

## Rationality and Evidence of Pre-Prepared Treatment Plan in Oesophageal HDR Brachytherapy

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**Abstract :** As a part of routine oesophageal HDR brachytherapy procedure, treatment planning takes about 45 minutes while patients are under light sedation. Some patients may suffer gagging and/or spasms, and the treatment may need to be aborted. A pre-prepared plan generated before the patient's sedation may reduce the brachytherapy procedure time by forty minutes. This paper reports the rationality and evidence of pre-prepared treatment plans. A retrospective study of 28 patients confirm that all of the pre-prepared plans would be acceptable. The rationality of pre-prepared HDR brachytherapy plans is further confirmed by a systemic study with a wide range of applicator curvature and treatment volume. Detailed comparison between CT based treatment plans and pre-prepared plans are discussed. This argument holds also for endobronchial HDR brachytherapy. With the above evidence, pre-prepared plans have been used for all oesophagus and bronchus HDR brachytherapy cases in our clinic.

**Keywords :** HDR brachytherapy, treatment planning, oesophageal carcinoma, pre-planning

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