381-16381.7 Hz	17556-17556.7 Hz	17749-17749.7 Hz	17978-17978.7 Hz	18030-18030.7 Hz
18246-18246.7 Hz	18567-18567.7 Hz	18686-18686.7 Hz	18842-18842.7 Hz	18897-18897.7 Hz
19510-19510.7 Hz	20324-20324.7 Hz	20825-20825.7 Hz	20908-20908.7 Hz	21616-21616.7 Hz
21778-21778.7 Hz	21876-21876.7 Hz	22353-22353.7 Hz	22459-22459.7 Hz	22535-22535.7 Hz
22709-22709.7 Hz	23509-23509.7 Hz	23526-23526.7 Hz	23560-23560.7 Hz	23589-23589.7 Hz
23957-23957.7 Hz	24014-24014.7 Hz	24117-24117.7 Hz	24869-24869.7 Hz	25449-25449.7 Hz
25454-25454.7 Hz	26722-26722.7 Hz	26861-26861.7 Hz	30942-30942.7 Hz	31713-31713.7 Hz
32866-32866.7 Hz	32870-32870.7 Hz	33765-33765.7 Hz	34405-34405.7 Hz	34562-34562.7 Hz
34984-34984.6 Hz	36410-36410.7 Hz	38483-38483.7 Hz	38659-38659.7 Hz	39035-39035.7 Hz
39223-39223.7 Hz	39510-39510.7 Hz	39729-39729.7 Hz	40693-40693.7 Hz	41244-41244.7 Hz
41574-41574.7 Hz	42913-42913.7 Hz	42923-42923.7 Hz	43243-43243.7 Hz	43413-43413.7 Hz
43542-43542.7 Hz	43603-43603.7 Hz	44742-44742.7 Hz	47693.4-47694 Hz	51592-51592.7 Hz
53947-53947.7 Hz	55072-55072.7 Hz	56093-56093.7 Hz	59089-59089.7 Hz	66969-66969.7 Hz
67683-67683.7 Hz	76537-76537.7 Hz	78229-78229.7 Hz	82845-82845.7 Hz	83612-83612.7 Hz
84086-84086.7 Hz	91245-91245.7 Hz	92361.3-92362 Hz	93332-93332.7 Hz	93530-93530.7 Hz
94968.3-94969 Hz	99281-99281.7 Hz	99846-99846.7 Hz		

[00121] In certain embodiments, the frequencies listed above may also be used in combination with one or more of the frequencies disclosed in the '365 patent. Specifically, treatment modalities for treatment of hepatocellular carcinoma in accordance with this disclosure may include application of some or all of the above listed frequencies with one or more of the frequencies disclosed in Table 13 for hepatocellular carcinoma. Alternatively and/or additionally, the frequencies disclosed in the '365 patent may be used for treatment of hepatocellular carcinoma state using the methods and systems described herein.

[00122] Table 13: Amplitude-modulated frequencies for treatment of hepatocellular carcinoma.

380.293 Hz	410.231 Hz	423.321 Hz	427.062 Hz	434.332 Hz
470.181 Hz	560.32 Hz	642.932 Hz	655.435 Hz	657.394 Hz
668.209 Hz	677.972 Hz	728.232 Hz	806.021 Hz	811.924 Hz

842.311 Hz	843.22 Hz	845.208 Hz	891.901 Hz	914.219 Hz
920.321 Hz	964.394 Hz	1250.504 Hz	1755.402 Hz	1814.223 Hz
1851.202 Hz	1873.477 Hz	1924.702 Hz	1975.196 Hz	2017.962 Hz
2053.396 Hz	2083.419 Hz	2190.731 Hz	2221.323 Hz	2308.294 Hz
2315.208 Hz	2324.393 Hz	2338.221 Hz	2353.478 Hz	2362.309 Hz
2379.571 Hz	2419.309 Hz	2425.222 Hz	2430.219 Hz	2431.094 Hz
2471.328 Hz	2478.331 Hz	2480.191 Hz	2522.328 Hz	2743.995 Hz
2744.211 Hz	2831.951 Hz	2843.283 Hz	2859.891 Hz	2873.542 Hz
2886.232 Hz	3009.332 Hz	3020.286 Hz	3042.012 Hz	3044.213 Hz
3051.218 Hz	3076.892 Hz	3078.983 Hz	3086.443 Hz	3104.854 Hz
3127.232 Hz	3160.942 Hz	3161.331 Hz	3167.22 Hz	3206.315 Hz
3255.219 Hz	3267.433 Hz	3269.321 Hz	3281.432 Hz	3457.291 Hz
3505.229 Hz	3516.296 Hz	3530.188 Hz	3531.296 Hz	3546.323 Hz
3572.106 Hz	3576.189 Hz	3669.513 Hz	3923.221 Hz	3927.331 Hz
4013.932 Hz	4071.121 Hz	4079.951 Hz	4123.953 Hz	4161.889 Hz
4222.821 Hz	4238.402 Hz	4256.321 Hz	4289.296 Hz	4312.947 Hz
4375.962 Hz	4426.387 Hz	4428.185 Hz	4435.219 Hz	4471.188 Hz
4483.889 Hz	4486.384 Hz	4556.322 Hz	4629.941 Hz	4715.222 Hz
4732.211 Hz	4767.185 Hz	4873.333 Hz	4876.218 Hz	5086.281 Hz
5124.084 Hz	5133.121 Hz	5247.142 Hz	5270.834 Hz	5340.497 Hz
5520.218 Hz	5570.234 Hz	5882.292 Hz	5926.512 Hz	6037.311 Hz
6180.334 Hz	6329.195 Hz	6350.333 Hz	6361.321 Hz	6364.928 Hz
6383.321 Hz	6461.175 Hz	6661.109 Hz	6711.392 Hz	6733.331 Hz
6758.232 Hz	6779.482 Hz	6856.222 Hz	6877.183 Hz	6915.886 Hz
6980.525 Hz	7019.235 Hz	7041.321 Hz	7043.209 Hz	7078.307 Hz
7130.323 Hz	7144.142 Hz	7210.223 Hz	7232.343 Hz	7291.21 Hz
7482.245 Hz	7510.92 Hz	7529.233 Hz	7549.212 Hz	7650.028 Hz
7680.518 Hz	7692.522 Hz	7829.231 Hz	7862.209 Hz	7932.482 Hz
7935.423 Hz	7947.392 Hz	7979.308 Hz	8025.322 Hz	8028.339 Hz
8055.942 Hz	8072.134 Hz	8141.174 Hz	8208.285 Hz	8328.312 Hz
8336.383 Hz	8394.793 Hz	8432.181 Hz	8452.119 Hz	8460.944 Hz
8475.221 Hz	8492.193 Hz	8542.311 Hz	8779.229 Hz	8818.104 Hz
8852.329 Hz	8853.444 Hz	8858.179 Hz	8915.221 Hz	8939.212 Hz
8953.231 Hz	8993.239 Hz	9278.889 Hz	9332.397 Hz	9381.221 Hz
9520.333 Hz	9719.314 Hz	9740.219 Hz	9768.331 Hz	9773.111 Hz
9797.294 Hz	9819.511 Hz	9845.319 Hz	10015.419 Hz	10043.293 Hz
10317.499 Hz	10438.495 Hz	10443.311 Hz	10456.383 Hz	10579.425 Hz
10863.209 Hz	10866.382 Hz	11067.418 Hz	11149.935 Hz	11163.895 Hz
11195.509 Hz	11421.219 Hz	11802.821 Hz	11953.424 Hz	12024.502 Hz
12223.329 Hz	12228.369 Hz	12247.233 Hz	12260.933 Hz	12265.295 Hz
12267.233 Hz	12267.296 Hz	12274.219 Hz	12623.191 Hz	12633.372 Hz
12685.231 Hz	12721.423 Hz	12785.342 Hz	13433.323 Hz	13457.388 Hz
14085.222 Hz	14212.122 Hz	14226.313 Hz	14333.209 Hz	14537.331 Hz
14542.432 Hz	14655.03 Hz	14736.223 Hz	14828.234 Hz	15149.213 Hz
15237.489 Hz	15560.908 Hz	15717.221 Hz	16110.932 Hz	16144.343 Hz
17153.322 Hz	17660.109 Hz	18121.184 Hz	18265.238 Hz	18283.323 Hz
18863.292 Hz	18930.995 Hz	19970.311 Hz	20330.294 Hz	20365.284 Hz
22321.331 Hz	24119.295 Hz	24181.221 Hz		

[00123] One or more of the AM frequencies of Table 12 may be used in combination with one or more of the frequencies provided in Table 13. In preferred embodiments, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more frequencies are used in the methods for the treatment of hepatocellular carcinoma, which frequencies are selected from Table 12 and, optionally from Table 13, provided that at least one or more frequencies are selected from Table 12.

[00124] Treatment of cholangiocarcinoma

[00125] Cholangiocarcinoma may be treated according to the methods disclosed herein by the application of cholangiocarcinoma specific amplitude-modulated frequencies. Cholangiocarcinoma specific frequencies are provided below in Table 14. A patient suffering from cholangiocarcinoma may be treated with any number of the frequencies provided in Table 14, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more of the listed cholangiocarcinoma specific frequencies may be used in the treatment of cholangiocarcinoma. It should be noted that while the table below provides certain frequencies for treatment of cholangiocarcinoma, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of cholangiocarcinoma are within the scope of this disclosure. Furthermore, each of the frequencies listed below include values that are close to (i.e., within ± 0.1 Hz), but not exactly, the number or range.

[00126] Table 14: Amplitude-modulated frequencies discovered to be effective for treatment of cholangiocarcinoma.

334-334.7 Hz	380-380.7 Hz	410-410.7 Hz	427-427.6 Hz	434-434.7 Hz
476-476.7 Hz	527-527.7 Hz	560-560.7 Hz	624-624.7 Hz	642.4-643 Hz
657-657.7 Hz	677.4-678 Hz	728-728.7 Hz	806-806.6 Hz	809-809.7 Hz
845-845.7 Hz	920-920.7 Hz	961-961.7 Hz	963.8-964.25Hz	964.3-964.8 Hz
974.4-975 Hz	1156.3-1157 Hz	1157-1157.7 Hz	1755-1755.7 Hz	1873-1873.7 Hz
1967-1967.7 Hz	2017.4-2018 Hz	2021-2021.7 Hz	2023-2023.7 Hz	2035-2035.7 Hz
2053-2053.7 Hz	2065-2065.7 Hz	2083-2083.7 Hz	2094-2094.7 Hz	2111-2111.7 Hz
2128-2128.7 Hz	2278-2278.7 Hz	2284-2284.7 Hz	2308-2308.7 Hz	2324-2324.7 Hz
2338-2338.7 Hz	2362-2362.7 Hz	2381-2381.7 Hz	2419-2419.7 Hz	2425-2425.7 Hz
2430-2430.7 Hz	2431-2431.6 Hz	2471-2471.7 Hz	2480-2480.7 Hz	2522-2522.7 Hz
2636-2636.7 Hz	2669-2669.7 Hz	2679-2679.7 Hz	2685-2685.6 Hz	2716-2716.6 Hz

2743.4-2744 Hz	2835-2835.7 Hz	2854-2854.7 Hz	2865-2865.7 Hz	2873.3-2874 Hz
2886-2886.7 Hz	3009-3009.7 Hz	3020-3020.7 Hz	3042-3042.6 Hz	3076.3-3077 Hz
3104.3-3105 Hz	3135-3135.7 Hz	3143-3143.7 Hz	3160.4-3161 Hz	3167-3167.7 Hz
3206-3206.7 Hz	3255-3255.7 Hz	3267-3267.7 Hz	3269-3269.7 Hz	3330.4-3331 Hz
3516-3516.7 Hz	3531-3531.7 Hz	3549-3549.7 Hz	3564-3564.7 Hz	3572-3572.7 Hz
3576-3576.7 Hz	3619-3619.7 Hz	3630-3630.7 Hz	3637.7-3638.3 Hz	3644-3644.7 Hz
3696-3696.7 Hz	3749.3-3750 Hz	3947-3947.7 Hz	3954-3954.7 Hz	4013.4-4014 Hz
4079.4-4080 Hz	4123.4-4124 Hz	4281-4281.7 Hz	4289-4289.7 Hz	4312.4-4313 Hz
4418-4418.7 Hz	4426-4426.7 Hz	4441-4441.7 Hz	4685-4685.6 Hz	4707-4707.7 Hz
4715-4715.7 Hz	4732-4732.7 Hz	4732-4732.7 Hz	4748-4748.7 Hz	4767-4767.7 Hz
4812-4812.7 Hz	4821-4821.7 Hz	4873-4873.7 Hz	4874-4874.7 Hz	4876-4876.7 Hz
4941-4941.7 Hz	5209.4-5210 Hz	5229-5229.7 Hz	5243-5243.7 Hz	5247-5247.7 Hz
5262-5262.7 Hz	5271-5271.7 Hz	5387.3-5388 Hz	5573-5573.7 Hz	5671-5671.7 Hz
5679-5679.7 Hz	5966-5966.7 Hz	5976.3-5977 Hz	6064-6064.7 Hz	6086-6086.7 Hz
6180-6180.7 Hz	6479.4-6480 Hz	6513-6513.7 Hz	6711-6711.7 Hz	6779-6779.7 Hz
6915.3-6916 Hz	7019-7019.7 Hz	7043-7043.7 Hz	7130-7130.7 Hz	7213-7213.7 Hz
7228.3-7229 Hz	7234-7234.7 Hz	7246-7246.7 Hz	7268-7268.7 Hz	7367-7367.7 Hz
7482-7482.7 Hz	7510.4-7511 Hz	7680.3-7681 Hz	7862-7862.7 Hz	7935-7935.7 Hz
8012.3-8013 Hz	8013-8013.7 Hz	8026-8026.7 Hz	8028-8028.7 Hz	8028-8028.7 Hz
8055.4-8056 Hz	8072-8072.7 Hz	8074-8074.7 Hz	8079-8079.7 Hz	8141-8141.7 Hz
8336-8336.7 Hz	8394.3-8395 Hz	8421-8421.7 Hz	8432-8432.7 Hz	8452-8452.7 Hz
8492-8492.7 Hz	8509.4-8510 Hz	8542-8542.7 Hz	8779-8779.7 Hz	8789.3-8790 Hz
8818-8818.7 Hz	8852-8852.7 Hz	8993-8993.7 Hz	9023-9023.7 Hz	9112-9112.7 Hz
9332-9332.7 Hz	9753-9753.7 Hz	9846-9846.7 Hz	10140-10140.7 Hz	10317-10317.7 Hz
10362-10362.7 Hz	10488-10488.7 Hz	10661-10661.7 Hz	10665.4-10666 Hz	10690-10690.7 Hz
10866-10866.7 Hz	11081-11081.7 Hz	11109.3-11110 Hz	11219-11219.7 Hz	11582-11582.7 Hz
11619-11619.7 Hz	11637-11637.7 Hz	11802.3-11803 Hz	11809-11809.7 Hz	11831-11831.7 Hz
11872-11872.7 Hz	11904.3-11905 Hz	12024.3-12025 Hz	12228-12228.7 Hz	12247-12247.7 Hz
12260.4-12261 Hz	12274-12274.7 Hz	12682-12682.7 Hz	12752-12752.7 Hz	12783-12783.7 Hz
12785-12785.7 Hz	13127-13127.7 Hz	13457-13457.7 Hz	13609-13609.7 Hz	13734-13734.7 Hz
13747-13747.7 Hz	13755-13755.7 Hz	13760-13760.7 Hz	13761-13761.7 Hz	13767-13767.7 Hz
13981-13981.7 Hz	14005-14005.7 Hz	14027-14027.7 Hz	14070-14070.7 Hz	14078-14078.7 Hz
14356-14356.7 Hz	14531-14531.7 Hz	14545-14545.7 Hz	14564-14564.7 Hz	14828-14828.7 Hz
14867-14867.7 Hz	14913.4-14914 Hz	14940-14940.7 Hz	15173-15173.7 Hz	15224-15224.7 Hz
15244-15244.7 Hz	15432-15432.7 Hz	15460-15460.7 Hz	15515-15515.7 Hz	15539-15539.7 Hz
15550.4-15551 Hz	15857-15857.7 Hz	16082-16082.7 Hz	16515-16515.7 Hz	17636-17636.7 Hz
17673-17673.7 Hz	18087-18087.7 Hz	18222-18222.7 Hz	18521-18521.7 Hz	18585-18585.7 Hz
19347-19347.7 Hz	19889-19889.7 Hz	21466-21466.7 Hz	21567-21567.7 Hz	21844-21844.7 Hz
21870-21870.7 Hz	21894-21894.7 Hz	22073-22073.7 Hz	22119-22119.7 Hz	22411-22411.7 Hz
22437-22437.7 Hz	22479-22479.7 Hz	22582-22582.7 Hz	22730-22730.6 Hz	22832-22832.7 Hz
22863-22863.7 Hz	23237-23237.7 Hz	23261-23261.7 Hz	23444-23444.7 Hz	26212-26212.7 Hz
27291-27291.7 Hz	31051-31051.7 Hz	35296-35296.7 Hz	37680-37680.7 Hz	39053-39053.7 Hz
39183-39183.7 Hz	39423-39423.7 Hz	40111-40111.7 Hz	41557-41557.7 Hz	42293-42293.7 Hz
43172-43172.7 Hz	43379-43379.7 Hz	44855-44855.7 Hz	45163-45163.7 Hz	45362-45362.7 Hz
46666-46666.7 Hz	46673-46673.7 Hz	46689-46689.6 Hz	51008-51008.7 Hz	52063-52063.7 Hz
52786-52786.7 Hz	52912-52912.7 Hz	55723-55723.7 Hz	61287-61287.7 Hz	61789-61789.7 Hz
71635-71635.7 Hz	86521-86521.7 Hz	87798.3-87799 Hz	88898-88898.7 Hz	91271-91271.7 Hz
92787-92787.7 Hz.				

[00127] Treatment of mesothelioma

[00128] Mesothelioma may be treated according to the methods disclosed herein by the application of mesothelioma specific amplitude-modulated frequencies. Mesothelioma specific frequencies are provided below in Table 15. A patient suffering from mesothelioma may be treated with any number of the frequencies provided in Table 15, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more of the listed mesothelioma specific frequencies may be used in the treatment of mesothelioma. It should be noted that while the table below provides certain frequencies for treatment of mesothelioma, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of mesothelioma are within the scope of this disclosure. Furthermore, each of the frequencies listed below include values that are close to (i.e., within +/- 0.1 Hz), but not exactly, the number or range.

[00129] Table 15: Amplitude-modulated frequencies discovered to be effective for treatment of mesothelioma.

262-262.7 Hz	412-412.7 Hz	418-418.7 Hz	429-429.7 Hz	441-441.7 Hz
442-442.7 Hz	465-465.7 Hz	485-485.7 Hz	517-517.7 Hz	556-556.7 Hz
581-581.7 Hz	612-612.7 Hz	626-626.7 Hz	638-638.7 Hz	664-664.7 Hz
694.3-695 Hz	708.3-709 Hz	734.4-735 Hz	761-761.7 Hz	764-764.7 Hz
776-776.7 Hz	806-806.6 Hz	831-831.7 Hz	883-883.7 Hz	1191-1191.7 Hz
1591-1591.7 Hz	2475.4-2476 Hz	2581-2581.7 Hz	2749-2749.7 Hz	2988-2988.7 Hz
3042-3042.6 Hz	3131-3131.7 Hz	3193-3193.7 Hz	3240-3240.7 Hz	3335-3335.7 Hz
3371-3371.7 Hz	3518-3518.7 Hz	3523-3523.7 Hz	3530-3530.7 Hz	3556-3556.7 Hz
3621-3621.7 Hz	3656-3656.7 Hz	3674-3674.7 Hz	3681.7-3682.3 Hz	3817-3817.7 Hz
3833-3833.7 Hz	3877-3877.7 Hz	3948-3948.7 Hz	3958-3958.6 Hz	4044-4044.7 Hz
4190-4190.7 Hz	4261-4261.7 Hz	4330-4330.7 Hz	5496-5496.7 Hz	5640.4-5641 Hz
6416.3-6417 Hz	6441-6441.7 Hz	6717-6717.7 Hz	6758-6758.7 Hz	6783-6783.7 Hz
7110-7110.7 Hz	7140-7140.7 Hz	7154-7154.7 Hz	7156-7156.7 Hz	7253-7253.7 Hz
7283-7283.7 Hz	7546-7546.7 Hz	7725-7725.7 Hz	8386-8386.7 Hz	8562.4-8563 Hz
8810-8810.7 Hz	8827.4-8828 Hz	8843-8843.7 Hz	8859.3-8860 Hz	8863-8863.7 Hz
8877-8877.7 Hz	8881-8881.7 Hz	9075-9075.7 Hz	9929-9929.7 Hz	9947-9947.7 Hz
9970-9970.7 Hz	11023-11023.7 Hz	11031-11031.7 Hz	11042-11042.7 Hz	11046-11046.7 Hz
11074-11074.7 Hz	11083-11083.7 Hz	11124-11124.7 Hz	11540-11540.7 Hz	11831-11831.7 Hz
11929-11929.7 Hz	11956-11956.7 Hz	12267-12267.7 Hz	12929-12929.7 Hz	13674-13674.7 Hz
13742-13742.7 Hz	14285-14285.7 Hz	14947-14947.7 Hz	15531-15531.7 Hz	17737-17737.7 Hz
17757-17757.7 Hz	18121-18121.7 Hz	18126-18126.7 Hz	18140-18140.7 Hz	18921-18921.7 Hz
19406-19406.7 Hz	19476-19476.7 Hz	19577-19577.7 Hz	20634-20634.7 Hz	21372-21372.7 Hz
22411-22411.7 Hz	22519-22519.7 Hz	22538-22538.7 Hz	22548-22548.7 Hz	23111-23111.7 Hz
23921-23921.7 Hz	24112-24112.7 Hz	24146-24146.7 Hz	39153-39153.7 Hz	

[00130] In certain embodiments, the frequencies listed above may also be used in combination with one or more of the frequencies disclosed in the '365 patent. Specifically, treatment modalities for treatment of mesothelioma in accordance with this disclosure may include application of some or all of the above listed frequencies with one or more of the frequencies disclosed in the Table 16 for mesothelioma. Alternatively and/or additionally, the frequencies disclosed in the '365 patent may be used for treatment of mesothelioma using the methods and systems described herein.

[00131] Table 16: Amplitude-modulated frequencies effective for treatment of mesothelioma.

958.929 Hz	1713.913 Hz	1736.782 Hz	2334.178 Hz	2607.193 Hz
3112.974 Hz	3319.945 Hz	3449.219 Hz	3622.312 Hz	5151.402 Hz
5887.022 Hz	5965.922 Hz	6516.793 Hz	7224.197 Hz	9471.152 Hz
14617.393 Hz				

[00132] One or more of the AM frequencies of Table 15 may be used in combination with one or more of the frequencies provided in Table 16. In preferred embodiments, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more frequencies are used in the methods for the treatment of mesothelioma, which frequencies are selected from Table 15 and, optionally from Table 16, provided that at least one or more frequencies are selected from Table 15.

[00133] Treatment of thyroid cancer

[00134] Thyroid cancer may be treated according to the methods disclosed herein by the application of thyroid cancer specific amplitude-modulated frequencies. Thyroid cancer specific frequencies are provided below in Table 17. A patient suffering from thyroid cancer may be treated with any number of the frequencies provided in Table 17, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more of the listed thyroid cancer specific frequencies may be used in the treatment of thyroid cancer. It should be noted that while the table below provides certain frequencies for treatment of thyroid cancer, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of thyroid cancer are within the scope of this disclosure. Furthermore, each of the frequencies

listed below include values that are close to (i.e., within +/- 0.1 Hz), but not exactly, the number or range.

[00135] Table 17: Amplitude-modulated frequencies discovered to be effective for treatment of thyroid cancer.

834-834.7 Hz	836-836.7 Hz	845-845.7 Hz	1213-1213.7 Hz	1220-1220.7 Hz
1252-1252.7 Hz	1815-1815.7 Hz	1966-1966.7 Hz	2050-2050.7 Hz	2313-2313.7 Hz
2318-2318.7 Hz	2320-2320.7 Hz	2328-2328.7 Hz	2336-2336.7 Hz	2359-2359.7 Hz
2373-2373.7 Hz	2380-2380.7 Hz	2425-2425.7 Hz	2429-2429.7 Hz	2436-2436.7 Hz
2513-2513.7 Hz	2629-2629.7 Hz	2653.7-2654.4 Hz	2830-2830.7 Hz	2834-2834.7 Hz
3030-3030.7 Hz	3056-3056.7 Hz	3609-3609.7 Hz	3646-3646.7 Hz	3674-3674.7 Hz
3694-3694.7 Hz	3908.7-3909.22Hz	3981-3981.7 Hz	4027-4027.7 Hz	4386.4-4387 Hz
4425.7-4426.22Hz	4792-4792.7 Hz	4844-4844.7 Hz	4870-4870.7 Hz	5259-5259.7 Hz
5510-5510.7 Hz	5533-5533.7 Hz	5714-5714.7 Hz	5741-5741.7 Hz	5742-5742.7 Hz
5752-5752.7 Hz	5766-5766.7 Hz	6392-6392.7 Hz	6423-6423.7 Hz	6781-6781.7 Hz
6832-6832.7 Hz	6864-6864.7 Hz	7404.4-7405 Hz	7526-7526.6 Hz	7646-7646.7 Hz
7652-7652.7 Hz	7913-7913.7 Hz	8217.4-8218 Hz	8251-8251.7 Hz	8347-8347.7 Hz
8731-8731.7 Hz	8740-8740.7 Hz	8749-8749.7 Hz	8814-8814.7 Hz	9169-9169.7 Hz
9506-9506.7 Hz	10159-10159.7 Hz	10395-10395.7 Hz	10541-10541.7 Hz	10830-10830.7 Hz
10844-10844.7 Hz	10878-10878.7 Hz	10993-10993.7 Hz	11117-11117.7 Hz	11779-11779.7 Hz
11867-11867.7 Hz	12302-12302.7 Hz	12356-12356.7 Hz	13117-13117.7 Hz	13373-13373.7 Hz
13679-13679.7 Hz	13694-13694.7 Hz	14111-14111.7 Hz	14116-14116.7 Hz	14156-14156.7 Hz
14174-14174.7 Hz	14281-14281.7 Hz	14523-14523.7 Hz	14585-14585.7 Hz	14690-14690.7 Hz
14716-14716.7 Hz	14912-14912.7 Hz	14974-14974.7 Hz	15223-15223.7 Hz	15236-15236.7 Hz
15329-15329.7 Hz	15615-15615.7 Hz	15867-15867.7 Hz	15919-15919.7 Hz	15942-15942.7 Hz
16096-16096.7 Hz	18040-18040.7 Hz	18182-18182.7 Hz	18211-18211.7 Hz	18246-18246.7 Hz
18274-18274.7 Hz	18411-18411.7 Hz	18454-18454.7 Hz	18462-18462.7 Hz	18596-18596.7 Hz
19365-19365.7 Hz	19419-19419.7 Hz	19715-19715.7 Hz	19744-19744.7 Hz	19823-19823.7 Hz
20229-20229.7 Hz	20284-20284.7 Hz	20513-20513.7 Hz	20747-20747.7 Hz	21963-21963.7 Hz
22338-22338.7 Hz	22344-22344.7 Hz	22350-22350.7 Hz	22422-22422.7 Hz	22484-22484.7 Hz
22932-22932.7 Hz	23012-23012.7 Hz	23044-23044.7 Hz	23216-23216.7 Hz	23659-23659.7 Hz
23730-23730.7 Hz	24060-24060.7 Hz	24085-24085.7 Hz	26044-26044.7 Hz	26343-26343.7 Hz
27214-27214.7 Hz	28361-28361.7 Hz	33366-33366.7 Hz	33414-33414.7 Hz	33553-33553.7 Hz
34614-34614.7 Hz	35826-35826.7 Hz	40133-40133.7 Hz	40394-40394.7 Hz	40896-40896.7 Hz
40899-40899.7 Hz	41424-41424.7 Hz	41534-41534.7 Hz	41859-41859.7 Hz	41861-41861.7 Hz
42402-42402.7 Hz	43851-43851.7 Hz	44162-44162.7 Hz	44692-44692.7 Hz	45393-45393.7 Hz
45526-45526.7 Hz	46282-46282.7 Hz	46285-46285.7 Hz	47036-47036.7 Hz	48314-48314.7 Hz
48535-48535.7 Hz	52097-52097.7 Hz	54293-54293.7 Hz	54297-54297.7 Hz	55592-55592.7 Hz
57927-57927.7 Hz	59907-59907.7 Hz	65586-65586.7 Hz	67697-67697.6 Hz	71204-71204.7 Hz
71447-71447.7 Hz	74017-74017.7 Hz	76227-76227.7 Hz	76659-76659.7 Hz	82024-82024.7 Hz

[00136] In certain embodiments, the frequencies listed above may also be used in combination with one or more of the frequencies disclosed in the '365 patent. Specifically, treatment modalities for treatment of thyroid cancer in accordance with this disclosure may include application of some or all of the above listed frequencies with one or more of the frequencies disclosed in Table 18 for

thyroid cancer. Alternatively and/or additionally, the frequencies disclosed in the '365 patent may be used for treatment of thyroid cancer using the methods and systems described herein.

[00137] Table 18: Amplitude-modulated frequencies for treatment of thyroid cancer.

410.231 Hz	412.209 Hz	479.222 Hz	493.442 Hz	517.202 Hz
556.233 Hz	617.313 Hz	618.407 Hz	618.813 Hz	618.927 Hz
621.321 Hz	628.321 Hz	648.252 Hz	658.191 Hz	663.407 Hz
694.689 Hz	777.432 Hz	812.512 Hz	814.251 Hz	820.907 Hz
821.202 Hz	831.223 Hz	874.341 Hz	914.429 Hz	941.311 Hz
942.331 Hz	983.429 Hz	1127.239 Hz	1191.341 Hz	1380.828 Hz
1552.123 Hz	1587.811 Hz	1614.409 Hz	1723.389 Hz	1771.402 Hz
2155.311 Hz	2179.231 Hz	2185.282 Hz	2221.323 Hz	2228.832 Hz
2315.888 Hz	2341.312 Hz	2445.123 Hz	2454.232 Hz	2723.302 Hz
2740.384 Hz	2749.323 Hz	2856.253 Hz	2856.921 Hz	2859.495 Hz
2871.795 Hz	2886.232 Hz	2928.911 Hz	2988.212 Hz	3021.122 Hz
3078.275 Hz	3080.592 Hz	3186.331 Hz	3198.323 Hz	3248.321 Hz
3271.329 Hz	3284.192 Hz	3335.332 Hz	3432.343 Hz	3434.911 Hz
3440.212 Hz	3475.216 Hz	3509.522 Hz	3533.328 Hz	3610.203 Hz
3637.085 Hz	3682.489 Hz	3789.288 Hz	3822.392 Hz	3909.333 Hz
3917.211 Hz	4023.33 Hz	4028.204 Hz	4043.332 Hz	4046.321 Hz
4154.301 Hz	4207.322 Hz	4226.263 Hz	4236.945 Hz	4243.393 Hz
4261.228 Hz	4330.289 Hz	4340.833 Hz	4347.125 Hz	4358.333 Hz
4366.294 Hz	4426.387 Hz	4440.962 Hz	4458.339 Hz	4478.443 Hz
4479.113 Hz	4486.193 Hz	4744.424 Hz	4827.642 Hz	4854.318 Hz
4865.421 Hz	4897.212 Hz	5323.192 Hz	5324.123 Hz	5548.879 Hz
5711.283 Hz	5730.432 Hz	5754.332 Hz	5881.295 Hz	5924.221 Hz
6455.131 Hz	6558.342 Hz	6620.132 Hz	6666.839 Hz	6675.951 Hz
6714.189 Hz	6745.333 Hz	6766.281 Hz	6779.088 Hz	6780.679 Hz
6884.432 Hz	6917.194 Hz	6946.928 Hz	7036.122 Hz	7083.191 Hz
7230.838 Hz	7323.209 Hz	7355.378 Hz	7432.143 Hz	7495.763 Hz
7505.282 Hz	7534.221 Hz	7577.421 Hz	7623.184 Hz	7626.332 Hz
7725.339 Hz	7726.085 Hz	7920.879 Hz	8013.953 Hz	8019.912 Hz
8021.331 Hz	8040.231 Hz	8078.955 Hz	8082.173 Hz	8147.1 Hz
8281.259 Hz	8309.752 Hz	8311.371 Hz	8435.094 Hz	8442.293 Hz
8505.312 Hz	8521.311 Hz	8525.789 Hz	8537.321 Hz	8540.329 Hz
8543.211 Hz	8553.329 Hz	8744.527 Hz	8881.819 Hz	9009.329 Hz
9068.311 Hz	9070.809 Hz	9085.911 Hz	9535.393 Hz	9720.412 Hz
10020.521 Hz	10039.109 Hz	10127.279 Hz	10134.161 Hz	10257.324 Hz
10498.339 Hz	10765.224 Hz	10849.412 Hz	10924.342 Hz	10976.321 Hz
11030.418 Hz	11360.332 Hz	11537.292 Hz	11559.292 Hz	11812.119 Hz
11913.222 Hz	11927.934 Hz	11955.949 Hz	11960.179 Hz	12120.049 Hz
12139.222 Hz	12146.335 Hz	12489.233 Hz	12984.462 Hz	13425.229 Hz
13636.082 Hz	13654.272 Hz	13677.211 Hz	14014.941 Hz	14228.295 Hz
14445.214 Hz	14540.932 Hz	14823.325 Hz	14826.334 Hz	14910.894 Hz
15180.492 Hz	15561.322 Hz	15597.284 Hz	16023.119 Hz	16048.391 Hz
16080.831 Hz	16129.321 Hz	16539.532 Hz	17222.225 Hz	17253.222 Hz
17323.196 Hz	17461.504 Hz	17577.221 Hz	17671.321 Hz	17881.709 Hz
17911.323 Hz	17913.286 Hz	17937.203 Hz	17948.264 Hz	18036.921 Hz

18715.412 Hz	19859.429 Hz	21425.321 Hz	21452.445 Hz	
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[00138] One or more of the AM frequencies of Table 17 may be used in combination with one or more of the frequencies provided in Table 18. In preferred embodiments, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more frequencies are used in the methods for the treatment of thyroid cancer, which frequencies are selected from Table 17 and, optionally from Table 18, provided that at least one or more frequencies are selected from Table 17.

[00139] Treatment of prostate cancer

[00140] Prostate cancer may be treated according to the methods disclosed herein by the application of prostate cancer specific amplitude-modulated frequencies. Prostate cancer specific frequencies are provided below in Table 19. A patient suffering from prostate cancer may be treated with any number of the frequencies provided in Table 19, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more of the listed prostate cancer specific frequencies may be used in the treatment of prostate cancer. It should be noted that while the table below provides certain frequencies for treatment of prostate cancer, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of prostate cancer are within the scope of this disclosure. Furthermore, each of the frequencies listed below include values that are close to (i.e., within +/- 0.1 Hz), but not exactly, the number or range.

[00141] Table 19: Amplitude-modulated frequencies discovered to be effective for treatment of prostate cancer.

408-408.7 Hz	429.7-430.3 Hz	561-561.7 Hz	568-568.7 Hz	572-572.7 Hz
631-631.7 Hz	709-709.7 Hz	717-717.7 Hz	733-733.7 Hz	810-810.7 Hz
817-817.7 Hz	830-830.7 Hz	1668-1668.7 Hz	1808-1808.6 Hz	2483-2483.7 Hz
2518-2518.7 Hz	2824-2824.7 Hz	3207-3207.7 Hz	3245-3245.7 Hz	3251-3251.7 Hz
3266.3-3267 Hz	3279.3-3280 Hz	3529-3529.7 Hz	3562-3562.7 Hz	3571-3571.7 Hz
3627-3627.7 Hz	3661-3661.7 Hz	3731-3731.7 Hz	3743-3743.7 Hz	3756-3756.7 Hz
3787-3787.7 Hz	3962-3962.7 Hz	4152-4152.7 Hz	4409-4409.7 Hz	4476-4476.7 Hz
4806-4806.7 Hz	4809-4809.7 Hz	4823-4823.7 Hz	4841-4841.7 Hz	4948-4948.7 Hz
4998-4998.7 Hz	5336-5336.7 Hz	5414-5414.7 Hz	5884-5884.7 Hz	6117-6117.7 Hz
6252-6252.7 Hz	6329-6329.7 Hz	6333-6333.7 Hz	6748-6748.7 Hz	6782-6782.7 Hz

7112-7112.7 Hz	7424-7424.7 Hz	7655-7655.7 Hz	7906-7906.7 Hz	7910-7910.7 Hz
7923-7923.7 Hz	8373-8373.7 Hz	8445-8445.7 Hz	8765-8765.7 Hz	8829-8829.7 Hz
8852-8852.7 Hz	8877-8877.7 Hz	9078-9078.7 Hz	9512-9512.7 Hz	9635-9635.7 Hz
9681-9681.7 Hz	9886-9886.7 Hz	10735-10735.7 Hz	10748-10748.7 Hz	10781-10781.7 Hz
10813.2-10813.8 Hz	11134-11134.7 Hz	11155-11155.7 Hz	11164-11164.7 Hz	11264-11264.7 Hz
11381-11381.7 Hz	11416-11416.7 Hz	11438-11438.7 Hz	11469-11469.7 Hz	11628-11628.7 Hz
12330-12330.7 Hz	12391-12391.7 Hz	12880-12880.7 Hz	13467-13467.7 Hz	13562-13562.6 Hz
13805-13805.7 Hz	13828-13828.7 Hz	13834-13834.7 Hz	13857.4-13858 Hz	13858-13858.7 Hz
13871-13871.7 Hz	14009-14009.7 Hz	14034-14034.7 Hz	14153-14153.7 Hz	14489-14489.7 Hz
15071-15071.7 Hz	15149-15149.7 Hz	15233-15233.7 Hz	15253-15253.7 Hz	15263-15263.7 Hz
15435-15435.7 Hz	15545-15545.7 Hz	16176-16176.7 Hz	16329-16329.7 Hz	16679-16679.7 Hz
16804-16804.7 Hz	16821-16821.7 Hz	17333-17333.7 Hz	17435-17435.7 Hz	17974-17974.7 Hz
18260-18260.7 Hz	18641-18641.7 Hz	18831-18831.7 Hz	18884-18884.7 Hz	19453-19453.7 Hz
20948-20948.7 Hz	21119-21119.7 Hz	21167-21167.7 Hz	21636-21636.7 Hz	22312-22312.7 Hz
22361-22361.7 Hz	22419-22419.7 Hz	22430-22430.7 Hz	22443-22443.7 Hz	22459-22459.7 Hz
22879-22879.7 Hz	23117-23117.7 Hz	23137-23137.7 Hz	23412-23412.7 Hz	23548-23548.7 Hz
23686-23686.7 Hz	26142-26142.7 Hz	26465-26465.7 Hz	27328-27328.6 Hz	28653-28653.7 Hz
28744-28744.7 Hz	31572-31572.7 Hz	31633-31633.7 Hz	41062-41062.7 Hz	41325-41325.7 Hz
41473-41473.7 Hz	48683-48683.7 Hz	48793-48793.7 Hz	87507-87507.7 Hz	

[00142] In certain embodiments, the frequencies listed above may also be used in combination with one or more of the frequencies disclosed in the '365 patent. Specifically, treatment modalities for treatment of prostate cancer in accordance with this disclosure may include application of some or all of the above listed frequencies with one or more of the frequencies disclosed in Table 20 for prostate cancer. Alternatively and/or additionally, the frequencies disclosed in the '365 patent may be used for treatment of prostate cancer using the methods and systems described herein.

[00143] Table 20: Amplitude-modulated frequencies for treatment of prostate cancer.

331.3 Hz	331.358 Hz	403.218 Hz	430.439 Hz	436.231 Hz
461.233 Hz	522.2 Hz	522.213 Hz	618.4 Hz	618.407 Hz
618.8 Hz	656.295 Hz	657.394 Hz	657.397 Hz	657.4 Hz
657.483 Hz	659.033 Hz	694.4 Hz	694.689 Hz	694.7 Hz
741.4 Hz	741.421 Hz	749.221 Hz	752.9 Hz	752.933 Hz
776.194 Hz	785.219 Hz	786.332 Hz	793.331 Hz	809.205 Hz
819.322 Hz	840.133 Hz	844.8 Hz	844.822 Hz	847.332 Hz
929.1 Hz	1083.309 Hz	1102.635 Hz	1102.71 Hz	1240.336 Hz
1372.934 Hz	1444.288 Hz	1486.322 Hz	1563.332 Hz	1591.322 Hz
1670.699 Hz	1697.321 Hz	1708.195 Hz	1741.939 Hz	1743.521 Hz
2031.448 Hz	2050.282 Hz	2076.519 Hz	2156.332 Hz	2229.515 Hz
2243.121 Hz	2381.443 Hz	2440.489 Hz	2475.912 Hz	2477.919 Hz
2551.332 Hz	2579.435 Hz	2628.324 Hz	2669.328 Hz	2824.832 Hz
2887.829 Hz	2891.331 Hz	3081.523 Hz	3133.309 Hz	3249.529 Hz
3250.125 Hz	3251.815 Hz	3264.827 Hz	3278.329 Hz	3281.432 Hz
3348.783 Hz	3519.118 Hz	3539.962 Hz	3551.318 Hz	3556.439 Hz

3572.321 Hz	3615.223 Hz	3670.129 Hz	3681.341 Hz	3686.021 Hz
3753.382 Hz	3774.923 Hz	3867.692 Hz	3909.333 Hz	3916.321 Hz
4031.233 Hz	4031.933 Hz	4038.203 Hz	4047.233 Hz	4066.222 Hz
4081.743 Hz	4084.319 Hz	4139.322 Hz	4153.192 Hz	4223.795 Hz
4231.221 Hz	4241.321 Hz	4320.513 Hz	4329.152 Hz	4380.321 Hz
4417.312 Hz	4489.452 Hz	4549.808 Hz	4558.306 Hz	4579.324 Hz
4638.293 Hz	4740.322 Hz	4854.318 Hz	4882.322 Hz	4978.822 Hz
5237.152 Hz	5264.222 Hz	5289.195 Hz	5426.323 Hz	5431.542 Hz
5455.593 Hz	6168.131 Hz	6345.332 Hz	6347.433 Hz	6363.284 Hz
6418.331 Hz	6496.231 Hz	6538.295 Hz	6577.421 Hz	6590.328 Hz
6651.276 Hz	6706.431 Hz	6743.322 Hz	6783.282 Hz	6850.197 Hz
6855.286 Hz	6864.896 Hz	6871.943 Hz	6878.356 Hz	6898.489 Hz
6973.393 Hz	7118.332 Hz	7120.932 Hz	7143.231 Hz	7146.509 Hz
7192.505 Hz	7251.309 Hz	7251.322 Hz	7278.124 Hz	7278.933 Hz
7279.335 Hz	7299.119 Hz	7527.229 Hz	7589.925 Hz	7699.193 Hz
7832.331 Hz	7842.184 Hz	7852.393 Hz	7872.333 Hz	8023.32 Hz
8096.939 Hz	8245.801 Hz	8315.291 Hz	8357.305 Hz	8408.121 Hz
8432.209 Hz	8535.238 Hz	8552.431 Hz	8585.224 Hz	8923.361 Hz
8935.752 Hz	9015.253 Hz	9018.233 Hz	9068.231 Hz	9137.232 Hz
9156.321 Hz	9351.931 Hz	9393.946 Hz	9694.179 Hz	9984.405 Hz
10226.223 Hz	10390.232 Hz	10442.221 Hz	10449.343 Hz	10459.084 Hz
10514.768 Hz	10651.311 Hz	10689.339 Hz	10772.419 Hz	10818.452 Hz
10843.543 Hz	11118.322 Hz	11165.239 Hz	11985.353 Hz	12209.329 Hz
12308.321 Hz	12489.233 Hz	12583.339 Hz	13820.329 Hz	14013.123 Hz
14129.213 Hz	14171.434 Hz	14681.329 Hz	14759.131 Hz	14986.794 Hz
15930.249 Hz	16026.623 Hz	16888.912 Hz	17091.189 Hz	17880.954 Hz
18021.222 Hz	18053.233 Hz	18247.532 Hz	18282.211 Hz	18610.232 Hz
18629.328 Hz	19469.318 Hz	19766.218 Hz	20159.434 Hz	21643.232 Hz
23022.481 Hz	23035.132 Hz	26718.23 Hz	30583.383 Hz	30653.323 Hz
30843.222 Hz	36065.221 Hz	60317.352 Hz		

[00144] One or more of the AM frequencies of Table 19 may be used in combination with one or more of the frequencies provided in Table 20. In preferred embodiments, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more frequencies are used in the methods for the treatment of prostate cancer, which frequencies are selected from Table 19 and, optionally from Table 20, provided that at least one or more frequencies are selected from Table 19.

[00145] Treatment of rhabdomyosarcoma

[00146] Rhabdomyosarcoma may be treated according to the methods disclosed herein by the application of rhabdomyosarcoma specific amplitude-modulated frequencies. Rhabdomyosarcoma specific frequencies are provided below in Table 21. A patient suffering from

rhabdomyosarcoma may be treated with any number of the frequencies provided in Table 21, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more of the listed rhabdomyosarcoma specific frequencies may be used in the treatment of rhabdomyosarcoma. It should be noted that while the table below provides certain frequencies for treatment of rhabdomyosarcoma, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of rhabdomyosarcoma are within the scope of this disclosure. Furthermore, each of the frequencies listed below include values that are close to (i.e., within +/- 0.1 Hz), but not exactly, the number or range.

[00147] Table 21: Amplitude-modulated frequencies discovered to be effective for treatment of rhabdomyosarcoma.

304-304.7 Hz	331-331.7 Hz	410-410.7 Hz	420-420.7 Hz	429-429.7 Hz
434-434.7 Hz	461-461.7 Hz	537.4-538 Hz	560-560.7 Hz	572-572.7 Hz
605-605.7 Hz	611-611.7 Hz	618.3-619 Hz	626-626.7 Hz	717-717.7 Hz
776-776.7 Hz	779-779.7 Hz	810-810.7 Hz	814-814.7 Hz	826-826.7 Hz
836.4-837 Hz	843-843.7 Hz	843-843.7 Hz	1314-1314.7 Hz	1411-1411.7 Hz
1467-1467.7 Hz	1785-1785.7 Hz	1816-1816.7 Hz	1903-1903.7 Hz	2073.3-2074 Hz
2155-2155.7 Hz	2287-2287.7 Hz	2381-2381.7 Hz	2542-2542.7 Hz	2711-2711.6 Hz
2854-2854.6 Hz	2911-2911.7 Hz	3085.7-3086.3 Hz	3121-3121.7 Hz	3232-3232.7 Hz
3438-3438.7 Hz	3518-3518.7 Hz	3544-3544.7 Hz	3569-3569.7 Hz	3618-3618.7 Hz
3910-3910.7 Hz	3917-3917.7 Hz	4198-4198.7 Hz	4233.3-4234 Hz	4241-4241.7 Hz
266.3-267 Hz	4337-4337.7 Hz	4358-4358.7 Hz	4424-4424.7 Hz	4436-4436.7 Hz
4485-4485.7 Hz	4731-4731.7 Hz	4749-4749.7 Hz	4776-4776.7 Hz	5151-5151.7 Hz
5521-5521.7 Hz	5545.3-5546 Hz	5577.3-5578 Hz	5618-5618.7 Hz	5631-5631.7 Hz
5696-5696.7 Hz	6058-6058.7 Hz	6443-6443.7 Hz	6472-6472.6 Hz	6558-6558.7 Hz
6651-6651.7 Hz	6730-6730.7 Hz	7168.4-7169 Hz	7406-7406.7 Hz	7440-7440.7 Hz
7452.3-7453 Hz	7649-7649.7 Hz	7808-7808.7 Hz	8542-8542.7 Hz	8546-8546.7 Hz
8562-8562.7 Hz	8576-8576.7 Hz	8698-8698.7 Hz	8881-8881.7 Hz	9040-9040.7 Hz
9074-9074.7 Hz	9189-9189.6 Hz	9484.3-9485 Hz	9851-9851.7 Hz	9943.4-9944 Hz
10870-10870.7 Hz	10891-10891.7 Hz	12086-12086.7 Hz	12648-12648.7 Hz	15195-15195.7 Hz
17316-17316.7 Hz	18021-18021.7 Hz	18567-18567.7 Hz	19384-19384.7 Hz	20097-20097.7 Hz
20278.4-20279 Hz	21854-21854.7 Hz	21890-21890.7 Hz	24198-24198.7 Hz	24413-24413.7 Hz
24789-24789.7 Hz	26534-26534.7 Hz	27713-27713.7 Hz	28222-28222.7 Hz	40489-40489.7 Hz
40762-40762.7 Hz	41279-41279.7 Hz	42923-42923.7 Hz	43166-43166.7 Hz	43692-43692.7 Hz
48583-48583.7 Hz	49434-49434.7 Hz	66553-66553.7 Hz	79658-79658.7 Hz	

[00148] Treatment of colorectal cancer

[00149] Colorectal cancer may be treated according to the methods disclosed herein by the application of colorectal cancer specific amplitude-modulated frequencies. Colorectal cancer

specific frequencies are provided below in Table 22. A patient suffering from colorectal cancer may be treated with any number of the frequencies provided in Table 22, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more of the listed colorectal cancer specific frequencies may be used in the treatment of colorectal cancer. It should be noted that while the table below provides certain frequencies for treatment of colorectal cancer, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of colorectal cancer are within the scope of this disclosure. Furthermore, each of the frequencies listed below include values that are close to (i.e., within ± 0.1 Hz), but not exactly, the number or range.

[00150] Table 22: Amplitude-modulated frequencies discovered to be effective for treatment of colorectal cancer.

605-605.7 Hz	826-826.7 Hz	834-834.7 Hz	841.9-842.6 Hz	1808-1808.6 Hz
1928-1928.7 Hz	1989-1989.7 Hz	2439.7-2440.3Hz	2714-2714.7 Hz	2747-2747.7 Hz
2759-2759.7 Hz	2807-2807.7 Hz	2826-2826.7 Hz	2981-2981.7 Hz	3209-3209.7 Hz
3213-3213.7 Hz	3244-3244.7 Hz	3261-3261.7 Hz	3548-3548.7 Hz	3634-3634.7 Hz
3646.4-3647 Hz	3915-3915.7 Hz	3922-3922.7 Hz	3940-3940.7 Hz	3946-3946.7 Hz
4135-4135.7 Hz	4155-4155.7 Hz	4224-4224.7 Hz	4241-4241.7 Hz	4283-4283.7 Hz
4323-4323.7 Hz	4438.7-4439.2Hz	4447-4447.7 Hz	4708-4708.7 Hz	4713-4713.7 Hz
4718-4718.7 Hz	4718-4718.7 Hz	4722-4722.7 Hz	4776-4776.7 Hz	4850-4850.7 Hz
4874-4874.7 Hz	5205-5205.7 Hz	5209-5209.7 Hz	5209-5209.7 Hz	5221-5221.7 Hz
5232-5232.7 Hz	5265-5265.7 Hz	5427-5427.7 Hz	5484.4-5485 Hz	6074-6074.7 Hz
6112-6112.7 Hz	6159-6159.7 Hz	6361-6361.7 Hz	6438-6438.7 Hz	6468-6468.7 Hz
6537-6537.7 Hz	6648-6648.7 Hz	6869-6869.7 Hz	6878-6878.7 Hz	6914-6914.7 Hz
6974-6974.7 Hz	6982-6982.7 Hz	6986-6986.7 Hz	7109-7109.7 Hz	7117-7117.7 Hz
7137-7137.7 Hz	7149-7149.7 Hz	7191.7-7192.3Hz	7531-7531.7 Hz	7560-7560.7 Hz
7879-7879.7 Hz	7936-7936.7 Hz	7970-7970.7 Hz	7994-7994.7 Hz	8038.4-8039 Hz
8413-8413.7 Hz	8438-8438.7 Hz	8467-8467.7 Hz	8771-8771.7 Hz	8809-8809.7 Hz
8889-8889.7 Hz	9071-9071.7 Hz	9084-9084.7 Hz	9731-9731.7 Hz	10566-10566.7 Hz
10831.7-10832.1 Hz	10845-10845.7 Hz	10859-10859.7 Hz	10906-10906.7 Hz	10947-10947.7 Hz
10974-10974.7 Hz	11110-11110.7 Hz	11225-11225.7 Hz	11234-11234.7 Hz	11255-11255.7 Hz
11387-11387.7 Hz	11530-11530.7 Hz	11576-11576.7 Hz	11621-11621.7 Hz	11630-11630.7 Hz
11638-11638.7 Hz	11681-11681.7 Hz	11911-11911.7 Hz	11934-11934.7 Hz	11949-11949.7 Hz
12182-12182.7 Hz	12373-12373.7 Hz	12575-12575.7 Hz	12589-12589.7 Hz	12617-12617.7 Hz
12629-12629.7 Hz	12637-12637.7 Hz	12645-12645.7 Hz	13418-13418.7 Hz	13475-13475.7 Hz
13611-13611.7 Hz	13615-13615.7 Hz	13670-13670.7 Hz	13717-13717.7 Hz	13736-13736.7 Hz
13742-13742.7 Hz	13773-13773.7 Hz	13775-13775.7 Hz	13978.3-13979 Hz	14182-14182.7 Hz
14417-14417.7 Hz	14422-14422.7 Hz	14441-14441.7 Hz	14443-14443.7 Hz	14570-14570.7 Hz
14621-14621.7 Hz	14630-14630.7 Hz	14671-14671.7 Hz	14674-14674.7 Hz	14863-14863.7 Hz

14877-14877.7 Hz	14911-14911.7 Hz	14957-14957.7 Hz	14982-14982.7 Hz	15109-15109.7 Hz
15133-15133.7 Hz	15154-15154.7 Hz	15230-15230.7 Hz	15250-15250.7 Hz	15278-15278.7 Hz
16274-16274.7 Hz	17106-17106.7 Hz	17123-17123.7 Hz	17472-17472.7 Hz	17515-17515.7 Hz
17578.4-17579 Hz	17808-17808.7 Hz	17825-17825.7 Hz	18157-18157.7 Hz	18171-18171.7 Hz
18294-18294.7 Hz	18372-18372.7 Hz	18375-18375.7 Hz	18396-18396.7 Hz	18533-18533.7 Hz
18635-18635.7 Hz	19342-19342.7 Hz	19437-19437.7 Hz	19447-19447.7 Hz	19829-19829.7 Hz
20173-20173.7 Hz	20499-20499.7 Hz	21389-21389.7 Hz	21490-21490.7 Hz	21663-21663.7 Hz
21833-21833.7 Hz	22167-22167.7 Hz	22423.4-22424 Hz	22559.3-22560 Hz	22743-22743.7 Hz
23246-23246.7 Hz	23249-23249.7 Hz	23259-23259.7 Hz	23344-23344.7 Hz	23624-23624.7 Hz
23667-23667.7 Hz	24142-24142.7 Hz	26113-26113.7 Hz	26403-26403.7 Hz	28212-28212.7 Hz
28272-28272.7 Hz	28537-28537.7 Hz	30075-30075.7 Hz	30373-30373.7 Hz	31847-31847.7 Hz
33546-33546.7 Hz	35324-35324.7 Hz	35543-35543.7 Hz	42544-42544.7 Hz	42692.3-42693 Hz
42812-42812.7 Hz	42813-42813.7 Hz	43162-43162.7 Hz	43325-43325.7 Hz	44652-44652.7 Hz
46340-46340.7 Hz	46746-46746.7 Hz	48653-48653.7 Hz	51946-51946.7 Hz	52752-52752.7 Hz
80715-80715.7 Hz	94494-94494.7 Hz			

[00151] In certain embodiments, the frequencies listed above may also be used in combination with one or more of the frequencies disclosed in the '365 patent (reproduced below). Specifically, treatment modalities for treatment of colorectal cancer in accordance with this disclosure may include application of some or all of the above listed frequencies with one or more of the frequencies disclosed in Table 23 for colorectal cancer. Alternatively and/or additionally, the frequencies disclosed in the '365 patent may be used for treatment of colorectal cancer using the methods and systems described herein.

[00152] Table 23: Amplitude-modulated frequencies for treatment of colon cancer.

78.76 Hz	796.562 Hz	841.541 Hz	842.783 Hz	914.429 Hz
1162.117 Hz	1372.207 Hz	1372.934 Hz	1718.532 Hz	2243.169 Hz
2278.312 Hz	2286.5 Hz	2286.519 Hz	2334.178 Hz	2423.292 Hz
2454.423 Hz	2464.229 Hz	2598.853 Hz	2623.048 Hz	3131.123 Hz
3161.465 Hz	3175.313 Hz	3249.529 Hz	3363.229 Hz	3373.892 Hz
3390.925 Hz	3409.179 Hz	3432.274 Hz	3509.522 Hz	3531.422 Hz
3533.328 Hz	3766.296 Hz	4040.839 Hz	4081.022 Hz	4123.953 Hz
4146.274 Hz	4233.822 Hz	4282.332 Hz	4318.222 Hz	4344.082 Hz
4416.221 Hz	4481.242 Hz	4724.263 Hz	4751.319 Hz	4755.323 Hz
4788.485 Hz	5149.331 Hz	5217.402 Hz	5386.212 Hz	5407.192 Hz
5426.323 Hz	5496.434 Hz	5555.212 Hz	5572.032 Hz	5634.933 Hz
5724.231 Hz	5758.378 Hz	5787.342 Hz	5948.897 Hz	5967.448 Hz
5976.825 Hz	6182.322 Hz	6292.379 Hz	6324.493 Hz	6341.248 Hz
6471.322 Hz	6477.218 Hz	6558.342 Hz	6855.286 Hz	7129.843 Hz
7140.187 Hz	7162.422 Hz	7368.222 Hz	7645.859 Hz	7829.234 Hz
7866.229 Hz	7877.334 Hz	8013.314 Hz	8374.942 Hz	8384.228 Hz
8408.121 Hz	8534.111 Hz	8568.033 Hz	8573.122 Hz	9226.222 Hz
9351.9 Hz	9737.211 Hz	9744.193 Hz	9942.321 Hz	10301.371 Hz
10401.515 Hz	10872.693 Hz	11220.222 Hz	11283.378 Hz	12256.432 Hz
13749.858 Hz	15231.548 Hz	15248.324 Hz	58191.928 Hz	60317.352 Hz

[00153] One or more of the AM frequencies of Table 22 may be used in combination with one or more of the frequencies provided in Table 23. In preferred embodiments, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more frequencies are used in the methods for the treatment of colorectal cancer, which frequencies are selected from Table 22 and, optionally from Table 23, provided that at least one or more frequencies are selected from Table 22.

[00154] In certain embodiments, the frequencies disclosed in the '365 patent may be used for treatment of a diseased state using the methods and systems described herein.

[00155] Treatment of ovarian cancer

[00156] Ovarian cancer may be treated according to the methods disclosed herein by the application of ovarian cancer specific amplitude-modulated frequencies. Ovarian cancer specific frequencies are provided below in Table 24. A patient suffering from ovarian cancer may be treated with any number of the frequencies provided in Table 24, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more, 90 or more, or 100 or more of the listed ovarian cancer specific frequencies may be used in the treatment of ovarian cancer. It should be noted that while the table below provides certain frequencies for treatment of ovarian cancer, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of ovarian cancer are within the scope of this disclosure.

[00157] Table 24: Amplitude-modulated frequencies for treatment of ovarian cancer.

78.76 Hz	181.821 Hz	367.211 Hz	403.218 Hz	410.245 Hz
414.817 Hz	436.332 Hz	447.942 Hz	481.191 Hz	489.292 Hz
537.914 Hz	559.292 Hz	608.321 Hz	618.407 Hz	621.321 Hz
655.435 Hz	657.394 Hz	657.397 Hz	657.483 Hz	664.211 Hz
694.689 Hz	708.787 Hz	708.8 Hz	708.821 Hz	708.822 Hz
734.921 Hz	749.221 Hz	764.232 Hz	778.295 Hz	779.403 Hz
806.021 Hz	806.389 Hz	809.313 Hz	824.327 Hz	825.145 Hz
835.129 Hz	839.521 Hz	841.208 Hz	843.312 Hz	925.309 Hz
956.984 Hz	958.929 Hz	985.313 Hz	1024.208 Hz	1102.635 Hz
1121.329 Hz	1159.738 Hz	1221.321 Hz	1372.207 Hz	1396.498 Hz
1502.181 Hz	1518.208 Hz	1552.123 Hz	1579.212 Hz	1624.802 Hz
1656.431 Hz	1670.699 Hz	1679.432 Hz	1696.403 Hz	1759.318 Hz
1762.938 Hz	1771.402 Hz	1775.313 Hz	1821.729 Hz	1990.482 Hz
2016.323 Hz	2031.448 Hz	2034.231 Hz	2050.282 Hz	2053.396 Hz

2082.234 Hz	2089.092 Hz	2221.323 Hz	2228.832 Hz	2229.515 Hz
2253.704 Hz	2254.329 Hz	2278.312 Hz	2332.949 Hz	2348.233 Hz
2381.443 Hz	2413.193 Hz	2415.243 Hz	2425.222 Hz	2433.321 Hz
2439.253 Hz	2465.23 Hz	2477.919 Hz	2669.177 Hz	2715.232 Hz
2733.843 Hz	2771.211 Hz	2802.339 Hz	2812.321 Hz	2831.386 Hz
2835.332 Hz	2851.347 Hz	2856.253 Hz	2873.542 Hz	2877.192 Hz
2885.322 Hz	2887.385 Hz	2894.972 Hz	2973.771 Hz	3080.592 Hz
3157.483 Hz	3160.321 Hz	3161.465 Hz	3185.129 Hz	3223.232 Hz
3238.148 Hz	3240.111 Hz	3249.529 Hz	3254.122 Hz	3262.145 Hz
3264.241 Hz	3265.121 Hz	3282.235 Hz	3283.392 Hz	3296.431 Hz
3314.321 Hz	3361.671 Hz	3366.311 Hz	3459.408 Hz	3461.322 Hz
3523.215 Hz	3527.233 Hz	3542.213 Hz	3590.376 Hz	3629.232 Hz
3632.793 Hz	3636.289 Hz	3637.085 Hz	3669.513 Hz	3770.189 Hz
3858.916 Hz	3872.321 Hz	3919.232 Hz	3941.739 Hz	3957.185 Hz
3975.228 Hz	3975.383 Hz	4061.131 Hz	4072.322 Hz	4139.322 Hz
4169.451 Hz	4174.259 Hz	4241.321 Hz	4243.393 Hz	4261.228 Hz
4279.113 Hz	4309.335 Hz	4314.188 Hz	4318.222 Hz	4328.928 Hz
4340.833 Hz	4380.321 Hz	4394.134 Hz	4412.252 Hz	4424.236 Hz
4439.341 Hz	4442.161 Hz	4447.221 Hz	4458.339 Hz	4556.322 Hz
4566.009 Hz	4579.981 Hz	4682.643 Hz	4718.331 Hz	4749.302 Hz
4765.331 Hz	4779.194 Hz	4912.923 Hz	4917.202 Hz	5011.325 Hz
5149.331 Hz	5228.172 Hz	5237.132 Hz	5313.353 Hz	5745.218 Hz
5757.897 Hz	5762.386 Hz	5812.322 Hz	5869.321 Hz	5882.292 Hz
5921.249 Hz	5991.932 Hz	6069.458 Hz	6071.319 Hz	6083.214 Hz
6111.819 Hz	6161.782 Hz	6169.341 Hz	6275.232 Hz	6294.929 Hz
6350.333 Hz	6356.321 Hz	6406.891 Hz	6407.207 Hz	6450.787 Hz
6477.098 Hz	6477.929 Hz	6478.338 Hz	6504.983 Hz	6543.421 Hz
6552.24 Hz	6661.09 Hz	6663.955 Hz	6753.338 Hz	6789.211 Hz
6851.323 Hz	6855.286 Hz	6875.232 Hz	6882.949 Hz	7047.223 Hz
7206.403 Hz	7232.214 Hz	7257.489 Hz	7276.209 Hz	7279.335 Hz
7281.219 Hz	7285.223 Hz	7285.693 Hz	7289.192 Hz	7326.229 Hz
7399.223 Hz	7429.212 Hz	7460.932 Hz	7480.228 Hz	7488.742 Hz
7495.763 Hz	7539.432 Hz	7564.185 Hz	7650.028 Hz	7689.728 Hz
7780.294 Hz	8021.921 Hz	8038.961 Hz	8040.322 Hz	8044.233 Hz
8054.413 Hz	8095.313 Hz	8141.174 Hz	8143.491 Hz	8164.332 Hz
8261.121 Hz	8302.285 Hz	8309.752 Hz	8372.532 Hz	8408.121 Hz
8424.229 Hz	8428.313 Hz	8430.142 Hz	8435.451 Hz	8486.421 Hz
8492.797 Hz	8548.324 Hz	8554.361 Hz	8562.965 Hz	8578.193 Hz
8579.323 Hz	8579.333 Hz	8597.409 Hz	8642.181 Hz	8655.818 Hz
8758.341 Hz	8779.323 Hz	8792.231 Hz	8819.127 Hz	8831.132 Hz
8863.232 Hz	9028.031 Hz	9049.205 Hz	9173.264 Hz	9175.311 Hz
9184.338 Hz	9186.919 Hz	9393.946 Hz	9482.409 Hz	9658.296 Hz
9737.211 Hz	9746.232 Hz	9859.322 Hz	9922.231 Hz	10020.213 Hz
10032.684 Hz	10435.191 Hz	10446.028 Hz	10449.221 Hz	10457.329 Hz
10478.221 Hz	10498.339 Hz	10545.313 Hz	10639.345 Hz	10720.221 Hz
10743.118 Hz	10813.981 Hz	10832.421 Hz	10838.243 Hz	10862.429 Hz
10865.127 Hz	10917.229 Hz	10977.188 Hz	11120.209 Hz	11143.409 Hz
11177.289 Hz	11177.409 Hz	11321.491 Hz	11359.093 Hz	11540.212 Hz
11673.031 Hz	11731.295 Hz	11793.886 Hz	11895.229 Hz	12074.531 Hz

12216.212 Hz	12223.329 Hz	12243.132 Hz	12253.329 Hz	12260.933 Hz
2262.853 Hz	12292.222 Hz	12357.353 Hz	12527.032 Hz	12668.194 Hz
12743.197 Hz	12755.333 Hz	12947.311 Hz	13477.293 Hz	13582.122 Hz
13636.082 Hz	13717.221 Hz	13756.503 Hz	13825.295 Hz	13829.195 Hz
14188.611 Hz	14410.949 Hz	14436.201 Hz	14528.429 Hz	14537.218 Hz
14563.821 Hz	14835.809 Hz	14947.184 Hz	14948.323 Hz	15429.139 Hz
15443.309 Hz	15450.183 Hz	16026.221 Hz	16062.401 Hz	16081.291 Hz
16144.343 Hz	16331.323 Hz	17316.328 Hz	17930.967 Hz	17932.432 Hz
17951.395 Hz	17970.122 Hz	18242.181 Hz	18254.323 Hz	18265.238 Hz
18337.222 Hz	18344.212 Hz	18378.321 Hz	18921.415 Hz	18926.951 Hz
18931.327 Hz	19124.197 Hz	19133.123 Hz	19321.231 Hz	19686.593 Hz
114508.332 Hz				

[00158] Treatment of kidney cancer

[00159] Kidney cancer may be treated according to the methods disclosed herein by the application of kidney cancer specific amplitude-modulated frequencies. Kidney cancer specific frequencies are provided below in Table 25. A patient suffering from kidney cancer may be treated with any number of the frequencies provided in Table 25, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more of the listed kidney cancer specific frequencies may be used in the treatment of kidney cancer. It should be noted that while the table below provides certain frequencies for treatment of kidney cancer, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of kidney cancer are within the scope of this disclosure.

[00160] Table 25: Amplitude-modulated frequencies for treatment of kidney cancer.

628.321 Hz	631.141 Hz	643.312 Hz	812.512 Hz	826.321 Hz
1240.336 Hz	1372.934 Hz	2082.241 Hz	2156.931 Hz	2254.329 Hz
2286.5 Hz	3555.209 Hz	3928.343 Hz	4329.152 Hz	4420.932 Hz
4819.228 Hz	4828.321 Hz	5314.322 Hz	6007.332 Hz	7054.279 Hz
7074.429 Hz	7254.343 Hz	8041.289 Hz	8727.224 Hz	8760.983 Hz
8831.132 Hz	8870.228 Hz	8923.1 Hz	10565.321 Hz	10586.229 Hz
11561.221 Hz	11846.212 Hz	12631.331 Hz	12693.272 Hz	14411.321 Hz
20178.941 Hz				

[00161] Treatment of bladder cancer

[00162] Bladder cancer may be treated according to the methods disclosed herein by the application of bladder cancer specific amplitude-modulated frequencies. Bladder cancer specific frequencies are provided below in Table 26. A patient suffering from bladder cancer may be

treated with any number of the frequencies provided in Table 26, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more of the listed bladder cancer specific frequencies may be used in the treatment of bladder cancer. It should be noted that while the table below provides certain frequencies for treatment of bladder cancer, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of bladder cancer are within the scope of this disclosure.

[00163] Table 26: Amplitude-modulated frequencies for treatment of bladder cancer.

623.243 Hz	757.084 Hz	870.4 Hz	2454.423 Hz	2480.191 Hz
2581.101 Hz	2715.232 Hz	3042.012 Hz	3196.194 Hz	3265.323 Hz
3438.109 Hz	3692.319 Hz	3952.308 Hz	5230.227 Hz	6022.942 Hz
6061.711 Hz	6710.899 Hz	6721.912 Hz	7181.784 Hz	7212.826 Hz
7458.209 Hz	8235.21 Hz	8749.232 Hz	8767.189 Hz	9354.812 Hz
9611.339 Hz	12532.729 Hz	13467.209 Hz	13777.9 Hz	14015.241 Hz
18524.419 Hz				

[00164] Treatment of lung cancer

[00165] Lung cancer may be treated according to the methods disclosed herein by the application of lung cancer specific amplitude-modulated frequencies. Lung cancer specific frequencies are provided below in Table 27. A patient suffering from lung cancer may be treated with any number of the frequencies provided in Table 27, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more, 60 or more, 70 or more, 80 or more of the listed lung cancer specific frequencies may be used in the treatment of lung cancer. It should be noted that while the table below provides certain frequencies for treatment of lung cancer, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of lung cancer are within the scope of this disclosure.

[00166] Table 27: Amplitude-modulated frequencies for treatment of lung cancer.

304.148 Hz	694.7 Hz	694.727 Hz	708.8 Hz	708.841 Hz
1587.811 Hz	1759.318 Hz	1873.477 Hz	2253.704 Hz	2391.312 Hz
2454.232 Hz	2729.929 Hz	2741.261 Hz	2761.312 Hz	2784.491 Hz
2812.443 Hz	2855.218 Hz	2859.495 Hz	3128.822 Hz	3139.297 Hz
3193.212 Hz	3348.783 Hz	3360.971 Hz	3366.311 Hz	3373.892 Hz
3440.212 Hz	3461.322 Hz	3682.489 Hz	3727.231 Hz	3749.882 Hz
3769.942 Hz	4131.235 Hz	4158.393 Hz	4243.393 Hz	4347.733 Hz

4373.411 Hz	4378.321 Hz	4416.221 Hz	4481.242 Hz	4777.521 Hz
4798.422 Hz	4837.241 Hz	4959.842 Hz	5013.321 Hz	5047.523 Hz
5068.322 Hz	5371.922 Hz	5538.432 Hz	5548.879 Hz	5679.309 Hz
5734.143 Hz	5787.342 Hz	6445.309 Hz	6838.434 Hz	6870.955 Hz
6879.216 Hz	7079.411 Hz	7216.288 Hz	7376.089 Hz	7761.289 Hz
8082.173 Hz	8281.259 Hz	8352.189 Hz	8442.473 Hz	8773.916 Hz
8935.752 Hz	9121.223 Hz	9181.434 Hz	9317.913 Hz	9363.896 Hz
9736.919 Hz	9753.321 Hz	10424.908 Hz	10452.913 Hz	10824.609 Hz
11656.329 Hz	12748.919 Hz	15774.291 Hz	15798.333 Hz	16510.333 Hz

[00167] Treatment of leiomyosarcoma

[00168] Leiomyosarcoma may be treated according to the methods disclosed herein by the application of leiomyosarcoma specific amplitude-modulated frequencies. Leiomyosarcoma specific frequencies are provided below in Table 28. A patient suffering from leiomyosarcoma may be treated with any number of the frequencies provided in Table 28, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more of the listed leiomyosarcoma specific frequencies may be used in the treatment of leiomyosarcoma. It should be noted that while the table below provides certain frequencies for treatment of leiomyosarcoma, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of leiomyosarcoma are within the scope of this disclosure.

[00169] Table 28: Amplitude-modulated frequencies for treatment of leiomyosarcoma.

836.923 Hz	843.181 Hz	1411.241 Hz	2073.721 Hz	2381.443 Hz
2711.019 Hz	2911.329 Hz	3232.185 Hz	3518.321 Hz	3544.209 Hz
3569.219 Hz	4233.822 Hz	4241.321 Hz	4266.591 Hz	4337.322 Hz
4424.112 Hz	4436.111 Hz	4485.22 Hz	5545.521 Hz	5577.841 Hz
5631.422 Hz	5696.184 Hz	6472.098 Hz	6558.342 Hz	6651.276 Hz
7168.892 Hz	7406.309 Hz	7452.528 Hz	7649.209 Hz	7808.352 Hz
9040.313 Hz	9074.294 Hz	9189.092 Hz	9484.512 Hz	9943.972 Hz
12086.394 Hz				

[00170] Treatment of leukemia and chronic lymphoid cancer

[00171] Leukemia and chronic lymphoid cancer may be treated according to the methods disclosed herein by the application of leukemia and chronic lymphoid cancer specific amplitude-modulated frequencies. Leukemia and chronic lymphoid cancer specific frequencies are provided below in Table 29. A patient suffering from leukemia and chronic lymphoid cancer may be treated with any number of the frequencies provided in Table 29, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10

or more, 15 or more of the listed leukemia and chronic lymphoid cancer specific frequencies may be used in the treatment of leukemia and chronic lymphoid cancer. It should be noted that while the table below provides certain frequencies for treatment of leukemia and chronic lymphoid cancer, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of leukemia and chronic lymphoid cancer are within the scope of this disclosure.

[00172] Table 29: Amplitude-modulated frequencies for treatment of leukemia and chronic lymphoid cancer.

814.413 Hz	825.145 Hz	2415.243 Hz	2436.316 Hz	2874.432 Hz
2891.029 Hz	3361.671 Hz	5245.452 Hz	5557.333 Hz	6850.197 Hz
6919.322 Hz	7587.224 Hz	7629.318 Hz	8172.405 Hz	8272.338 Hz
8438.453 Hz	12950.331 Hz			

[00173] Treatment of myeloma

[00174] Myeloma may be treated according to the methods disclosed herein by the application of myeloma specific amplitude-modulated frequencies. Myeloma specific frequencies are provided below in Table 30. A patient suffering from myeloma may be treated with any number of the frequencies provided in Table 30, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more of the listed myeloma specific frequencies may be used in the treatment of myeloma. It should be noted that while the table below provides certain frequencies for treatment of myeloma, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of myeloma are within the scope of this disclosure.

[00175] Table 30: Amplitude-modulated frequencies for treatment of myeloma.

765.196 Hz	2336.238 Hz	2372.122 Hz	2381.443 Hz	2425.394 Hz
656.339 Hz	2741.261 Hz	2883.618 Hz	2919.273 Hz	3265.323 Hz
3564.455 Hz	3580.25 Hz	3584.291 Hz	3674.292 Hz	5249.331 Hz
7967.311 Hz	7973.125 Hz	8049.952 Hz	8283.329 Hz	10351.323 Hz

[00176] Treatment of lymphoma

[00177] Lymphoma may be treated according to the methods disclosed herein by the application of lymphoma specific amplitude-modulated frequencies. Lymphoma specific frequencies are provided below in Table 31. A patient suffering from lymphoma may be treated with any number of the frequencies provided in Table 31, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more

of the listed lymphoma specific frequencies may be used in the treatment of lymphoma. It should be noted that while the table below provides certain frequencies for treatment of lymphoma, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of lymphoma are within the scope of this disclosure.

[00178] Table 31: Amplitude-modulated frequencies for treatment of lymphoma.

752.5 Hz	976.3 Hz	1558.223 Hz	2310.912 Hz	2477.919 Hz
2560.843 Hz	3348.783 Hz	3371.216 Hz	3605.432 Hz	3623.198 Hz
3838.281 Hz	3838.48 Hz	5102 Hz	5696.932 Hz	5724.231 Hz
6358.194 Hz	7472.211 Hz	8062.121 Hz	8222.222 Hz	

[00179] Treatment of brain cancer

[00180] Brain cancer may be treated according to the methods disclosed herein by the application of brain cancer specific amplitude-modulated frequencies. Brain cancer specific frequencies are provided below in Table 32. A patient suffering from brain cancer may be treated with any number of the frequencies provided in Table 32, however it is generally preferable to employ as many of the frequencies as is practical for the treatment of the patient. Accordingly, 10 or more, 15 or more, or 20 or more, 25 or more, or 30 or more, 35 or more, or 40 or more, 45 or more, or 50 or more of the listed brain cancer specific frequencies may be used in the treatment of brain cancer. It should be noted that while the table below provides certain frequencies for treatment of brain cancer, the disclosure is not so limiting, and other frequencies discovered to be effective in the treatment of brain cancer are within the scope of this disclosure.

[00181] Table 32: Amplitude-modulated frequencies for treatment of brain cancer.

1372.934 Hz	2318.182 Hz	2381.443 Hz	2425.394 Hz	2442.423 Hz
2478.973 Hz	2654.513 Hz	2661.324 Hz	2686.105 Hz	2690.179 Hz
3249.332 Hz	3277.509 Hz	3335.279 Hz	3348.783 Hz	3436.211 Hz
3916.321 Hz	4031.933 Hz	4086.091 Hz	4241.321 Hz	4318.222 Hz
4334.33 Hz	4358.333 Hz	4393.419 Hz	4454.194 Hz	4515.789 Hz
4619.324 Hz	4723.937 Hz	4853.286 Hz	5289.231 Hz	5378.099 Hz
5426.323 Hz	5640.981 Hz	6316.211 Hz	6459.203 Hz	6474.332 Hz
6626.572 Hz	6855.286 Hz	6915.886 Hz	6943.386 Hz	7151.264 Hz
7182.922 Hz	7194.897 Hz	7323.209 Hz	7390.343 Hz	7796.221 Hz
7961.122 Hz	8128.942 Hz	8245.109 Hz	8272.281 Hz	8358.154 Hz
8408.121 Hz	9138.82 Hz	10719.318 Hz	11556.241 Hz	12828.633 Hz
14515.962 Hz	14586.765 Hz			

[00182] The following are synopses relate to exemplary uses of the electronic devices of the present invention and the cancer specific frequencies for the treatment of patients:

Example A

[00183] A 79-year-old man was diagnosed with hepatitis A and B negative hepatocellular carcinoma. He underwent left hepatectomy the following month, which revealed the presence of a poorly differentiated hepatocellular carcinoma. The tumors largest diameter was 10 cm and was staged as pT3NxMx. After five months from diagnosis, the patient had evidence of disease progression with four new lesions identified within the right lobe of the liver and new mediastinal adenopathy, and chemoembolization with doxorubicin and lipiodol was performed over the next month. A follow up MRI performed the following month showed progression of disease. Treatment with sorafenib was initiated when the patient's performance status was KPS 80%, ECOG 1 with a Child Pugh of A6. Simultaneous compassionate treatment with the TheraBionic device emitting 206 hepatocellular carcinoma (HCC) specific frequencies was administered 3 hours a day. The patient had a complete response by marker as the level of alpha-fetoprotein (AFP) decreased from 92,620.0 international units/ml (IU/ml) prior to treatment initiation to 4.18 IU/ml, measured a year from the original diagnosis and 4 months after commencing treatment with the HCC specific frequencies.

[00184] Nexavar was discontinued in the beginning of the third year following the initial diagnosis because of intolerable side effects. One month after discontinuation of Nexavar, there was evidence of early disease progression with a doubling of the AFP level, and near doubling of the levels of liver enzymes ASAP, ALAT, and gamma GT. The patient was re-examined for tumor-specific frequencies using the method described above. The analysis revealed pulse pressure changes for additional HCC specific frequencies. Fifty HCC frequencies were added to the 206 HCC frequencies, i.e., the patient began receiving 256 frequencies with each treatment. A new MRI of the abdomen obtained in seven months later revealed the emergence of new tumor nodules. The patient was re-examined on the following month using the method described above. The analysis revealed pulse pressure changes for 12 additional HCC specific frequencies, bringing the total number to 268 HCC specific frequencies. The same approach was used whenever there was either clear progression by changes in AFP levels and/or significant enlargement of existing tumor masses and/or emergence of new tumor masses. Addition of new HCC specific frequencies led to

significant decrease or stabilization of tumor masses as well as decreases in AFP levels. In the last year of treatment, the patient received a total of 422 HCC specific frequencies.

[00185] The patient received treatment with the TheraBionic device for 67 months, when he became unable to receive treatment on a regular basis because of a hip fracture secondary to a fall, generalized weakness, and worsening renal failure. He passed away in six months later. In summary, addition of HCC specific frequencies led to repeated objective clinical responses assessed both radiologically and by tumor marker, which led to an exceptionally long survival (more than 6 years) in a patient with rapidly progressive advanced hepatocellular carcinoma.

[00186] Example B

[00187] 87-year-old man with a long-standing history of type II diabetes was diagnosed with advanced unresectable multifocal hepatocellular carcinoma. He declined treatment with Nexavar and requested compassionate use treatment with the TheraBionic device. He began receiving treatment with 313 HCC specific frequencies two months after diagnosis. The patient had stable disease for 13 months when he had evidence of disease progression by RECIST criteria. He began receiving treatment with 355 HCC specific frequencies within the following month. A follow-up MRI of the abdomen obtained after two months revealed the presence of necrosis within 2 lesions and stable disease in the others. Hence, the addition of 42 HCC specific frequencies led to a radiological response. A follow-up MRI of the abdomen obtained two months later showed stable disease by RECIST criteria. A follow-up MRI of the liver obtained after three months showed progression of disease by RECIST criteria with the appearance of new liver lesions. Two weeks later, the patient was examined with the method described above and changes in pulse pressure were observed for 49 additional HCC frequencies. Hence, the patient began receiving treatment with 404 frequencies as of that month. A repeat MRI of the abdomen obtained three months later showed stable disease. The patient continued to do well over the next two months when he had gastrointestinal bleeding due to esophageal varices. He declined treatment for esophageal varices and passed away later that month. Hence, treatment of this patient demonstrates the clinical efficacy of additional HCC frequencies, which led to both objective response and stable disease.

[00188] Background

[00189] A portable and programmable device as described herein that is capable of delivering low levels of amplitude-modulated electromagnetic fields has been developed. The device emits a 27 MHz radiofrequency signal, amplitude-modulated at cancer-specific frequencies ranging from 0.1 to 150 kHz with high precision. The device is connected to a spoon-like coupler, which is placed in the patient's mouth during treatment.

Example 1: Treatment of Breast Cancer

[00190] Breast cancer may be treated according to the methods disclosed herein by the application of breast cancer specific amplitude-modulated frequencies. Breast cancer specific frequencies are provided below in Table 33.

[00191] Table 33: Amplitude-modulated frequencies discovered to be effective for treatment of breast cancer.

374-374.7 Hz	419.8-420.4 Hz	420.4-420.8 Hz	429-429.7 Hz	1336-1336.7 Hz
1369-1369.7 Hz	1728-1728.7 Hz	1771.8-1772.3 Hz	1772.3-1772.8 Hz	2811-2811.7 Hz
2824-2824.7 Hz	2840-2840.7 Hz	2858.8-2859.35Hz	2860-2860.7 Hz	2878-2878.7 Hz
2890-2890.7 Hz	3209-3209.7 Hz	3322-3322.7 Hz	3360-3360.7 Hz	3663-3663.7 Hz
3839-3839.7 Hz	3842.4-3843 Hz	3854-3854.7 Hz	3936-3936.7 Hz	4323-4323.7 Hz
4329-4329.7 Hz	4416-4416.7 Hz	4430-4430.7 Hz	4477.4-4478 Hz	4480.9-4481.35Hz
4714-4714.7 Hz	4805.3-4806 Hz	4813-4813.7 Hz	4819-4819.7 Hz	4822-4822.7 Hz
4823-4823.7 Hz	4833-4833.7 Hz	4890-4890.7 Hz	5154-5154.7 Hz	5243-5243.7 Hz
5407.3-5408 Hz	5716-5716.7 Hz	5976-5976.7 Hz	6024-6024.7 Hz	6070-6070.7 Hz
6094-6094.7 Hz	6414-6414.7 Hz	6717-6717.7 Hz	6751-6751.7 Hz	6968.4-6969 Hz
7013-7013.7 Hz	7042-7042.7 Hz	7080-7080.7 Hz	7145.4-7146 Hz	7151-7151.7 Hz
7158-7158.7 Hz	7225-7225.7 Hz	8332-8332.7 Hz	8824-8824.7 Hz	8837-8837.7 Hz
9935-9935.7 Hz	9961-9961.7 Hz	10013-10013.7 Hz	10064-10064.7 Hz	10339.8-10340.4 Hz
10384-10384.7 Hz	10745-10745.7 Hz	10788-10788.7 Hz	10834-10834.7 Hz	10854-10854.7 Hz
10873-10873.7 Hz	10894-10894.7 Hz	11163-11163.7 Hz	11414-11414.7 Hz	11421-11421.7 Hz
11429-11429.7 Hz	11719-11719.7 Hz	11745-11745.7 Hz	11931-11931.7 Hz	11974-11974.7 Hz
11993-11993.7 Hz	12118-12118.7 Hz	12137-12137.7 Hz	12144-12144.7 Hz	12318-12318.7 Hz
12342-12342.7 Hz	12364-12364.7 Hz	12557-12557.7 Hz	12588-12588.7 Hz	13329-13329.7 Hz
13377-13377.7 Hz	13386-13386.7 Hz	13644-13644.7 Hz	13661-13661.7 Hz	13713-13713.7 Hz
14164-14164.7 Hz	14308-14308.7 Hz	14333.4-14333.9 Hz	14432-14432.7 Hz	14524-14524.7 Hz
14589-14589.7 Hz	14729-14729.7 Hz	14813-14813.7 Hz	14835-14835.7 Hz	14858-14858.7 Hz
14885-14885.7 Hz	15035-15035.6 Hz	15067-15067.7 Hz	15126-15126.7 Hz	15195-15195.7 Hz
15269-15269.7 Hz	15432-15432.7 Hz	15432-15432.7 Hz	15563-15563.7 Hz	15621-15621.7 Hz
15624-15624.7 Hz	15642-15642.7 Hz	15647-15647.7 Hz	15669-15669.7 Hz	15698-15698.7 Hz
15823-15823.7 Hz	16347-16347.7 Hz	17832-17832.7 Hz	18221-18221.7 Hz	18260-18260.7 Hz
19433-19433.7 Hz	19446-19446.7 Hz	19489.3-19490 Hz	19782-19782.7 Hz	19827-19827.7 Hz

21291.4-21292 Hz	21887-21887.7 Hz	22020-22020.7 Hz	22419-22419.7 Hz	22422-22422.7 Hz
22425-22425.7 Hz	22444-22444.7 Hz	22491-22491.7 Hz	22840.3-22841 Hz	22859-22859.7 Hz
22973-22973.7 Hz	22983-22983.7 Hz	23258-23258.7 Hz	23652-23652.7 Hz	24174-24174.7 Hz
24811-24811.7 Hz	26954-26954.7 Hz	27114-27114.7 Hz	30463.3-30464 Hz	34557.3-34558 Hz
34854-34854.7 Hz	38144-38144.7 Hz	38682-38682.7 Hz	41561-41561.7 Hz	41623-41623.7 Hz
41735-41735.7 Hz	42713-42713.7 Hz	44575.3-44576 Hz	46662-46662.7 Hz	48173-48173.7 Hz
50292-50292.7 Hz				

Example 2: Treatment of neuroendocrine tumors

[00192] Neuroendocrine tumors may be treated according to the methods disclosed herein by the application of neuroendocrine tumor specific amplitude-modulated frequencies. Neuroendocrine tumors specific frequencies are provided below in Table 34.

[00193] Table 34: Amplitude-modulated frequencies discovered to be effective for treatment of neuroendocrine tumors.

843-843.7 Hz	1656-1656.7 Hz	2423-2423.7 Hz	2480-2480.7 Hz	2707-2707.7 Hz
2890-2890.7 Hz	3080.3-3081 Hz	3661-3661.7 Hz	3678-3678.7 Hz	3976.4-3977 Hz
4048-4048.7 Hz	4055-4055.7 Hz	4368.3-4369 Hz	4459-4459.7 Hz	4621-4621.7 Hz
4837-4837.7 Hz	4866-4866.7 Hz	5165.4-5166 Hz	5265-5265.7 Hz	5270-5270.7 Hz
6436-6436.7 Hz	7037-7037.7 Hz	8008-8008.7 Hz	8024-8024.7 Hz	8097-8097.7 Hz
8427-8427.7 Hz	8478.3-8479 Hz	8480-8480.7 Hz	8492-8492.7 Hz	8853-8853.7 Hz
8877-8877.7 Hz	9122-9122.7 Hz	9131-9131.7 Hz	9174-9174.7 Hz	10073-10073.7 Hz
10848.7-10849.3 Hz	11267-11267.7 Hz	11336-11336.7 Hz	11524-11524.7 Hz	11551.3-11552 Hz
11927.4-11928 Hz	12309-12309.7 Hz	13617-13617.7 Hz	13674-13674.7 Hz	13774-13774.7 Hz
14350-14350.7 Hz	14456-14456.7 Hz	14479-14479.7 Hz	14540-14540.7 Hz	14553-14553.7 Hz
14756-14756.7 Hz	14922-14922.7 Hz	14961-14961.7 Hz	15226-15226.7 Hz	15817-15817.7 Hz
15825-15825.7 Hz	15835-15835.7 Hz	15836-15836.7 Hz	15897-15897.7 Hz	16071-16071.7 Hz
17417-17417.7 Hz	17418-17418.7 Hz	17473-17473.7 Hz	17474-17474.7 Hz	17621-17621.7 Hz
17655-17655.7 Hz	18655-18655.7 Hz	18672-18672.7 Hz	18678-18678.7 Hz	19393-19393.7 Hz
19426-19426.7 Hz	19817-19817.7 Hz	19819-19819.7 Hz	19861-19861.7 Hz	19867-19867.7 Hz
20818-20818.7 Hz	21708-21708.7 Hz	21720-21720.7 Hz	21865-21865.7 Hz	21876-21876.7 Hz
22119-22119.7 Hz	22454-22454.7 Hz	24073-24073.7 Hz	30304-30304.7 Hz	31685-31685.7 Hz
43633-43633.7 Hz	44773-44773.7 Hz	46662-46662.7 Hz	46793-46793.7 Hz	48103-48103.7 Hz
50243-50243.7 Hz				

Example 3: Treatment of non-Hodgkin lymphoma

[00194] Non-Hodgkin lymphoma tumors may be treated according to the methods disclosed herein by the application of non-Hodgkin lymphoma specific amplitude-modulated frequencies. Non-Hodgkin lymphoma tumors specific frequencies are provided below in Table 35.

[00195] Table 35: Amplitude-modulated frequencies discovered to be effective for treatment of non-Hodgkin lymphoma.

3222-3222.7 Hz	3228-3228.7 Hz	3272-3272.7 Hz	3618-3618.7 Hz	4523-4523.7 Hz
4556-4556.7 Hz	4584-4584.7 Hz	5116-5116.7 Hz	5142-5142.7 Hz	6413-6413.7 Hz
6419.3-6420 Hz	6441-6441.7 Hz	6474-6474.7 Hz	6911.3-6912 Hz	6912-6912.7 Hz
6943-6943.7 Hz	7551-7551.7 Hz	7811-7811.7 Hz	7857-7857.7 Hz	7865-7865.7 Hz
8125-8125.7 Hz	9106-9106.7 Hz	9161-9161.7 Hz	9179-9179.7 Hz	9230-9230.7 Hz
9236-9236.7 Hz	9247-9247.7 Hz	11730.6-11731.1 Hz	11785-11785.7 Hz	13222-13222.7 Hz
13751-13751.7 Hz	13780-13780.7 Hz	15006-15006.7 Hz	15033-15033.7 Hz	15056-15056.7 Hz
15729-15729.7 Hz	15773-15773.7 Hz	17229-17229.7 Hz	17246-17246.7 Hz	17268-17268.7 Hz
20256-20256.7 Hz	22444-22444.7 Hz	30666-30666.7 Hz	30713-30713.7 Hz	30843-30843.7 Hz
38216-38216.7 Hz				

Example 4: Treatment of adenocarcinoma of pancreas

[00196] Adenocarcinoma of pancreas may be treated according to the methods disclosed herein by the application of adenocarcinoma of pancreas specific amplitude-modulated frequencies. Adenocarcinoma of pancreas specific frequencies are provided below in Table 36.

[00197] Table 36: Amplitude-modulated frequencies discovered to be effective for treatment of adenocarcinoma of the pancreas.

403-403.7 Hz	441-441.7 Hz	527-527.7 Hz	624.32-624.8 Hz	633-633.7 Hz
727-727.7 Hz	759-759.7 Hz	785-785.7 Hz	811-811.7 Hz	829-829.7 Hz
841-841.7 Hz	962-962.7 Hz	964.5-965 Hz	972-972.7 Hz	974.4-975 Hz
977-977.7 Hz	1179.2-1179.8 Hz	1250.3-1251 Hz	1314-1314.7 Hz	1352-1352.7 Hz
1622-1622.7 Hz	1652-1652.7 Hz	1656-1656.7 Hz	1670.3-1671 Hz	1914-1914.7 Hz
2346-2346.7 Hz	2362-2362.7 Hz	2380-2380.7 Hz	2469.2-2469.7 Hz	2627-2627.7 Hz
2706-2706.7 Hz	2720.3-2721 Hz	2726-2726.7 Hz	2754-2754.7 Hz	2778-2778.7 Hz
2842-2842.7 Hz	2864-2864.7 Hz	2940-2940.7 Hz	2988-2988.7 Hz	3234-3234.7 Hz
3280.6-3281.3 Hz	3366-3366.7 Hz	3428-3428.7 Hz	3446-3446.7 Hz	3466-3466.7 Hz
3523-3523.7 Hz	3605-3605.7 Hz	3622.5-3623 Hz	3627-3627.7 Hz	3631-3631.7 Hz
3656-3656.7 Hz	3663-3663.7 Hz	3667-3667.7 Hz	3687-3687.7 Hz	4152-4152.7 Hz
4233-4233.7 Hz	4249-4249.7 Hz	4281-4281.7 Hz	4368.3-4369 Hz	4417-4417.7 Hz
4425-4425.7 Hz	4440.4-4441 Hz	4465-4465.7 Hz	4480.9-4481.35 Hz	4580.11-4580.7 Hz
4621-4621.7 Hz	4637-4637.7 Hz	4657-4657.6 Hz	4725-4725.7 Hz	4733-4733.7 Hz
4749-4749.7 Hz	4841-4841.7 Hz	4924-4924.7 Hz	4946-4946.7 Hz	5063-5063.7 Hz
5089-5089.7 Hz	5378.2-5378.7 Hz	5424-5424.7 Hz	5438-5438.7 Hz	6112-6112.7 Hz
6159-6159.7 Hz	6161.3-6162 Hz	6167-6167.7 Hz	6179-6179.7 Hz	6220.3-6221 Hz
6346-6346.7 Hz	6380.4-6381 Hz	6808-6808.7 Hz	6825-6825.7 Hz	6847-6847.7 Hz
6850-6850.7 Hz	6878-6878.7 Hz	7036-7036.7 Hz	7037-7037.7 Hz	7118-7118.7 Hz
7160-7160.7 Hz	7432-7432.7 Hz	7541-7541.7 Hz	7676-7676.7 Hz	7936-7936.7 Hz
8024-8024.7 Hz	8032-8032.7 Hz	8043-8043.7 Hz	8447-8447.7 Hz	8734-8734.7 Hz
8756-8756.7 Hz	8757-8757.7 Hz	8809-8809.7 Hz	8823-8823.7 Hz	8841-8841.7 Hz
8845-8845.7 Hz	8846-8846.7 Hz	8872-8872.7 Hz	9133-9133.7 Hz	9155.7-9156.2 Hz
9520-9520.7 Hz	9859-9859.7 Hz	10342-10342.6 Hz	10352-10352.7 Hz	10378-10378.7 Hz

10436-10436.7 Hz	10566.4-10567 Hz	10633-10633.7 Hz	10641-10641.7 Hz	10671-10671.7 Hz
10708-10708.7 Hz	10859-10859.7 Hz	10876-10876.7 Hz	11174-11174.7 Hz	11220-11220.7 Hz
11247-11247.7 Hz	11264-11264.7 Hz	11284-11284.7 Hz	11630-11630.7 Hz	11994-11994.7 Hz
12120.2-12120.7 Hz	12135-12135.7 Hz	12152-12152.7 Hz	12184-12184.7 Hz	12711-12711.7 Hz
13375-13375.7 Hz	13571-13571.7 Hz	13636.2-13636.7 Hz	13738.3-13739 Hz	13947-13947.7 Hz
14116-14116.7 Hz	14279-14279.7 Hz	14376-14376.7 Hz	14462-14462.7 Hz	14519-14519.7 Hz
14558-14558.7 Hz	14729-14729.7 Hz	14940.4-14941 Hz	14957-14957.7 Hz	15179-15179.7 Hz
15225-15225.6 Hz	15536-15536.7 Hz	15576-15576.7 Hz	15597-15597.7 Hz	15663-15663.7 Hz
15678-15678.7 Hz	15711-15711.7 Hz	15724-15724.7 Hz	15740-15740.7 Hz	15749-15749.7 Hz
15824-15824.7 Hz	15867-15867.7 Hz	16143-16143.7 Hz	17214-17214.7 Hz	17253-17253.7 Hz
17271-17271.7 Hz	17283-17283.7 Hz	17739-17739.7 Hz	17944-17944.7 Hz	17962-17962.7 Hz
18279-18279.7 Hz	18678.7-18679.3 Hz	18921-18921.7 Hz	18922-18922.7 Hz	19059-19059.7 Hz
19464-19464.7 Hz	19686-19686.4 Hz	19724-19724.7 Hz	20123-20123.7 Hz	20128-20128.7 Hz
20144-20144.7 Hz	20149.3-20150 Hz	20219-20219.7 Hz	20254-20254.7 Hz	21546-21546.7 Hz
21616-21616.7 Hz	21664-21664.7 Hz	21840-21840.7 Hz	21876-21876.7 Hz	21894-21894.7 Hz
22355-22355.7 Hz	22430-22430.7 Hz	22597-22597.7 Hz	22742-22742.7 Hz	22822-22822.7 Hz
22846-22846.7 Hz	22867-22867.7 Hz	23237-23237.7 Hz	23284-23284.7 Hz	24228-24228.7 Hz
24275-24275.7 Hz	24508-24508.7 Hz	24609.3-24610 Hz	24841-24841.7 Hz	27478-27478.7 Hz
32143-32143.7 Hz	32493-32493.7 Hz	33546-33546.7 Hz	40133-40133.7 Hz	40595-40595.7 Hz
44913-44913.7 Hz	45474-45474.7 Hz	46672.3-46673 Hz	48204-48204.7 Hz	48314-48314.7 Hz
50072-50072.7 Hz	50254-50254.7 Hz	52812-52812.7 Hz	79867-79867.7 Hz	80993.3-80994 Hz
91877-91877.7 Hz	95742-95742.7 Hz.			

Example 5: Treatment of head and neck cancer

[00198] Head and neck cancer may be treated according to the methods disclosed herein by the application of head and neck cancer specific amplitude-modulated frequencies. Head and neck cancer specific frequencies are provided below in Table 37.

[00199] Table 37: Amplitude-modulated frequencies discovered to be effective for treatment of head and neck cancer.

1858-1858.7 Hz	2893-2893.7 Hz	5152-5152.7 Hz	6897-6897.7 Hz	7080-7080.7 Hz
7136-7136.7 Hz	7274-7274.7 Hz	8755-8755.7 Hz	9573-9573.7 Hz	9656-9656.7 Hz
10439-10439.7 Hz	10484-10484.7 Hz	10645-10645.7 Hz	10673-10673.7 Hz	11559-11559.7 Hz
14052-14052.7 Hz	17379-17379.7 Hz	19269-19269.7 Hz		

Example 6: Treatment of gastric cancer

[00200] Gastric cancer may be treated according to the methods disclosed herein by the application of gastric cancer specific amplitude-modulated frequencies. Gastric cancer specific frequencies are provided below in Table 38.

[00201] Table 38: Amplitude-modulated frequencies discovered to be effective for treatment of gastric cancer.

374-374.7 Hz	560-560.7 Hz	628-628.7 Hz	642.4-643 Hz	708.3-709 Hz
749-749.7 Hz	806-806.6 Hz	825-825.7 Hz	843-843.7 Hz	914-914.7 Hz
959-959.7 Hz	969-969.7 Hz	1157-1157.7 Hz	1436-1436.7 Hz	1656-1656.7 Hz
2379.3-2380 Hz	2417-2417.7 Hz	2436-2436.7 Hz	2455-2455.7 Hz	2478-2478.7 Hz
2747-2747.7 Hz	2762-2762.7 Hz	2774-2774.7 Hz	2856.4-2857 Hz	2891-2891.7 Hz
2981-2981.7 Hz	3104.3-3105 Hz	3133-3133.7 Hz	3522-3522.7 Hz	3537-3537.7 Hz
3549-3549.7 Hz	3556-3556.7 Hz	3595-3595.7 Hz	3927-3927.7 Hz	4154-4154.7 Hz
4548-4548.7 Hz	4723-4723.7 Hz	5286-5286.7 Hz	5494.4-5495 Hz	5548.3-5549 Hz
5742-5742.7 Hz	6010-6010.7 Hz	6064-6064.7 Hz	6329-6329.7 Hz	6444-6444.7 Hz
6469-6469.7 Hz	6488-6488.7 Hz	7222.4-7223 Hz	7646-7646.7 Hz	7748-7748.7 Hz
7855-7855.7 Hz	7927-7927.7 Hz	7951-7951.7 Hz	7970-7970.7 Hz	7979-7979.7 Hz
8039-8039.7 Hz	8055.4-8056 Hz	8926-8926.7 Hz	9109-9109.7 Hz	9123-9123.7 Hz
9136-9136.7 Hz	9146-9146.7 Hz	9157-9157.7 Hz	9194-9194.7 Hz	10137-10137.7 Hz
10345-10345.7 Hz	10727-10727.7 Hz	10802-10802.7 Hz	11533-11533.7 Hz	12165-12165.7 Hz
13241-13241.7 Hz	13307-13307.7 Hz	13330.7-13331.2 Hz	13408-13408.7 Hz	13434-13434.7 Hz
13714-13714.7 Hz	13746-13746.7 Hz	14016.4-14017 Hz	14160-14160.7 Hz	14483-14483.7 Hz
14511-14511.7 Hz	14670.4-14671 Hz	16309-16309.7 Hz	17418-17418.7 Hz	17455-17455.7 Hz
17485-17485.7 Hz	17581-17581.7 Hz	19125-19125.7 Hz	21430-21430.7 Hz	21714-21714.7 Hz
23946-23946.7 Hz	39586-39586.7 Hz	40734-40734.7 Hz	41172-41172.7 Hz	42146-42146.7 Hz
46143-46143.7 Hz				

Example 7: Treatment of glioblastoma

[00202] Glioblastoma may be treated according to the methods disclosed herein by the application of glioblastoma specific amplitude-modulated frequencies. Glioblastoma specific frequencies are provided below in Table 39.

[00203] Table 39: Amplitude-modulated frequencies discovered to be effective for treatment of glioblastoma.

262-262.7 Hz	295-295.6 Hz	415-415.7 Hz	418-418.7 Hz	423-423.7 Hz
434-434.7 Hz	440.4-441 Hz	476-476.7 Hz	556-556.7 Hz	608-608.7 Hz
612-612.7 Hz	627-627.7 Hz	656-656.7 Hz	694-694.7 Hz	708.3-709 Hz
741-741.7 Hz	752.4-753 Hz	757-757.6 Hz	759-759.7 Hz	776-776.7 Hz
796.3-797 Hz	836-836.7 Hz	941-941.7 Hz	1027-1027.7 Hz	1045-1045.7 Hz
1195-1195.7 Hz	1868-1868.7 Hz	1897-1897.7 Hz	2044-2044.7 Hz	2439-2439.7 Hz
2612-2612.7 Hz	2632-2632.7 Hz	2653.3-2654 Hz	2686-2686.7 Hz	2690-2690.7 Hz
2697-2697.7 Hz	2738-2738.7 Hz	3157-3157.7 Hz	3218-3218.7 Hz	3227.3-3228 Hz
3249-3249.7 Hz	3277.3-3278 Hz	3281.6-3282.1 Hz	3436-3436.7 Hz	3633-3633.7 Hz
3656-3656.7 Hz	3962-3962.7 Hz	4148-4148.7 Hz	4241-4241.7 Hz	4410-4410.7 Hz
4416-4416.7 Hz	4454-4454.7 Hz	4619-4619.7 Hz	4632-4632.7 Hz	4853-4853.7 Hz
5139-5139.7 Hz	5156-5156.7 Hz	5996-5996.7 Hz	6292-6292.7 Hz	6297-6297.7 Hz
6459-6459.7 Hz	6474-6474.7 Hz	6492.3-6493 Hz	6626.3-6627 Hz	6727.4-6728 Hz
6809-6809.6 Hz	6841-6841.7 Hz	6915.3-6916 Hz	6943-6943.7 Hz	7110-7110.7 Hz
7182.4-7183 Hz	7194.3-7195 Hz	7268-7268.7 Hz	7323-7323.7 Hz	7480-7480.7 Hz
7663-7663.7 Hz	7796-7796.7 Hz	7936-7936.7 Hz	8070-8070.7 Hz	8128.4-8129 Hz
8145-8145.7 Hz	8158-8158.7 Hz	8314-8314.7 Hz	8355-8355.7 Hz	8484-8484.7 Hz
9138.3-9139 Hz	9155.7-9156.2 Hz	9921-9921.7 Hz	10427-10427.7 Hz	10468-10468.7 Hz
10478-10478.7 Hz	10719-10719.7 Hz	10802-10802.7 Hz	10809-10809.7 Hz	10851-10851.7 Hz
11556-11556.7 Hz	11913-11913.7 Hz	12828.3-12829 Hz	13686.4-13687 Hz	14249-14249.7 Hz
14515.4-14516 Hz	14586.3-14587 Hz	14796-14796.7 Hz	15067-15067.7 Hz	15112-15112.7 Hz
17095-17095.7 Hz	17167-17167.7 Hz	18090-18090.7 Hz	18670.3-18671 Hz	18895-18895.7 Hz
19026-19026.7 Hz	20237-20237.7 Hz	20254-20254.7 Hz	20286-20286.7 Hz	24196-24196.7 Hz
25199-25199.7 Hz	26073-26073.7 Hz	26163-26163.7 Hz	26164-26164.7 Hz	30759-30759.7 Hz
32591.3-32592 Hz	36343-36343.7 Hz	41883-41883.7 Hz	44517-44517.7 Hz	44531-44531.7 Hz
45490-45490.7 Hz	47297-47297.7 Hz	49434-49434.7 Hz	50229-50229.7 Hz	69481-69481.7 Hz
78477.4-78478 Hz	80993.3-80994 Hz	81999-81999.7 Hz	85810-85810.7 Hz	89748-89748.7 Hz
92182-92182.7 Hz	95245-95245.7 Hz			

Example 8: Treatment of squamous cell carcinoma of the anal canal

[00204] Squamous cell carcinoma of the anal canal may be treated according to the methods disclosed herein by the application of squamous cell carcinoma of the anal canal specific amplitude-modulated frequencies. Squamous cell carcinoma of the anal canal specific frequencies are provided below in Table 40.

[00205] Table 40: Amplitude-modulated frequencies discovered to be effective for treatment of squamous cell carcinoma of the anal canal.

295-295.6 Hz	304-304.7 Hz	436-436.7 Hz	581-581.7 Hz	679-679.7 Hz
694.3-695 Hz	708.3-709 Hz	796.3-797 Hz	1759-1759.7 Hz	1858-1858.7 Hz
1873-1873.7 Hz	2442-2442.7 Hz	2522-2522.7 Hz	2648-2648.7 Hz	2893-2893.7 Hz
2975-2975.7 Hz	2981-2981.7 Hz	3238-3238.7 Hz	3249.3-3250 Hz	3250.3-3250.8 Hz
3461-3461.7 Hz	3531-3531.7 Hz	3535-3535.7 Hz	3681-3681.7 Hz	4279-4279.7 Hz
4440.4-4441 Hz	4718-4718.7 Hz	4876-4876.7 Hz	5034-5034.7 Hz	5068-5068.7 Hz
5151-5151.7 Hz	5249-5249.7 Hz	5286-5286.7 Hz	5869-5869.7 Hz	5881-5881.7 Hz
6298.4-6299 Hz	6851-6851.7 Hz	6879-6879.7 Hz	6882.4-6883 Hz	6897-6897.7 Hz
6980.3-6981 Hz	7136-7136.7 Hz	7274-7274.7 Hz	7673-7673.7 Hz	7930-7930.7 Hz
7981-7981.7 Hz	8328-8328.7 Hz	8432-8432.7 Hz	8755-8755.7 Hz	8949-8949.7 Hz
9656-9656.7 Hz	10439-10439.7 Hz	10484-10484.7 Hz	11145-11145.7 Hz	11159-11159.7 Hz
11253-11253.7 Hz	11260-11260.7 Hz	11277.3-11278 Hz	11559-11559.7 Hz	11699-11699.7 Hz
11905-11905.7 Hz	12139-12139.7 Hz	13819-13819.7 Hz	13847-13847.7 Hz	13903-13903.7 Hz
17379-17379.7 Hz	18618-18618.7 Hz	18742-18742.7 Hz	21445-21445.7 Hz	21467-21467.7 Hz
22763-22763.7 Hz	33536-33536.7 Hz	37527-37527.7 Hz	37546-37546.7 Hz	53079-53079.7 Hz
58094-58094.7 Hz	59288-59288.7 Hz	59997-59997.7 Hz	88281-88281.7 Hz	

Example 9: Treatment of hepatocellular carcinoma

[00206] Hepatocellular carcinoma may be treated according to the methods disclosed herein by the application of hepatocellular carcinoma specific amplitude-modulated frequencies. Hepatocellular carcinoma specific frequencies are provided below in Table 41.

[00207] Table 41: Amplitude-modulated frequencies discovered to be effective for treatment of hepatocellular carcinoma.

439-439.7 Hz	594-594.7 Hz	737-737.7 Hz	817-817.7 Hz	966-966.7 Hz
996-996.7 Hz	1785-1785.7 Hz	1823-1823.7 Hz	1881-1881.7 Hz	1963-1963.7 Hz
1973-1973.7 Hz	2189-2189.7 Hz	2321-2321.7 Hz	2372.3-2372.8 Hz	2459-2459.7 Hz
2647-2647.7 Hz	2825-2825.7 Hz	2836-2836.7 Hz	2860-2860.7 Hz	2971-2971.6 Hz
3171-3171.7 Hz	3188-3188.7 Hz	3749-3749.7 Hz	3762-3762.7 Hz	3823-3823.7 Hz
4007-4007.7 Hz	4013-4013.7 Hz	4454-4454.7 Hz	4997-4997.7 Hz	5151-5151.7 Hz
5239-5239.7 Hz	5322-5322.7 Hz	6317-6317.7 Hz	6330-6330.7 Hz	6334-6334.7 Hz
6432-6432.7 Hz	6840-6840.7 Hz	7098-7098.7 Hz	7169-7169.7 Hz	7239-7239.7 Hz
7338-7338.7 Hz	7378-7378.7 Hz	7481-7481.7 Hz	7510-7510.7 Hz	7719-7719.7 Hz
7748-7748.7 Hz	7787-7787.7 Hz	8388-8388.7 Hz	8412-8412.7 Hz	9588-9588.7 Hz
8522-8522.7 Hz	8845-8845.7 Hz	8935-8935.6 Hz	8949-8949.7 Hz	9273-9273.7 Hz
9695-9695.7 Hz	10387-10387.7 Hz	10641-10641.7 Hz	10731-10731.7 Hz	10740-10740.7 Hz
10762-10762.7 Hz	10768-10768.7 Hz	10776-10776.7 Hz	10805-10805.7 Hz	10831-10831.7 Hz
10889-10889.7 Hz	11209-11209.7 Hz	11243-11243.7 Hz	11247-11247.7 Hz	11275-11275.7 Hz
11295-11295.7 Hz	11569-11569.7 Hz	11590-11590.7 Hz	11946-11946.7 Hz	12498-12498.7 Hz
12572-12572.7 Hz	12649-12649.7 Hz	13215-13215.7 Hz	13252-13252.7 Hz	13735-13735.7 Hz
13856-13856.7 Hz	14114-14114.7 Hz	14170.7-14171.3 Hz	14532-14532.7 Hz	14574-14574.7 Hz
15521-15521.7 Hz	15528-15528.7 Hz	15546.3-15547 Hz	15589-15589.7 Hz	15982-15982.7 Hz
16381-16381.7 Hz	17556-17556.7 Hz	17749-17749.7 Hz	17978-17978.7 Hz	18030-18030.7 Hz
18246-18246.7 Hz	18567-18567.7 Hz	18686-18686.7 Hz	18842-18842.7 Hz	18897-18897.7 Hz
19510-19510.7 Hz	20324-20324.7 Hz	20825-20825.7 Hz	20908-20908.7 Hz	21616-21616.7 Hz

21778-21778.7 Hz	21876-21876.7 Hz	22353-22353.7 Hz	22459-22459.7 Hz	22535-22535.7 Hz
22709-22709.7 Hz	23509-23509.7 Hz	23526-23526.7 Hz	23560-23560.7 Hz	23589-23589.7 Hz
23957-23957.7 Hz	24014-24014.7 Hz	24117-24117.7 Hz	24869-24869.7 Hz	25449-25449.7 Hz
25454-25454.7 Hz	26722-26722.7 Hz	26861-26861.7 Hz	30942-30942.7 Hz	31713-31713.7 Hz
32866-32866.7 Hz	32870-32870.7 Hz	33765-33765.7 Hz	34405-34405.7 Hz	34562-34562.7 Hz
34984-34984.6 Hz	36410-36410.7 Hz	38483-38483.7 Hz	38659-38659.7 Hz	39035-39035.7 Hz
39223-39223.7 Hz	39510-39510.7 Hz	39729-39729.7 Hz	40693-40693.7 Hz	41244-41244.7 Hz
41574-41574.7 Hz	42913-42913.7 Hz	42923-42923.7 Hz	43243-43243.7 Hz	43413-43413.7 Hz
43542-43542.7 Hz	43603-43603.7 Hz	44742-44742.7 Hz	47693.4-47694 Hz	51592-51592.7 Hz
53947-53947.7 Hz	55072-55072.7 Hz	56093-56093.7 Hz	59089-59089.7 Hz	66969-66969.7 Hz
67683-67683.7 Hz	76537-76537.7 Hz	78229-78229.7 Hz	82845-82845.7 Hz	83612-83612.7 Hz
84086-84086.7 Hz	91245-91245.7 Hz	92361.3-92362 Hz	93332-93332.7 Hz	93530-93530.7 Hz
94968.3-94969 Hz	99281-99281.7 Hz	99846-99846.7 Hz		

Example 10: Treatment of cholangiocarcinoma

[00208] Cholangiocarcinoma may be treated according to the methods disclosed herein by the application of cholangiocarcinoma specific amplitude-modulated frequencies. Cholangiocarcinoma specific frequencies are provided below in Table 42.

[00209] Table 42: Amplitude-modulated frequencies discovered to be effective for treatment of cholangiocarcinoma

334-334.7 Hz	380-380.7 Hz	410-410.7 Hz	427-427.6 Hz	434-434.7 Hz
476-476.7 Hz	527-527.7 Hz	560-560.7 Hz	624-624.7 Hz	642.4-643 Hz
657-657.7 Hz	677.4-678 Hz	728-728.7 Hz	806-806.6 Hz	809-809.7 Hz
845-845.7 Hz	920-920.7 Hz	961-961.7 Hz	963.8-964.25Hz	964.3-964.8 Hz
974.4-975 Hz	1156.3-1157 Hz	1157-1157.7 Hz	1755-1755.7 Hz	1873-1873.7 Hz
1967-1967.7 Hz	2017.4-2018 Hz	2021-2021.7 Hz	2023-2023.7 Hz	2035-2035.7 Hz
2053-2053.7 Hz	2065-2065.7 Hz	2083-2083.7 Hz	2094-2094.7 Hz	2111-2111.7 Hz
2128-2128.7 Hz	2278-2278.7 Hz	2284-2284.7 Hz	2308-2308.7 Hz	2324-2324.7 Hz
2338-2338.7 Hz	2362-2362.7 Hz	2381-2381.7 Hz	2419-2419.7 Hz	2425-2425.7 Hz
2430-2430.7 Hz	2431-2431.6 Hz	2471-2471.7 Hz	2480-2480.7 Hz	2522-2522.7 Hz
2636-2636.7 Hz	2669-2669.7 Hz	2679-2679.7 Hz	2685-2685.6 Hz	2716-2716.6 Hz
2743.4-2744 Hz	2835-2835.7 Hz	2854-2854.7 Hz	2865-2865.7 Hz	2873.3-2874 Hz
2886-2886.7 Hz	3009-3009.7 Hz	3020-3020.7 Hz	3042-3042.6 Hz	3076.3-3077 Hz
3104.3-3105 Hz	3135-3135.7 Hz	3143-3143.7 Hz	3160.4-3161 Hz	3167-3167.7 Hz
3206-3206.7 Hz	3255-3255.7 Hz	3267-3267.7 Hz	3269-3269.7 Hz	3330.4-3331 Hz
3516-3516.7 Hz	3531-3531.7 Hz	3549-3549.7 Hz	3564-3564.7 Hz	3572-3572.7 Hz
3576-3576.7 Hz	3619-3619.7 Hz	3630-3630.7 Hz	3637.7-3638.3 Hz	3644-3644.7 Hz
3696-3696.7 Hz	3749.3-3750 Hz	3947-3947.7 Hz	3954-3954.7 Hz	4013.4-4014 Hz
4079.4-4080 Hz	4123.4-4124 Hz	4281-4281.7 Hz	4289-4289.7 Hz	4312.4-4313 Hz
4418-4418.7 Hz	4426-4426.7 Hz	4441-4441.7 Hz	4685-4685.6 Hz	4707-4707.7 Hz
4715-4715.7 Hz	4732-4732.7 Hz	4732-4732.7 Hz	4748-4748.7 Hz	4767-4767.7 Hz
4812-4812.7 Hz	4821-4821.7 Hz	4873-4873.7 Hz	4874-4874.7 Hz	4876-4876.7 Hz
4941-4941.7 Hz	5209.4-5210 Hz	5229-5229.7 Hz	5243-5243.7 Hz	5247-5247.7 Hz
5262-5262.7 Hz	5271-5271.7 Hz	5387.3-5388 Hz	5573-5573.7 Hz	5671-5671.7 Hz
5679-5679.7 Hz	5966-5966.7 Hz	5976.3-5977 Hz	6064-6064.7 Hz	6086-6086.7 Hz

6180-6180.7 Hz	6479.4-6480 Hz	6513-6513.7 Hz	6711-6711.7 Hz	6779-6779.7 Hz
6915.3-6916 Hz	7019-7019.7 Hz	7043-7043.7 Hz	7130-7130.7 Hz	7213-7213.7 Hz
7228.3-7229 Hz	7234-7234.7 Hz	7246-7246.7 Hz	7268-7268.7 Hz	7367-7367.7 Hz
7482-7482.7 Hz	7510.4-7511 Hz	7680.3-7681 Hz	7862-7862.7 Hz	7935-7935.7 Hz
8012.3-8013 Hz	8013-8013.7 Hz	8026-8026.7 Hz	8028-8028.7 Hz	8028-8028.7 Hz
8055.4-8056 Hz	8072-8072.7 Hz	8074-8074.7 Hz	8079-8079.7 Hz	8141-8141.7 Hz
8336-8336.7 Hz	8394.3-8395 Hz	8421-8421.7 Hz	8432-8432.7 Hz	8452-8452.7 Hz
8492-8492.7 Hz	8509.4-8510 Hz	8542-8542.7 Hz	8779-8779.7 Hz	8789.3-8790 Hz
8818-8818.7 Hz	8852-8852.7 Hz	8993-8993.7 Hz	9023-9023.7 Hz	9112-9112.7 Hz
9332-9332.7 Hz	9753-9753.7 Hz	9846-9846.7 Hz	10140-10140.7 Hz	10317-10317.7 Hz
10362-10362.7 Hz	10488-10488.7 Hz	10661-10661.7 Hz	10665.4-10666 Hz	10690-10690.7 Hz
10866-10866.7 Hz	11081-11081.7 Hz	11109.3-11110 Hz	11219-11219.7 Hz	11582-11582.7 Hz
11619-11619.7 Hz	11637-11637.7 Hz	11802.3-11803 Hz	11809-11809.7 Hz	11831-11831.7 Hz
11872-11872.7 Hz	11904.3-11905 Hz	12024.3-12025 Hz	12228-12228.7 Hz	12247-12247.7 Hz
12260.4-12261 Hz	12274-12274.7 Hz	12682-12682.7 Hz	12752-12752.7 Hz	12783-12783.7 Hz
12785-12785.7 Hz	13127-13127.7 Hz	13457-13457.7 Hz	13609-13609.7 Hz	13734-13734.7 Hz
13747-13747.7 Hz	13755-13755.7 Hz	13760-13760.7 Hz	13761-13761.7 Hz	13767-13767.7 Hz
13981-13981.7 Hz	14005-14005.7 Hz	14027-14027.7 Hz	14070-14070.7 Hz	14078-14078.7 Hz
14356-14356.7 Hz	14531-14531.7 Hz	14545-14545.7 Hz	14564-14564.7 Hz	14828-14828.7 Hz
14867-14867.7 Hz	14913.4-14914 Hz	14940-14940.7 Hz	15173-15173.7 Hz	15224-15224.7 Hz
15244-15244.7 Hz	15432-15432.7 Hz	15460-15460.7 Hz	15515-15515.7 Hz	15539-15539.7 Hz
15550.4-15551 Hz	15857-15857.7 Hz	16082-16082.7 Hz	16515-16515.7 Hz	17636-17636.7 Hz
17673-17673.7 Hz	18087-18087.7 Hz	18222-18222.7 Hz	18521-18521.7 Hz	18585-18585.7 Hz
19347-19347.7 Hz	19889-19889.7 Hz	21466-21466.7 Hz	21567-21567.7 Hz	21844-21844.7 Hz
21870-21870.7 Hz	21894-21894.7 Hz	22073-22073.7 Hz	22119-22119.7 Hz	22411-22411.7 Hz
22437-22437.7 Hz	22479-22479.7 Hz	22582-22582.7 Hz	22730-22730.6 Hz	22832-22832.7 Hz
22863-22863.7 Hz	23237-23237.7 Hz	23261-23261.7 Hz	23444-23444.7 Hz	26212-26212.7 Hz
27291-27291.7 Hz	31051-31051.7 Hz	35296-35296.7 Hz	37680-37680.7 Hz	39053-39053.7 Hz
39183-39183.7 Hz	39423-39423.7 Hz	40111-40111.7 Hz	41557-41557.7 Hz	42293-42293.7 Hz
43172-43172.7 Hz	43379-43379.7 Hz	44855-44855.7 Hz	45163-45163.7 Hz	45362-45362.7 Hz
46666-46666.7 Hz	46673-46673.7 Hz	46689-46689.6 Hz	51008-51008.7 Hz	52063-52063.7 Hz
52786-52786.7 Hz	52912-52912.7 Hz	55723-55723.7 Hz	61287-61287.7 Hz	61789-61789.7 Hz
71635-71635.7 Hz	86521-86521.7 Hz	87798.3-87799 Hz	88898-88898.7 Hz	91271-91271.7 Hz
92787-92787.7 Hz				

Example 11: Treatment of mesothelioma

[00210] Mesothelioma may be treated according to the methods disclosed herein by the application of mesothelioma specific amplitude-modulated frequencies. Mesothelioma specific frequencies are provided below in Table 43.

[00211] Table 43: Amplitude-modulated frequencies discovered to be effective for treatment of mesothelioma.

262-262.7 Hz	412-412.7 Hz	418-418.7 Hz	429-429.7 Hz	441-441.7 Hz
442-442.7 Hz	465-465.7 Hz	485-485.7 Hz	517-517.7 Hz	556-556.7 Hz
581-581.7 Hz	612-612.7 Hz	626-626.7 Hz	638-638.7 Hz	664-664.7 Hz
694.3-695 Hz	708.3-709 Hz	734.4-735 Hz	761-761.7 Hz	764-764.7 Hz

776-776.7 Hz	806-806.6 Hz	831-831.7 Hz	883-883.7 Hz	1191-1191.7 Hz
1591-1591.7 Hz	2475.4-2476 Hz	2581-2581.7 Hz	2749-2749.7 Hz	2988-2988.7 Hz
3042-3042.6 Hz	3131-3131.7 Hz	3193-3193.7 Hz	3240-3240.7 Hz	3335-3335.7 Hz
3371-3371.7 Hz	3518-3518.7 Hz	3523-3523.7 Hz	3530-3530.7 Hz	3556-3556.7 Hz
3621-3621.7 Hz	3656-3656.7 Hz	3674-3674.7 Hz	3681.7-3682.3 Hz	3817-3817.7 Hz
3833-3833.7 Hz	3877-3877.7 Hz	3948-3948.7 Hz	3958-3958.6 Hz	4044-4044.7 Hz
4190-4190.7 Hz	4261-4261.7 Hz	4330-4330.7 Hz	5496-5496.7 Hz	5640.4-5641 Hz
6416.3-6417 Hz	6441-6441.7 Hz	6717-6717.7 Hz	6758-6758.7 Hz	6783-6783.7 Hz
7110-7110.7 Hz	7140-7140.7 Hz	7154-7154.7 Hz	7156-7156.7 Hz	7253-7253.7 Hz
7283-7283.7 Hz	7546-7546.7 Hz	7725-7725.7 Hz	8386-8386.7 Hz	8562.4-8563 Hz
8810-8810.7 Hz	8827.4-8828 Hz	8843-8843.7 Hz	8859.3-8860 Hz	8863-8863.7 Hz
8877-8877.7 Hz	8881-8881.7 Hz	9075-9075.7 Hz	9929-9929.7 Hz	9947-9947.7 Hz
9970-9970.7 Hz	11023-11023.7 Hz	11031-11031.7 Hz	11042-11042.7 Hz	11046-11046.7 Hz
11074-11074.7 Hz	11083-11083.7 Hz	11124-11124.7 Hz	11540-11540.7 Hz	11831-11831.7 Hz
11929-11929.7 Hz	11956-11956.7 Hz	12267-12267.7 Hz	12929-12929.7 Hz	13674-13674.7 Hz
13742-13742.7 Hz	14285-14285.7 Hz	14947-14947.7 Hz	15531-15531.7 Hz	17737-17737.7 Hz
17757-17757.7 Hz	18121-18121.7 Hz	18126-18126.7 Hz	18140-18140.7 Hz	18921-18921.7 Hz
19406-19406.7 Hz	19476-19476.7 Hz	19577-19577.7 Hz	20634-20634.7 Hz	21372-21372.7 Hz
22411-22411.7 Hz	22519-22519.7 Hz	22538-22538.7 Hz	22548-22548.7 Hz	23111-23111.7 Hz
23921-23921.7 Hz	24112-24112.7 Hz	24146-24146.7 Hz	39153-39153.7 Hz	

Example 12: Treatment of thyroid cancer

[00212] Thyroid cancer may be treated according to the methods disclosed herein by the application of thyroid cancer specific amplitude-modulated frequencies. Thyroid cancer specific frequencies are provided below in Table 44.

[00213] Table 44: Amplitude-modulated frequencies discovered to be effective for treatment of thyroid cancer.

834-834.7 Hz	836-836.7 Hz	845-845.7 Hz	1213-1213.7 Hz	1220-1220.7 Hz
1252-1252.7 Hz	1815-1815.7 Hz	1966-1966.7 Hz	2050-2050.7 Hz	2313-2313.7 Hz
2318-2318.7 Hz	2320-2320.7 Hz	2328-2328.7 Hz	2336-2336.7 Hz	2359-2359.7 Hz
2373-2373.7 Hz	2380-2380.7 Hz	2425-2425.7 Hz	2429-2429.7 Hz	2436-2436.7 Hz
2513-2513.7 Hz	2629-2629.7 Hz	2653.7-2654.4 Hz	2830-2830.7 Hz	2834-2834.7 Hz
3030-3030.7 Hz	3056-3056.7 Hz	3609-3609.7 Hz	3646-3646.7 Hz	3674-3674.7 Hz
3694-3694.7 Hz	3908.7-3909.22Hz	3981-3981.7 Hz	4027-4027.7 Hz	4386.4-4387 Hz
4425.7-4426.22Hz	4792-4792.7 Hz	4844-4844.7 Hz	4870-4870.7 Hz	5259-5259.7 Hz
5510-5510.7 Hz	5533-5533.7 Hz	5714-5714.7 Hz	5741-5741.7 Hz	5742-5742.7 Hz
5752-5752.7 Hz	5766-5766.7 Hz	6392-6392.7 Hz	6423-6423.7 Hz	6781-6781.7 Hz
6832-6832.7 Hz	6864-6864.7 Hz	7404.4-7405 Hz	7526-7526.6 Hz	7646-7646.7 Hz
7652-7652.7 Hz	7913-7913.7 Hz	8217.4-8218 Hz	8251-8251.7 Hz	8347-8347.7 Hz
8731-8731.7 Hz	8740-8740.7 Hz	8749-8749.7 Hz	8814-8814.7 Hz	9169-9169.7 Hz
9506-9506.7 Hz	10159-10159.7 Hz	10395-10395.7 Hz	10541-10541.7 Hz	10830-10830.7 Hz
10844-10844.7 Hz	10878-10878.7 Hz	10993-10993.7 Hz	11117-11117.7 Hz	11779-11779.7 Hz
11867-11867.7 Hz	12302-12302.7 Hz	12356-12356.7 Hz	13117-13117.7 Hz	13373-13373.7 Hz
13679-13679.7 Hz	13694-13694.7 Hz	14111-14111.7 Hz	14116-14116.7 Hz	14156-14156.7 Hz
14174-14174.7 Hz	14281-14281.7 Hz	14523-14523.7 Hz	14585-14585.7 Hz	14690-14690.7 Hz

14716-14716.7 Hz	14912-14912.7 Hz	14974-14974.7 Hz	15223-15223.7 Hz	15236-15236.7 Hz
15329-15329.7 Hz	15615-15615.7 Hz	15867-15867.7 Hz	15919-15919.7 Hz	15942-15942.7 Hz
16096-16096.7 Hz	18040-18040.7 Hz	18182-18182.7 Hz	18211-18211.7 Hz	18246-18246.7 Hz
18274-18274.7 Hz	18411-18411.7 Hz	18454-18454.7 Hz	18462-18462.7 Hz	18596-18596.7 Hz
19365-19365.7 Hz	19419-19419.7 Hz	19715-19715.7 Hz	19744-19744.7 Hz	19823-19823.7 Hz
20229-20229.7 Hz	20284-20284.7 Hz	20513-20513.7 Hz	20747-20747.7 Hz	21963-21963.7 Hz
22338-22338.7 Hz	22344-22344.7 Hz	22350-22350.7 Hz	22422-22422.7 Hz	22484-22484.7 Hz
22932-22932.7 Hz	23012-23012.7 Hz	23044-23044.7 Hz	23216-23216.7 Hz	23659-23659.7 Hz
23730-23730.7 Hz	24060-24060.7 Hz	24085-24085.7 Hz	26044-26044.7 Hz	26343-26343.7 Hz
27214-27214.7 Hz	28361-28361.7 Hz	33366-33366.7 Hz	33414-33414.7 Hz	33553-33553.7 Hz
34614-34614.7 Hz	35826-35826.7 Hz	40133-40133.7 Hz	40394-40394.7 Hz	40896-40896.7 Hz
40899-40899.7 Hz	41424-41424.7 Hz	41534-41534.7 Hz	41859-41859.7 Hz	41861-41861.7 Hz
42402-42402.7 Hz	43851-43851.7 Hz	44162-44162.7 Hz	44692-44692.7 Hz	45393-45393.7 Hz
45526-45526.7 Hz	46282-46282.7 Hz	46285-46285.7 Hz	47036-47036.7 Hz	48314-48314.7 Hz
48535-48535.7 Hz	52097-52097.7 Hz	54293-54293.7 Hz	54297-54297.7 Hz	55592-55592.7 Hz
57927-57927.7 Hz	59907-59907.7 Hz	65586-65586.7 Hz	67697-67697.6 Hz	71204-71204.7 Hz
71447-71447.7 Hz	74017-74017.7 Hz	76227-76227.7 Hz	76659-76659.7 Hz	82024-82024.7 Hz

Example 13: Treatment of prostate cancer

[00214] Prostate cancer may be treated according to the methods disclosed herein by the application of prostate cancer specific amplitude-modulated frequencies. Prostate cancer specific frequencies are provided below in Table 45.

[00215] Table 45: Amplitude-modulated frequencies discovered to be effective for treatment of prostate cancer.

408-408.7 Hz	429.7-430.3 Hz	561-561.7 Hz	568-568.7 Hz	572-572.7 Hz
631-631.7 Hz	709-709.7 Hz	717-717.7 Hz	733-733.7 Hz	810-810.7 Hz
817-817.7 Hz	830-830.7 Hz	1668-1668.7 Hz	1808-1808.6 Hz	2483-2483.7 Hz
2518-2518.7 Hz	2824-2824.7 Hz	3207-3207.7 Hz	3245-3245.7 Hz	3251-3251.7 Hz
3266.3-3267 Hz	3279.3-3280 Hz	3529-3529.7 Hz	3562-3562.7 Hz	3571-3571.7 Hz
3627-3627.7 Hz	3661-3661.7 Hz	3731-3731.7 Hz	3743-3743.7 Hz	3756-3756.7 Hz
3787-3787.7 Hz	3962-3962.7 Hz	4152-4152.7 Hz	4409-4409.7 Hz	4476-4476.7 Hz
4806-4806.7 Hz	4809-4809.7 Hz	4823-4823.7 Hz	4841-4841.7 Hz	4948-4948.7 Hz
4998-4998.7 Hz	5336-5336.7 Hz	5414-5414.7 Hz	5884-5884.7 Hz	6117-6117.7 Hz
6252-6252.7 Hz	6329-6329.7 Hz	6333-6333.7 Hz	6748-6748.7 Hz	6782-6782.7 Hz
7112-7112.7 Hz	7424-7424.7 Hz	7655-7655.7 Hz	7906-7906.7 Hz	7910-7910.7 Hz
7923-7923.7 Hz	8373-8373.7 Hz	8445-8445.7 Hz	8765-8765.7 Hz	8829-8829.7 Hz
8852-8852.7 Hz	8877-8877.7 Hz	9078-9078.7 Hz	9512-9512.7 Hz	9635-9635.7 Hz
9681-9681.7 Hz	9886-9886.7 Hz	10735-10735.7 Hz	10748-10748.7 Hz	10781-10781.7 Hz
10813.2-10813.8 Hz	11134-11134.7 Hz	11155-11155.7 Hz	11164-11164.7 Hz	11264-11264.7 Hz
11381-11381.7 Hz	11416-11416.7 Hz	11438-11438.7 Hz	11469-11469.7 Hz	11628-11628.7 Hz
12330-12330.7 Hz	12391-12391.7 Hz	12880-12880.7 Hz	13467-13467.7 Hz	13562-13562.6 Hz
13805-13805.7 Hz	13828-13828.7 Hz	13834-13834.7 Hz	13857.4-13858 Hz	13858-13858.7 Hz
13871-13871.7 Hz	14009-14009.7 Hz	14034-14034.7 Hz	14153-14153.7 Hz	14489-14489.7 Hz
15071-15071.7 Hz	15149-15149.7 Hz	15233-15233.7 Hz	15253-15253.7 Hz	15263-15263.7 Hz

15435-15435.7 Hz	15545-15545.7 Hz	16176-16176.7 Hz	16329-16329.7 Hz	16679-16679.7 Hz
16804-16804.7 Hz	16821-16821.7 Hz	17333-17333.7 Hz	17435-17435.7 Hz	17974-17974.7 Hz
18260-18260.7 Hz	18641-18641.7 Hz	18831-18831.7 Hz	18884-18884.7 Hz	19453-19453.7 Hz
20948-20948.7 Hz	21119-21119.7 Hz	21167-21167.7 Hz	21636-21636.7 Hz	22312-22312.7 Hz
22361-22361.7 Hz	22419-22419.7 Hz	22430-22430.7 Hz	22443-22443.7 Hz	22459-22459.7 Hz
22879-22879.7 Hz	23117-23117.7 Hz	23137-23137.7 Hz	23412-23412.7 Hz	23548-23548.7 Hz
23686-23686.7 Hz	26142-26142.7 Hz	26465-26465.7 Hz	27328-27328.6 Hz	28653-28653.7 Hz
28744-28744.7 Hz	31572-31572.7 Hz	31633-31633.7 Hz	41062-41062.7 Hz	41325-41325.7 Hz
41473-41473.7 Hz	48683-48683.7 Hz	48793-48793.7 Hz	87507-87507.7 Hz	

Example 14: Treatment of rhabdomyosarcoma

[00216] Rhabdomyosarcoma may be treated according to the methods disclosed herein by the application of rhabdomyosarcoma specific amplitude-modulated frequencies. Rhabdomyosarcoma specific frequencies are provided below in Table 46.

[00217] Table 46: Amplitude-modulated frequencies discovered to be effective for treatment of rhabdomyosarcoma.

304-304.7 Hz	331-331.7 Hz	410-410.7 Hz	420-420.7 Hz	429-429.7 Hz
434-434.7 Hz	461-461.7 Hz	537.4-538 Hz	560-560.7 Hz	572-572.7 Hz
605-605.7 Hz	611-611.7 Hz	618.3-619 Hz	626-626.7 Hz	717-717.7 Hz
776-776.7 Hz	779-779.7 Hz	810-810.7 Hz	814-814.7 Hz	826-826.7 Hz
836.4-837 Hz	843-843.7 Hz	843-843.7 Hz	1314-1314.7 Hz	1411-1411.7 Hz
1467-1467.7 Hz	1785-1785.7 Hz	1816-1816.7 Hz	1903-1903.7 Hz	2073.3-2074 Hz
2155-2155.7 Hz	2287-2287.7 Hz	2381-2381.7 Hz	2542-2542.7 Hz	2711-2711.6 Hz
2854-2854.6 Hz	2911-2911.7 Hz	3085.7-3086.3 Hz	3121-3121.7 Hz	3232-3232.7 Hz
3438-3438.7 Hz	3518-3518.7 Hz	3544-3544.7 Hz	3569-3569.7 Hz	3618-3618.7 Hz
3910-3910.7 Hz	3917-3917.7 Hz	4198-4198.7 Hz	4233.3-4234 Hz	4241-4241.7 Hz
266.3-267 Hz	4337-4337.7 Hz	4358-4358.7 Hz	4424-4424.7 Hz	4436-4436.7 Hz
4485-4485.7 Hz	4731-4731.7 Hz	4749-4749.7 Hz	4776-4776.7 Hz	5151-5151.7 Hz
5521-5521.7 Hz	5545.3-5546 Hz	5577.3-5578 Hz	5618-5618.7 Hz	5631-5631.7 Hz
5696-5696.7 Hz	6058-6058.7 Hz	6443-6443.7 Hz	6472-6472.6 Hz	6558-6558.7 Hz
6651-6651.7 Hz	6730-6730.7 Hz	7168.4-7169 Hz	7406-7406.7 Hz	7440-7440.7 Hz
7452.3-7453 Hz	7649-7649.7 Hz	7808-7808.7 Hz	8542-8542.7 Hz	8546-8546.7 Hz
8562-8562.7 Hz	8576-8576.7 Hz	8698-8698.7 Hz	8881-8881.7 Hz	9040-9040.7 Hz
9074-9074.7 Hz	9189-9189.6 Hz	9484.3-9485 Hz	9851-9851.7 Hz	9943.4-9944 Hz
10870-10870.7 Hz	10891-10891.7 Hz	12086-12086.7 Hz	12648-12648.7 Hz	15195-15195.7 Hz
17316-17316.7 Hz	18021-18021.7 Hz	18567-18567.7 Hz	19384-19384.7 Hz	20097-20097.7 Hz
20278.4-20279 Hz	21854-21854.7 Hz	21890-21890.7 Hz	24198-24198.7 Hz	24413-24413.7 Hz
24789-24789.7 Hz	26534-26534.7 Hz	27713-27713.7 Hz	28222-28222.7 Hz	40489-40489.7 Hz
40762-40762.7 Hz	41279-41279.7 Hz	42923-42923.7 Hz	43166-43166.7 Hz	43692-43692.7 Hz
48583-48583.7 Hz	49434-49434.7 Hz	66553-66553.7 Hz	79658-79658.7 Hz	

Example 15: Treatment of colorectal cancer

[00218] Colorectal cancer may be treated according to the methods disclosed herein by the application of colorectal cancer specific amplitude-modulated frequencies. Colorectal cancer specific frequencies are provided below in Table 47.

[00219] Table 47: Amplitude-modulated frequencies discovered to be effective for treatment of colorectal cancer.

605-605.7 Hz	826-826.7 Hz	834-834.7 Hz	841.9-842.6 Hz	1808-1808.6 Hz
1928-1928.7 Hz	1989-1989.7 Hz	2439.7-2440.3Hz	2714-2714.7 Hz	2747-2747.7 Hz
2759-2759.7 Hz	2807-2807.7 Hz	2826-2826.7 Hz	2981-2981.7 Hz	3209-3209.7 Hz
3213-3213.7 Hz	3244-3244.7 Hz	3261-3261.7 Hz	3548-3548.7 Hz	3634-3634.7 Hz
3646.4-3647 Hz	3915-3915.7 Hz	3922-3922.7 Hz	3940-3940.7 Hz	3946-3946.7 Hz
4135-4135.7 Hz	4155-4155.7 Hz	4224-4224.7 Hz	4241-4241.7 Hz	4283-4283.7 Hz
4323-4323.7 Hz	4438.7-4439.2Hz	4447-4447.7 Hz	4708-4708.7 Hz	4713-4713.7 Hz
4718-4718.7 Hz	4718-4718.7 Hz	4722-4722.7 Hz	4776-4776.7 Hz	4850-4850.7 Hz
4874-4874.7 Hz	5205-5205.7 Hz	5209-5209.7 Hz	5209-5209.7 Hz	5221-5221.7 Hz
5232-5232.7 Hz	5265-5265.7 Hz	5427-5427.7 Hz	5484.4-5485 Hz	6074-6074.7 Hz
6112-6112.7 Hz	6159-6159.7 Hz	6361-6361.7 Hz	6438-6438.7 Hz	6468-6468.7 Hz
6537-6537.7 Hz	6648-6648.7 Hz	6869-6869.7 Hz	6878-6878.7 Hz	6914-6914.7 Hz
6974-6974.7 Hz	6982-6982.7 Hz	6986-6986.7 Hz	7109-7109.7 Hz	7117-7117.7 Hz
7137-7137.7 Hz	7149-7149.7 Hz	7191.7-7192.3Hz	7531-7531.7 Hz	7560-7560.7 Hz
7879-7879.7 Hz	7936-7936.7 Hz	7970-7970.7 Hz	7994-7994.7 Hz	8038.4-8039 Hz
8413-8413.7 Hz	8438-8438.7 Hz	8467-8467.7 Hz	8771-8771.7 Hz	8809-8809.7 Hz
8889-8889.7 Hz	9071-9071.7 Hz	9084-9084.7 Hz	9731-9731.7 Hz	10566-10566.7 Hz
10831.7-10832.1 Hz	10845-10845.7 Hz	10859-10859.7 Hz	10906-10906.7 Hz	10947-10947.7 Hz
10974-10974.7 Hz	11110-11110.7 Hz	11225-11225.7 Hz	11234-11234.7 Hz	11255-11255.7 Hz
11387-11387.7 Hz	11530-11530.7 Hz	11576-11576.7 Hz	11621-11621.7 Hz	11630-11630.7 Hz
11638-11638.7 Hz	11681-11681.7 Hz	11911-11911.7 Hz	11934-11934.7 Hz	11949-11949.7 Hz
12182-12182.7 Hz	12373-12373.7 Hz	12575-12575.7 Hz	12589-12589.7 Hz	12617-12617.7 Hz
12629-12629.7 Hz	12637-12637.7 Hz	12645-12645.7 Hz	13418-13418.7 Hz	13475-13475.7 Hz
13611-13611.7 Hz	13615-13615.7 Hz	13670-13670.7 Hz	13717-13717.7 Hz	13736-13736.7 Hz
13742-13742.7 Hz	13773-13773.7 Hz	13775-13775.7 Hz	13978.3-13979 Hz	14182-14182.7 Hz
14417-14417.7 Hz	14422-14422.7 Hz	14441-14441.7 Hz	14443-14443.7 Hz	14570-14570.7 Hz
14621-14621.7 Hz	14630-14630.7 Hz	14671-14671.7 Hz	14674-14674.7 Hz	14863-14863.7 Hz
14877-14877.7 Hz	14911-14911.7 Hz	14957-14957.7 Hz	14982-14982.7 Hz	15109-15109.7 Hz
15133-15133.7 Hz	15154-15154.7 Hz	15230-15230.7 Hz	15250-15250.7 Hz	15278-15278.7 Hz
16274-16274.7 Hz	17106-17106.7 Hz	17123-17123.7 Hz	17472-17472.7 Hz	17515-17515.7 Hz
17578.4-17579 Hz	17808-17808.7 Hz	17825-17825.7 Hz	18157-18157.7 Hz	18171-18171.7 Hz
18294-18294.7 Hz	18372-18372.7 Hz	18375-18375.7 Hz	18396-18396.7 Hz	18533-18533.7 Hz
18635-18635.7 Hz	19342-19342.7 Hz	19437-19437.7 Hz	19447-19447.7 Hz	19829-19829.7 Hz
20173-20173.7 Hz	20499-20499.7 Hz	21389-21389.7 Hz	21490-21490.7 Hz	21663-21663.7 Hz
21833-21833.7 Hz	22167-22167.7 Hz	22423.4-22424 Hz	22559.3-22560 Hz	22743-22743.7 Hz
23246-23246.7 Hz	23249-23249.7 Hz	23259-23259.7 Hz	23344-23344.7 Hz	23624-23624.7 Hz
23667-23667.7 Hz	24142-24142.7 Hz	26113-26113.7 Hz	26403-26403.7 Hz	28212-28212.7 Hz
28272-28272.7 Hz	28537-28537.7 Hz	30075-30075.7 Hz	30373-30373.7 Hz	31847-31847.7 Hz

33546-33546.7 Hz	35324-35324.7 Hz	35543-35543.7 Hz	42544-42544.7 Hz	42692.3-42693 Hz
42812-42812.7 Hz	42813-42813.7 Hz	43162-43162.7 Hz	43325-43325.7 Hz	44652-44652.7 Hz
46340-46340.7 Hz	46746-46746.7 Hz	48653-48653.7 Hz	51946-51946.7 Hz	52752-52752.7 Hz
80715-80715.7 Hz	94494-94494.7 Hz			

[00220] Conclusions:

[00221] The treatment of cancer according to the method and devices described herein is a safe and promising novel treatment modality for multiple types of cancer. Following extended trials, it has been determined that application to subjects of the frequencies provided herein enhances the efficacy of treatment and yields therapeutic effects in patients whose tumors have become resistant to therapy. It is accordingly preferred that most (i.e., over 50%) or all of the determined listed frequencies be applied to the subject. The mechanism of including additional frequencies is attributed to either or both of inter-active synergism between applied frequencies or between cells which have been influenced by the treatment and additive effects of the additional frequencies.

[00222] Of further note is the fact that different patients suffering from the same type of tumor cell growth practically exhibit the above-mentioned physiological responses at the same well-defined AM frequencies. Furthermore, AM frequencies which differ only very slightly (less than 0.001% at higher frequencies) from the frequencies listed, in general elicit reduced or no physiological response by subjects exposed to excitation at such very slightly different frequency. In view of these determinations, the electronic system of the present invention may be adapted to screen a subject for physiological responses over a broad range of frequencies to determine the presence or absence tumor cells and, if positive, then to note at which defined frequencies physiological responses are elicited. These frequencies will in general match with the defined frequencies listed in one of the Examples above or such further examples as may be developed and hence the nature of the tumor will be known. The electronic system of the invention is therefore a valuable diagnostic tool for diagnosing the presence or absence and identities of types of tumor cell growths or cancers. Furthermore, the electronic system of the invention is of value for predicting whether a patient will benefit from the application of a given series of modulation frequencies. The system therefore possesses a capability of predicting responses to treatment, thereby enhancing the possibility to select optimal modes of treatment.

[00223] The sequence of well-defined frequencies is preferably applied sequentially for determined periods of time, e.g., 3 seconds for each frequency, but several frequencies may also be applied simultaneously or may be applied in any order or in a random order. This means that a

cycle of application involving 180 frequencies would take nearly 10 minutes time. Advantageous effects may, however, also arise from applying individual well-defined frequencies for differing time periods, e.g., some for 3 seconds, some for 6 seconds, etc.

[00224] Therapeutic dosages to be applied to a subject suffering from the presence of tumor cell growth or cancer are determined by the time of application of the low energy electromagnetic emissions to the subject and will depend on the nature of the cancer and the overall condition of the subject. In general, however, greatest experience has been gained in treating terminally ill subjects expected to survive no longer than about three months and who have agreed to discontinue alternative forms of cancer treatments such as chemo-therapy or radioactive treatment. In these severe cases, convenient times of treatment are recommended, e.g., 3 times 1 hour daily treatment. However, with the use of alternative forms of application, i.e., other than by means of a mouth probe, continuous application is possible and may be desirable.

[00225] While the invention has been described with specific embodiments, other alternatives, modifications and variations will be apparent to those skilled in the art. Accordingly, it will be intended to include all such alternatives, modifications, and variations within the spirit and scope of the appended claims.