Ontario Gynecological Cancers Community of Practice (GynCoP)
Models of Care Working Group
The Management of Cervical Cancer with Interstitial HDR Brachytherapy
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Indications for Referral for Interstitial Brachytherapy for Cervix Cancer

The Models of Care working group has interviewed centres practicing gynecologic radiation oncology across the province. The majority of centres have commenced the use of MRI for 3D planning or have plans to do so soon. As such, access to MRI is less of a concern although timely access is crucial to effective delivery of treatment. The CoP has previously indicated that an MRI guided 3D approach to brachytherapy is the new standard of care. Centres unable to provide such care should consider referring their patients to a centre where such care is delivered, for the brachytherapy component of their treatment. This is a rapidly evolving field and while this document is relevant to the current community of practice, a review would be prudent in 3 years time.

Access to interstitial treatment, however, remains limited. At present, 3 centres accept referrals for interstitial treatment: London, Odette and PMH. It is the opinion of the Working Group that cervix cancer patients with the following indications should be referred for access to interstitial brachytherapy treatment. An interstitial approach enables more conformal delivery of appropriate radiation dose to an irregular target volume that may not be ideally or adequately covered with an intracavitary applicator alone while limiting potential toxicity to adjacent critical structures. There is considerable accumulating evidence in the literature that allowing for higher brachytherapy doses to the HRCTV results in greater local control, thus, increasing the potential for cure in patients with bulky/higher stage disease. Analysis from retroEMBRACE indicates that patients treated with combined interstitial/intracavity treatments have 10% greater tumour control compared to intracavitary alone, when the HRCTV is > 30 cc. Late toxicity is similar. The spectrum of indications for interstitial HDR brachytherapy includes the following disease characteristics:

1. IIIB or IVA disease
2. Large IIB (e.g. larger than 5cm)
3. Stage IIIA – cancers with substantial vaginal involvement, not well covered with spools
4. Smaller cancers with unfavorable geometry and poor dosimetry at first insertion

Other clinical scenarios that may require interstitial brachytherapy include: 1) cervical stump and (2) Recurrence after hysterectomy and/or previous radiation therapy.

Whenever possible, it is strongly preferred that patients meeting the above criteria be referred at the time of diagnosis. This facilitates two components of definitive treatment: 1) the brachytherapy center is able to perform a baseline physical examination; 2) the brachytherapy centre is able to book the OR and make other necessary arrangements in a timely manner. It must be emphasized that it is exceedingly difficult for brachytherapy centres to accommodate complicated patients on short notice. Centres providing brachytherapy would prefer to cancel a patient (e.g. if there is significant tumour regression

after external beam thus eliminating the need for interstitial brachytherapy), rather than try to schedule one in with little warning.

Elsewhere in this document we provide contact information for radiation oncologists and therapists involved with gynecologic radiotherapy at each site. This is to facilitate RO to RO communication regarding questions, referrals and ensure that recommended clinical and radiation plan information is exchanged as documented in the Models of Care Package document “3.0 Pt info needed for interstitial cervix referral”.

Centres providing shared care to patients should ensure they have clear communication regarding external beam doses, use (or not) of parametrial boosts, the intention for pelvic nodal boosts after brachytherapy as documented in the Models of Care Package document “3.0 Pt info needed for interstitial cervix referral”.

The fundamental goal of this coordinated effort is to allow streamlined access to care within the required timeframe for treatment to ensure optimal outcome. With further experience and by working with aligned Program partners, in the future it may be feasible for additional programs to offer interstitial brachytherapy. This may be influenced by: volume of patients treated, continued development of expertise and adequate resources available to provide this care in local communities.