Another aspect of the invention is directed to another method of assisting transducer placements on a subject's body for applying tumor treating fields. The method comprises: generating, based on a first image data, a three-dimensional (3D) model of a portion of the subject's body, wherein the 3D model comprising a presentation of one or more recommended transducer placement positions; receiving a second image data of the portion of the subject's body, determining, based on the second image data, a representation of the one or more placement positions for one or more transducers in a three-dimensional (3D) space; comparing the representation of the one or more placement positions for the one or more transducers in the 3D space to the presentation of the one or more recommended transducer placement positions in the 3D model; and determining and outputting, based on the comparison, a variance of at least one of the one or more placement positions for the one or more transducer from at least one of the one or more recommended transducer placement positions.

Another aspect of the invention is directed to a method to identify placement on a subject's body of a transducer array to generate tumor treating fields in the subject's body, the method comprising: receiving image data of the subject's body and the transducer array to generate tumor treating fields in the subject's body; displaying an image having a representation of the subject, a representation of the transducer array, and a representation of a desired position of the transducer array, the displayed image based on the received image data; providing a visual notification in the displayed image when the transducer array is determined to be located at the desired position.

There is disclosed an apparatus of assisting transducer placements on a subject's body for applying tumor treating fields. The apparatus comprises: one or more processors; and a memory storing processor executable instructions that, when executed by the one or more processors, cause the apparatus to: determine, based on one or more images associated with a portion of a subject's body, a first image data, wherein the first image data comprising one or more transducer placement positions; determine, based on the one or more images, a second image data, wherein the second image data comprising one or more recommended transducer placement positions; register the first image data to the second image data; and generate a composite data comprising the one or more transducer placement positions and the one or more recommended transducer placement positions.

Additional advantages will be set forth in part in the description which follows or may be learned by practice. The advantages will be realized and attained by means of the elements and combinations particularly pointed out in the appended claims. It is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory only and are not restrictive.