SP-0197
Consequences of bowel cancer screening programmes
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Colorectal cancer (CRC) is the third most common type of cancer among men and the second among women in the European region. CRC is the second most common cause of cancer related death in Europe. Several trials have shown a mortality reduction of screening by either faecal occult blood test or flexible sigmoidoscopy. Next to mortality reduction, there also is a reduction of the CRC incidence by CRC screening. Furthermore, different CRC screening modalities have been proven to be cost-effective and maybe even cost-saving. Most countries of the European Union do have a type of CRC screening, but still many countries do have opportunistic programs without an explicit policy, defined target population and without a dedicated organisation responsible for the roll out of the program. Preferable, CRC screening should be a population based program, using an up to date IT system/data warehouse and with close monitoring and evaluation of the whole program and the outcome measures. Quality assurance is of utmost importance and can only be established in an organised program. Part of the results of the Netherlands CRC screening program will be presented as example.

SP-0198
The way forward in organ preservation strategies for rectal cancer
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Abstract not received

SP-0199
How to delineate the CTV for rectal cancer? An international consensus
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Purpose: The delineation of clinical target volume is a critical step in radiation therapy procedure. Several contouring guidelines suggest different subvolumes and anatomical limits in rectal cancer, supporting a variability in delineation that largely depends on inter-operator discordance in delineation. An international agreement among expert radiation oncologists might significantly reduce this variability, converging on a consensus rectal cancer contouring guideline through Falcon, the educational web-based multifunctional platform for delineation endorsed by ESTRO.

Material and Method: Seven skilled radiation oncologists, delegated from ESTRO, ASTRO, TROG and EORTC, defined the steps to produce consensus rectal cancer guidelines on elective nodal levels delineation. Six rectal cancer cases with different clinical stage were selected and the related CT scans were shared and uploaded on Falcon platform. The experts firstly delineated online the selected CT scan slices following each his personal guidelines. The first delineation outcome was then discussed in a face-to-face meeting with the contribution of surgeons and radiologist and a table of boundaries was compiled. All the experts had then to delineate online the same CT scan slices, considering the new table of boundaries. In a peer review meeting the final outcome was obtained and the publication plan defined.

Results: Falcon allowed a comparison of the experts’ delineations, identifying critical nodal boundaries as areas of disagreement. The ontology of structure sets was defined and a new table of boundaries was generated. The major modifications to the previously published guidelines were about lateral lymph nodes (LLN) and ischiorectal fossa (IRF). One of the discussed issues was the level of the cranial and anterior border of LLN according to clinical rectal cancer stage. The delineation of the entire IRF was recommended only when there was an infiltration of the external anal sphincter or the IRF and new limits were defined (Table).

Conclusion: The definition of consensus guidelines for rectal cancer delineation endorsed by skilled radiation oncologists may support in reducing contouring variability. The structure sets of the six cases used will be available online as consultation atlases on the Falcon platform for individual test and a paper describing the agreed guidelines will be soon published.

Symposium: Changing paradigm in the management of kidney cancer

SP-0200
Partial nephrectomy: indication and results
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Historically, the standard treatment modality used for the vast majority of small renal masses (< 4 cm) was radical nephrectomy (RN). Partial nephrectomy (PN) was conceived to preserve renal parenchyma and function. It was pioneered in patients who would require renal replacement after RN (imperative indications). Based on the “belief” that PN is “better” than RN, utilization of PN has increased worldwide in the last few years. This has been supported by extensive literature of retrospective studies demonstrating renal functional outcomes and “overall survival” benefits of PN over RN. For T1 renal cancer (up to 7 cm lesion according to current TNM), > 95% 5 years disease specific survival rates have been reported. The probability of a positive surgical margin (PSM) on the resection bed has been shown to be below 5%. The impact of a PSM on disease recurrence remains controversial with some series suggesting no additional risk compared to a negative margin. A tumour resection technique conducted at the edge of the tumour (enucleation) has been advocated as a mean to preserve more renal parenchyma and oncologically “non-inferior” to the standard “enucleoresection” technique where a margin of up to 1 cm of healthy parenchyma is left on the resected mass. Besides, a significant reduction in the risk of developing chronic kidney disease (CKD) has been reported with PN as compared
to RN. This has also translated into a reduced risk of all cause mortality in large population series receiving PN as compared to RN, as a result of a lower rate of cardiovascular events potentially driven by CKD. Backed by these data, current guidelines (NCCN 2015, EAU 2014 and AUA 2009) make strong recommendations for PN in all T1a (up to 4 cm) and whenever feasible in T1b (4 - 7 cm) kidney cancers. The recommendation becomes imperative in patients with baseline CKD, bilateral tumours or tumour in a solitary kidney. Surprisingly, the only level I evidence available from a European RCT could not prove equivalence between PN and RN. While the trial did not meet accrual goals (541 out of 1300 patients required), overall survival (the primary study end point) at 9.3 years of follow up was eventually better in the RN arm in spite of a better preserved renal function in the PN arm. Notably more cardiovascular events were observed in the PN group! All these observation taken together suggest that the survival advantage of PN over RN observed in large retrospective series or metanalyses is likely the effect of unaccountable selection biases in favour of PN (healthier patients more likely to be treated with PN). The beneficial effect of PN on kidney function is out of question, yet its clinical relevancy (= reduced risk of non cancer related morbidity) is restricted to patients with baseline CKD. Up to 30% of patients with SRM have some degree of baseline CKD and hence would require a PN that must be performed with surgical skill in order to optimize both oncological efficacy (negative surgical margin) and kidney function preservation (keep ischemia time < 25 minutes or even lower). The currently available surgical techniques (open, laparoscopic and robotic assisted) have all proved effective to accomplish a PN matching the criteria for both oncological and functional efficacy.

SP-0201
Stereotactic radiotherapy for renal cell carcinoma: the hidden treasure or the forbidden kingdom
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Renal-cellicarcinoma (RCC) is considered to be a radioresistant tumour, but this dogma is wrong and based on traditional radiation schedules. If given in a few (evensingle) fractions, but at a high fraction dose (stereotactic body radiotherapy SBRT), RCC becomes highly radioresponsive. Both in the primary setting and treatment of oligometastatic disease, local control rates >90% are achieved. There is an established biological rationale for the radiosensitivity of renal-cell carcinoma to SBRT which is based on the ceramide pathway, which is activated only when a high fraction dose is given. This pathway involves dendritic cells, might be enhanced when targeted drugs and stereotactic body radiotherapy are combined. Therefore, rigorous, prospective randomized trials involving a multidisciplinary/scientific panel are needed urgently. The presence of a radiation oncologist insuch panels is vital.

Further reading

SP-0202
Ablative treatment for renal cancer
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There has been an increase in incidence of small renal masses over the last two decades. There is evidence that nephron sparing surgery offers equivalent long-term oncological results compared to radical nephrectomy. More recent evidence suggests that radical nephrectomy is associated with greater chronic renal insufficiency, which is in turn associated with increased risk of cardiovascular death, in patients with localised T1 renal mass. It is for these reasons that nephron sparing surgery is recommended, when technically feasible, for the management of renal tumour smaller than 7 cm.

Partial nephrectomy is the gold standard treatment for small renal masses, however it is associated with a significant morbidity. Ablative treatments are alternative options that cause necrosis of the renal tumour without removing it. This can be achieved by heating tumour up to 80°C, with radiofrequency, or by freezing it below -40°C with cryosurgery. These percutaneous ablative treatments are performed under CT scan guidance or by laparoscopic approach. The percutaneous approach can be performed under local anaesthesia, which is particularly useful in fragile patients. These two minimally invasive ablative treatments allow, on average, to halve the postoperative morbidity when compared to partial nephrectomy. On the other hand, the risk of local recurrence is higher compared to partial nephrectomy.

Cancer specific survival rate on literature review is quoted around 90 to 95% for T1a (<4 cm) tumours. The 5 years overall survival or metastatic free survival, don’t seem to be different from partial nephrectomy, if salvage treatments are proposed in case of local recurrence. To achieve these oncological results, appropriate patient selection along with adequate follow up is required.

According to the various urological guidelines, renal biopsy must be performed prior to these ablative treatments. When a malignant tumour is confirmed histologically, these treatments are recommended for cortical tumours, smaller than 4 cm, ideally in elderly patients or patients with multiple comorbidities who have a reasonable life expectancy. Patients with bilateral synchronous tumours, genetic diseases leading to multiple bilateral recurrences, renal insufficiency or presence of solitary kidney, are also ideal candidates for ablative treatments. Patients with shorter life expectancy, tumours in the hilum or in close proximity to the collecting system and proximal ureter are contraindications. Cryosurgery appears to treat central tumours with less morbidity compared to radiofrequency ablation. Close radiological follow up is required. Renal CT scan or MRI is usually performed at regular intervals looking for any possible enhancement of recurrent/residual tumour.

Conclusion: Partial nephrectomy remains the gold standard treatment for management of small renal tumours. Ablative treatment is a validated option associated with a favourable risk benefit balance, especially for fragile patients.

Symposium: Modern techniques for old indications

SP-0203
Robotic surgery and brachytherapy
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The practice of brachytherapy nowadays has been developed decennia ago. In the course of years modifications are introduced by the use of different isotopes, the development of afterloading techniques, the introduction image-guided techniques, and many more. Robotics technologies are already on wide scale increasingly being used in the treatment of patients. Also in brachytherapy this emerging technology has been adopted and is still in development. A robot is a