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ABSTRACT

The present invention provides a significantly improved therapeutic tool for radiation therapy in or near body cavities accessible through existing orifices. At least one therapeutic balloon of a catheter and balloon assembly is inflated by fluid communication through the catheter. Several embodiments provide radiation therapy, at times in association with one or more of formation of seals, control of movement, nutrient passage and drainage. The radiation therapy is provided by means of rods or other radiotherapeutic items secured, positioned or inserted along the contour of the surface of the therapeutic balloon and which are thus deployed to treatment position by balloon inflation. Control of movement can be achieved through the use of a small balloon usually located where the body cavity changes size, such as at the body orifice; through the use of a template, which may be sutured to nearby tissue or secured with tether catheter assemblies inserted in other body cavities; through the use of a catheter lead which is inserted into narrow portions of a body cavity; or through the use of a secondary balloon located distally of the larger therapeutic balloon. Drainage, often required when performing this procedure in the bladder or rectum, is achieved by the use of a Foley-type catheter. Feeding, inhalation and exhalation are permitted through a communication channel within the catheter.

24 Claims, 4 Drawing Sheets