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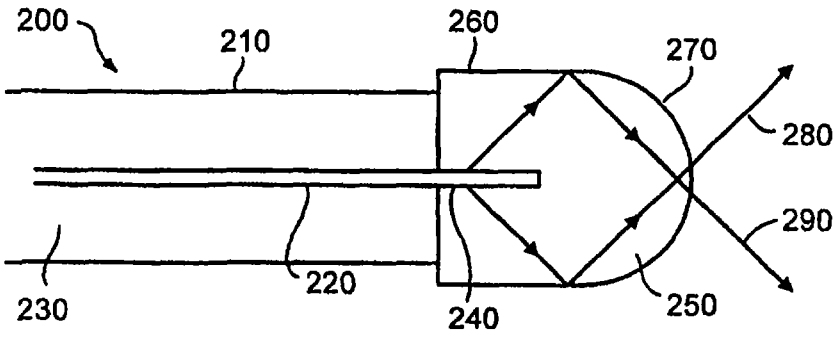
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(54) Title: RADIATION APPLICATOR

(57) Abstract

Radiation applicators comprise an elongate device having an antenna (240, 340) at their tip for coupling radiation into biological tissue and a dielectric body (250, 350) surrounding the antenna so as to encompass substantially the whole of the near-field region of the antenna and/or to enhance transmission of radiation in the forward direction. The body (250, 350) may be cylindrical with the antenna (240, 340) along its axis. The antenna may be $\lambda/2$ in length and $\lambda/2$ in radius. The tip (270) of the antenna (240) may be rounded hemispherical with radius $\lambda/2$ to enhance forward transmission of radiation. The dielectric constant (ϵ) of the body (250, 350) is as high as possible to reduce its diameter at a desired operating frequency but may be matched to the surrounding tissue by another layer of dielectric material (380) with a value (ϵ) intermediate that of the core (360) of the body (350) and the tissue.



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