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Guidance for radiotherapy for gynaecological cancer and COVID-19

The following guidance considers potential adaptations to current practice that may be necessary if resources become limited due to COVID-19.

Cervical and vaginal cancer

All patients with curative intent radiotherapy

- With the possibility that all surgery including cancer surgery is suspended then definitive radiotherapy will be required to treat some early stage cervical cancers that would normally undergo radical hysterectomy.

External beam radiotherapy

Radiotherapy priority: Group 1

- Pelvic radiotherapy combined with weekly cisplatin remains the treatment of choice
- Consider using the lowest number of fractions, typically 45 Gy in 25 fractions. If brachytherapy is limited to three fractions, it may be preferable to use 50.4 Gy in 28 fractions for bulkier or node positive tumours.
- If radiotherapy planning resource is limited, conformal radiotherapy may be used instead of IMRT, particularly for node negative patients.
- An integrated boost technique can be used to escalate dose to involved nodes if available.
- Treatment verification (including daily CBCT / adaptive plan of the day techniques) may need to change to less resource intensive techniques, and target volume margins adapted accordingly.

<70 yrs old, no co-morbidity

- Concurrent weekly cisplatin is the treatment of choice with significant improvement in local control and survival.
- Carboplatin is often associated with higher levels of immunosuppression so consider avoiding this option.
- However consider omitting chemotherapy on case by case and resources.

>70 yrs old and/ or co-morbidity

- Pelvic radiotherapy without concurrent chemotherapy.
- Consider limiting the volume irradiating ‘small pelvis’ to reduce potential toxicity.

Intrauterine brachytherapy

Radiotherapy priority: Group 1

- Intrauterine brachytherapy is an essential component of the treatment for cervical cancer. The outcomes when brachytherapy is not used are very poor (non-curative) and therefore brachytherapy should be prioritised whenever possible.
- Intrauterine brachytherapy requires a highly specialised team. Current referral pathways may involve delivering EBRT in one centre while brachytherapy is delivered in a different specialist centre. These referral pathways should be maintained if feasible so that all patients continue to have access to brachytherapy.

- For centres unable to deliver brachytherapy in the event of severe resource limitations, referral to another centre for brachytherapy is preferred to using EBRT.
- Where brachytherapy is still available but resources are limited (e.g. theatre time) then patients should be prioritised according to likely benefit from brachytherapy versus EBRT boost and overall treatment time.
- An expert forum will be available for advice and support if centres need to vary from their standard practice.

Technique

- If theatre and anaesthetic availability becomes limited, adapting the treatment pathway to deliver two or three fractions per insertion is recommended. A gap of at least 6 hours must be maintained between fractions.
- Consider limiting to the lowest number of fractions possible aiming for a combined EBRT and brachytherapy HR-CTV EQD2 optimally more than 85 Gy. This will be typically be at least three fractions because it is unlikely the dose aims/constraints for HRCTV and OAR will be met with only 2 fractions, especially for large tumours.
- In some circumstances when anaesthetic support is unavailable, small diameter applicators could be inserted using local anaesthetic or sedation. The placement of a Smit sleeve in the cervix may allow repeat insertions without the need for anaesthesia.

Imaging

- If centres still have access to MRI, this should be used at least for the first fraction. If there is limited access, prioritisation will be given to patients with bulky residual disease and interstitial implants.

- CT imaging is required as a minimum for verification and planning

Planning

- Dependent on initial examination, imaging and clinical information a risk based approach can be applied to the use of image-guided adaptive plans versus standard point A plans. This will depend on trained staff availability and centre experience.

Timing

- Total treatment time impacts on cure rates and therefore the time between completing EBRT and brachytherapy should be as short as possible.
- Patients with COVID-19 infection may need a one-two week delay in treatment until recovered

Phase II if brachytherapy is not possible

- Brachytherapy should be used if at all possible. If anaesthetic/theatre is no longer available or where brachytherapy is not appropriate, EBRT phase II boost fractionation schemes include 16-20 Gy in 8-11 fractions. SBRT could be considered as an alternative in experienced centres although outcomes are inferior to brachytherapy.

Phase I and phase II combined

- If a SIB-IMRT protocol is being used to boost central disease for patients where brachytherapy is not felt to be appropriate from day 1 then this can be continued to use. However we do not advice centres to introduce new techniques at this time point.

Endometrial cancer

- It should be considered that endometrial cancer predominantly affects patients who fall within the population who are thought to be most vulnerable for COVID-19.

- Surgery remains the treatment the choice for endometrial cancer. However if surgery is not available then consider alternatives such as oral progestogens or insertion of a Mirena coil to allow delay of surgery.

- Where surgery is not possible due to patient morbidity, consider hormonal alternatives as above. Radiotherapy is an alternative option: intrauterine brachytherapy is used for early stage disease but this can be deferred until more resource is available. External beam radiotherapy can usually be deferred or if required urgently, a hypofractionated approach is recommended.

- For locally advanced disease, consider chemotherapy or radiotherapy depending on individualised situation.

- There may be increased use of EBRT if surgical lymph node staging procedures are less frequently performed

Adjuvant radiotherapy

- Commencement of adjuvant therapy may be delayed up to 3 months from surgery unless there is residual disease, positive resection margins or aggressive histological subtype.
- *Intermediate risk group*: Adjuvant brachytherapy reduces local recurrence but with no overall survival benefit, so consider no further treatment.
- *High risk group*: EBRT is usually recommended but may consider vaginal brachytherapy only or omitting as above.

Vulval cancer

Curative intent radiotherapy

- For patients not suitable for surgery, radical radiotherapy with concurrent chemotherapy remains the treatment of choice
- Consider omitting chemotherapy for older patients or with co-morbidities
- Skin toxicity is reduced with IMRT techniques compared to use of two opposing fields
- Aim to keep the irradiated volume as small as possible

Adjuvant

- Patients with positive resection margins, residual disease or lymph node involvement are at high risk of loco-regional recurrence.
- Adjuvant radiotherapy should be considered without chemotherapy

Palliative radiotherapy

- Consider using a single fraction of radiotherapy to control symptoms on the basis that re-treatment is generally possible.

Recovery plans

- Review any patients where radiotherapy has been delayed (eg post-operative adjuvant radiotherapy for endometrial cancer). A decision should be made regarding proceeding with radiotherapy based on patient age, co-morbidity, patient choice and radiotherapy capacity within the 3 month window.
- Review modified follow-up pathways adopted during COVID-19 pandemic.
- Review brachytherapy capacity within centres and across the regional network (ODN) in anticipation of a possible bulge in referrals later in the year.

Additional resources

https://www.bgcs.org.uk/professionals/guidelines-for-recent-publications/