WHAT IS CLAIMED IS:

1. A method for determining a dose of energy to be delivered to cause an end effect on a target invasive entity of a target,, the method comprising:

determining the type of the target invasive entity of a target;

estimating the dose-response of the determined target invasive entity to a particular energy-based therapy;

estimating, based on the estimated dose-response, a specific dose required to result in 10% unchanged target invasive entity that is a 1 log change as a D_{10} value;

defining the treatment volume of the target;

determining the maximal multiple of the estimated D_{10} value of the target invasive entity that overlaps within an initial slope and shoulder of the dose-response curve pertaining to the treatment volume of the target;

determining a permissible dose per fraction based on the determined maximal multiple when administered is to result in no more than a cellular D90 to result in a 10% reduction of cells;

determining a percent depth- dose or depth dose characterizations to identify the isodose distribution of the particular energy based therapy in a particular treatment volume density;

optimizing the volume of the defined treatment volume of the target volume to receive 100% of the maximal permissible dose per fraction; and

prescribing a dose based on the determining the maximal multiple, the determining the permissible dose, the determining the percent depth dose, and the optimizing.

2. The method of claim 1, wherein the initial slope and shoulder of the dose-response curve is defined by repair kinetics of cells pertaining to the treatment volume of the target when exposed to a particular energy-based therapy.

3. The method of claim 1 or 2, wherein: a) the target invasive entity comprises one of a fungus, a parasite, a bacteria, or a virus; and/or

b) the target comprises one of an internal organ, skin, canal, or cavity, and/or optionally one of a lung, nostril, oral cavity, rectal cavity, vaginal cavity, stomach, esophagus, or vascular blood volume.

4. The method of claim 1 or 2, wherein: a) the cells within the treatment volume of a target are cells of a human, animal, or plant; and/or

b) the particular energy-based therapy comprises UVR or UVB.

5. A method for measuring the absorbed dose of energy delivered via a target within a volume of cells, the method comprising:

measuring a specific activity and initial activity of chemical nuclei that are attached to an agent with target binding capacity;

quantifying target molecule(s) (FOLH1) for the volume of cells;and

inputting the measured value and the quantified value into a mathematical simulation to estimate the possible outcomes of an uncertain event.

6. A method for optimizing the absorbed dose of energy-based therapy delivered via a target within a volume of cells, the method comprising:

identifying the initial activity of chemical nuclei that are attached to an agent with target binding capacity;

identifying a dose rate or absorption rate of the chemical nuclei into cells within the volume;

identifying the absorbed dose;

identifying the time required for target replenishment after complete or partial target depletion;

identifying the time required for target replenishment so that 50-100% of the initial dose of chemical nuclei can be absorbed as a subsequent dose; and

identifying a period of time to wait between doses of the chemical nuclei.

7. A method for optimizing the absorbed dose of energy-based therapy, the method comprising:

conjugating chemical nuclei to an agent with receptor binding capacity;

administering the nuclei-agent construct into a body of cells for exposing a volume of cells of the body of cells to the nuclei-agent construct;

waiting for a period of time after the administering to allow binding to occur; and

exposing the volume of cells to energy for modifying the chemical nuclei within the volume of cells.

8. The method of claim 7, wherein the agent:

a) comprises monoclonal antibodies, small molecules or antibody fragments; and/or

b) can bind to both the chemical nuclei and FOLH1; and/or

c) can bind to both the chemical nuclei and HER-2.

9. A method for optimizing the absorbed dose of energy-based therapy delivered via inducing or upregulating FOLH1 expression, the method comprising:

applying energy to a volume of cells;

waiting for a period of time after the energy application for an FOLH1 target to upregulate or to appear de novo; and

after the waiting, exposing the volume of cells to an embodiment with target binding capacity.

10. A method of using a smart device running radiometry software to calculate electromagnetic radiation exposure time to result in change of a target invasive entity within a treatment volume of a target, the method comprising:

accessing, with the smart device, dose-for-change as a D_{10} value of the target invasive entity;

detecting, through the smart device, electromagnetic energy at the treatment volume of the target;

quantifying, through the smart device, intensity of the detected electromagnetic energy;

segregating wavebands of the detected electromagnetic energy;

determining, through the smart device, the matter type of the treatment volume of the target;

calculating, through the smart device, the percent depth-dose calculation for the segregated wavebands within the density of the treatment volume of the target; and

calculating the exposure time required to deliver a D_{10} dose to the treatment volume of the target.

11. A method for defining a treatment volume of a target, the method comprising:

performing a folate hydrolase-1 ("FOLH1") positron emission tomography–computed tomography ("PET/CT") on the target to visualize any FOLH1-avid neoendothelial cells.

12. The method of claim 11, wherein the FOLH1 PET/CT is a tool to screen to detect de novo cancer(s) on the target with a suspected prior exposure to carcinogen(s).

13. The method of claim 11, wherein the FOLH1 PET/CT is a tool to screen to detect de novo cancer(s) on the target with genetic mutations predisposing them to increased risk of early-onset cancer(s).

14. The method of claim 11, further comprises:

using the detected FOLH1-avid neo-endothelial cells to define the treatment volume of the target

wherein the using the detected FOLH1-avid neo-endothelial cells to define the treatment volume of the target comprises:

identifying a virtual geometry as volumes containing FOLH1-avid neo-endothelial cells

identifying a mass geometry as CT units within the virtual geometry.