# Audit of concurrent chemoradiotherapy and high dose rate (HDR) brachytherapy in the treatment of cervical cancer

**Descriptor:**

This audit will evaluate outcomes and long term toxicity following radical treatment for cervical cancer and will establish whether HDR brachytherapy doses can be escalated.

**Background:**

The standard curative treatment for locally advanced cervical cancer is external beam radiotherapy (EBRT) with concurrent weekly cisplatin chemotherapy followed by intra-cavity brachytherapy. The Royal College of Radiologists (RCR) recommend the use of image guided brachytherapy (IGBT) in order to optimise dose distribution to the tumour and also to allow dose escalation.

## The Cycle

**The standard:**

The results of the audit are compared with those from the national RCR cervical cancer audit of radical chemoradiotherapy or radiotherapy in patients treated in 2001-2002 (overall survival 56%, pelvic recurrence 22%, toxicity 10%).

**Target:**

Outcome and toxicity results as RCR audit.

## Assess local practice

**Indicators:**

• Survival rate

• Recurrence rate

• Toxicity rate

**Data items to be collected:**

• Demographics

• Age at diagnosis

• Cancer details: Date of diagnosis, Histology, Stage, Bulky disease > 4 cm

• Radiotherapy treatment details: Date EBRT (start – completion dates), Dates of brachytherapy, Pelvic EBRT dose achieved (dose/fraction), HDR brachytherapy dose achieved (dose/fraction), Doses to OAR (bladder, rectum, sigmoid, bowel), Was dose limited by OAR dose?

• Chemotherapy treatment details: Was chemotherapy given? Reason if not; Chemo regime and number of cycles

• Toxicity data: 1 month, 3 months, 1 year, 2 years, 5 years for each of skin, vagina, bowel, bladder (grades 0-4)

• Outcome data: Date of last assessment, Status at last assessment, Died of disease, Date of deathDied free of disease, Date of death, Alive and free of disease, Alive with disease, Relapse, Date of relapse and site of relapse, Outside pelvis, Inside pelvis but outside cervix, uterus and inner half parametrium, Only inside cervix and uterus, ?residual disease

**Suggested number:**

Patients with at least 2 year follow up, about 50 patients

**Suggestions for change if target not met:**

Dose escalation if survival and recurrence rate above standard and toxicity rate at or below standard.

**Resources:**

• Patient case note review and radiotherapy/brachytherapy prescription review

• Collaboration with surgeons, gynae-oncology nurses, gynae lead radiographer to collect toxicity data

• Gynae radiotherapy team to maintain a database of patients

**References:**

1. Vale C et al Substantial improvement in UK cervical cancer survival with chemoradiotherapy: results of a Royal College of Radiologists’ Audit Clinical Oncology 2010; 22: 590-601
2. RCR 2009 Implementing image-guided brachytherapy for cervix cancer in the UK
3. Potter R et al Clinical impact of MRI assisted dose volume adaptation and dose escalation in brachytherapy of locally advanced cervix cancer. Radiotherapy and Oncology 2007; 83: 148-155
4. 4. Haie-Meder C et al Recommendations from Gynaecological (GYN) GEC-ESTRO Working Group (I): concepts and terms in 3D image based 3D treatment planning in cervix cancer brachytherapy with emphasis on MRI assessment of GT and CTV. Radiotherapy and Oncology 2005: 7: 235-245
5. Potter R et al Recommendations from Gynaecological (GYN) GEC-ESTRO Working Group (II): concepts and terms in 3D image based 3D treatment planning in cervix cancer brachytherapy – 3D volume parameters and aspects of 3D image based anatomy, radiation physics, radiobiology. Radiotherapy and Oncology 2006; 78: 67-77
6. An international study on MRI-guided brachytherapy in locally advanced cervical cancer (EMBRACE) protocol version 17-01-2008

**Editor's comments:**

To re-audit practice when radiotherapy doses are escalated.

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