very low radiation dose on surrounding normal tissues or for higher local dose and interventional radiotherapy offers treatment) are in-field recurrences. This indicates the need radiotherapy (with or without complementary systemic developments in the technical performance (stepping source regulated the indication as well the performance of in two groups. The first group includes studies where patients mainly were treated with 2-dimensional (x-ray based) radiotherapy. The second small group includes studies where patients have been treated using image guided (CT or MRI) adaptive treatment planning. Any direct comparison between the two groups of studies is difficult because of the retrospective nature of the data, limited number of patients and short follow-up. However, it seems that image guided brachytherapy is associated an increased local control rate from 75% (44-87%) for the radiograph based studies to 85% (75-94%) for the studies using an image guided approach, together with a decrease in moderate to severe treatment related morbidity. In 2005 the GEC-ESTRO GYN group successfully introduced an image guided adaptive target concept for brachytherapy in locally advanced cervical cancer. This concept takes the initial tumour extent at time of diagnosis as well as tumour regression during EBRT into account. Several studies have shown a therapeutic benefit with improvements in local control and reductions in moderate to severe morbidity using this concept. Based on these results, a task group within GEC ESTRO GYN was formed with the aim to introduce image guided adaptive target concept in the treatment of vaginal cancer. This initiative started in the beginning of 2014 and different target concepts from each of the 5 involved centres. In a next step each centre contoured 5 different cases with their own target concept in mind. During this work many similarities were found in the target concepts and between the contours of each centre. Therefore the group proceeded to investigate the differences and similarities in dose and treatment planning. In this project each centre performed treatment planning for the 5 contoured cases using both their own target contours and on a set of contours that were provided. Importantly, radiotherapy for vaginal cancer is based on a combination of clinical findings as well as imaging. Especially for the clinical findings the precise documentation can be challenging. In order to increase the uniform reporting a clinical drawing for this documentation has been developed.

Vaginal cancer is a rare disease, accounting for only 2-3% of all gynaecological cancers. The majority (85%) of the tumours are squamous cell carcinomas and associated with a previous HPV infection. The FIGO classification is used for clinical staging and is an important prognostic factor. Approximately 25% of patients present with FIGO stage I, (imaging that vaginal implantation is possible, 5-year survival rate of approximately 80%, compared to 20% for FIGO stage IV tumours that invade other pelvic organs or extend beyond the true pelvis (10-15% of patients). Other known prognostic factors are site, size and histologic subtype.

The treatment of vaginal cancer may include surgery in limited stage I disease, in the upper third of the vagina. However, surgery is often extensive especially if tumors extend to the lower two thirds of the vagina and it is often difficult to achieve tumor free margins. The majority of patients present with FIGO stage I, limited to the vaginal wall with a 5-year survival rate of approximately 80%, compared to 20% for FIGO stage IV tumours that invade other pelvic organs or extend beyond the true pelvis (10-15% of patients). Other known prognostic factors are site, size and histologic subtype.

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