From Point A to MRI-Guided Brachytherapy in Cancer Cervix: Rationalizing Brachytherapy Practice in India

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Cervical brachytherapy practice in India is diverse. The choice of appropriate technique depends on residual tumor topography at brachytherapy, availability of applicators, and expertise.

Image-based interstitial brachytherapy adequately covers parametrial and posterior disease, prevents overdosage to critical organs in small cervix, and spares sigmoid colon better.1 The residual tumor in pelvis should be thoroughly assessed using clinical examination, X-ray, computed tomography (CT) scan, magnetic resonance imaging (MRI), or ultrasound. Most radiation oncologists are comfortably performing CT-based brachytherapy. MRI-based brachytherapy is less commonly used. CT overestimates the disease but MRI is more conformal, although the latter requires more time and expertise. Ultrasound is an effective alternative to clinical examination and MRI of pelvis for delineating residual disease.2

Intraoperative ultrasound helps in guiding placement of uterine tandem and prevents uterine perforation.3 The structures chiefly contoured are gross tumor volume (GTV), high risk clinical target volume (HRCTV), intermediate risk clinical target volume (IRCTV), bladder, rectum, and sigmoid.4 The prescription points are Point A and HRCTV.4

The applicators used routinely are Fletcher Suit Delclos, Manchester Tandem and Ovoid, Ring and Tandem (including MRI compatible), Vienna, Martinez Universal Perineal Interstitial Template (MUPIT), and Syed Neblett template.5

MRI-based brachytherapy as routine seems difficult due to the uncommon practice of delineating IRCTV, high patient load, and cost. However, existing literature substantiates that MRI-based brachytherapy offers better local control, progression-free survival, overall survival, and less grade 3–4 complications of organs at risk.6,7 These advantages translate into less overall treatment cost.6 It seems a good alternative for future brachytherapists.

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**Conflict of Interest**
None declared.

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