

RT. In 2009, ESTRO is offering 29 different teaching courses, including special editions organised in developing countries (e.g. several in Asia). ESTRO is also involved in the formulation and (at the moment) updating of European standards for training curricula. To support the scientific advancement of RT, ESTRO organises annual meetings, in even years on its own, in uneven years together with ECCO/ESMO; these years the three other RT disciplines have their own meetings. The ESTRO meetings are truly interdisciplinary, with both dedicated and joint tracks for physicists, biologists and technologists, in addition to radiation oncology tracks. From the 2008 meeting, there have also been dedicated sessions developed by and for young scientists in the field of RT. In addition, ESTRO has been/is involved in the organisation of several tumour site specific meetings (e.g. for head and neck and urological cancer) as well as inter-disciplinary meetings with other medical specialities (e.g. nuclear medicine). RT is an important treatment modality in the management of cancer. With the many on-going developments in radiation oncology, biology, physics and technology, it is very likely that RT also in the future will remain the major organ-sparing treatment alternative for cancer. In Europe, ESTRO is the key player in this field, providing support for this process through education, training and the advancement of science.

Scientific Symposium (Wed, 23 Sep, 14:45–16:45) Liver metastases from colorectal cancer

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INVITED

Radiofrequency ablation, a new standard?

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Introduction: During the past few years techniques on tumour ablation by radiofrequency have evolved significantly. This development resulted in an increasing use of radiofrequency over Europe. Although the technique proved to be safe and was adopted by many institutions, the place of radiofrequency ablation in patients with colorectal liver metastases is still not well defined. Hence, today there is still a clear need for scientific evidence that defines the role of radiofrequency therapy in patients with colorectal liver metastases.

Technique and devices: The basic idea behind local tumour ablation is to selectively destruct tumour tissue without significant damage to the remaining liver. RFA can be performed during laparotomy (open), laparoscopy or percutaneously. On line monitoring of the ablative procedure is crucial in order to obtain complete tumour destruction. Ultrasonography is the most commonly method used and allows accurate tumor destruction during open procedures. For percutaneous RFA, both CT and MRI imaging have been reported to be more reliable.

Local tumour control by RFA: For lesions smaller than 4 cm local recurrence rates after open RFA procedures (during laprotomy) are generally be reported around 5–7%. For percutaneous RFA comparable results are reported when the procedure is performed under CT or MRI guidance.

Use of RFA in patients with unresectable colorectal liver metastases: Chemotherapy is the gold standard for patients with unresectable colorectal liver metastases. From the theoretical point of view, however, local tumour destruction by RFA could be beneficial to those patients with (unresectable) liver metastases only. Despite many reports published so far, it remains difficult to delineate the role of RFA in this patient category. Results published are often confusing by reporting overall treatment results in a wide variety of different tumour types and with many different treatment strategies. It is only until recently that the interim results of a randomized study became available (CLOCC study, EORTC 40004). This phase II study investigates the efficacy of RFA plus chemotherapy versus chemotherapy alone in patients with unresectable colorectal liver metastases. Interim analysis shows that PFS is 16.8 months in the RFA arm versus 10 months in the chemotherapy only arm. When definite analysis confirms these results, RFA becomes an acceptable treatment option in this patient category.

Use of RFA in patients with resectable colorectal liver metastases: It is highly likely that with a local recurrence rate of 7%, local tumour ablative procedures like RFA may enter the arena of treatment alternatives for resectable colorectal liver metastases. However at present, patient selection and treatment strategies with combined treatment of RFA plus chemotherapy need further evaluation before RFA may be considered as an equivalent treatment option to resection.

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INVITED

Liver metastases from colorectal cancer. Which staging method is optimal?

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Various imaging modalities for staging patients with metastatic colorectal cancer have emerged or have evolved into powerful tools in the last decade. Multislice CT is still the cornerstone for choosing appropriate treatment. MRI (with or without novel contrast agents) provides better delineation of liver metastases. Furthermore, positron emission tomography (PET) using FDG has shown that the addition of FDG-PET changes patient management in up to 30% of patients with potentially resectable liver metastases, mainly by detecting previously unknown extrahepatic disease. FDG-PET is also useful in the follow-up of patients who underwent surgical procedures of the liver, since it is sensitive in detecting residual or relapse malignancy in scarred liver tissue following both resection and local ablative techniques. For follow-up during systemic therapy, early FDG-PET appears predictive for response to therapy.

FDG-PET, Computerized Tomography and Magnetic Resonance Imaging are complementary techniques in staging and restaging patients with advanced colorectal cancer. A combination of FDG-PET and CT scanning characteristics seems promising, and integrated PET/CT is becoming more widely available, although the exact clinical value and efficacy is not yet fully established. In addition, assessment of these modalities in joint reading sessions with radiologist, nuclear medicine physician, medical and surgical oncologists significantly impacts upon patient management.

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INVITED

Systemic treatment

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Patients must be divided in 2 different groups: (a) patients with resectable liver metastases and (b) with unresectable liver metastases due to size, number or illeocation (or all of this). For resectable liver metastases (a) standard treatment is perioperative chemotherapy with 3 cycles FOLFOX before and 3 cycles after surgery. This approach is able to significantly prolong the time to recurrence/disease free survival. For the alternative approach which is postoperative adjuvant chemotherapy without preoperative chemotherapy, the data are not consistent. A metaanalysis of 2 trials give some, but not significant evidence in favour of postoperative treatment with either single agent 5FU or 5FU/Irinotecan based combination to prolong disease free survival. However, the level of evidence is stronger for the pre-/postoperative approach and should therefore preferred. However, in patients who had due to some circumstances no preoperative chemotherapy, at least postop treatment should be considered. The role of Bevacizumab (Avastin®) in addition to chemotherapy for postop adjuvant treatment is currently investigated. For group with unresectable liver metastases (b) the treatment of choice is highly active chemotherapy for 4–6 months, followed by surgical attempt to resect all residual disease as much as possible. This approach leads to a long term survival of 15–25% of the patients depending on the initial situation. The best chemotherapy regimen is at least a triplet based on chemodoublet plus targeted drug or chemotriplet. For kras wild type tumor patients FOLFOX or FOLFIRI plus Cetuximab (Erbix®) as well as a chemotherapy triplet, eg. FOLFOX/Irinotecan (Camp®) or XELOX/Irinotecan (Camp®) are of some equivalent activity and potentially superior to FOLFOX/Bevacizumab (Avastin®); however, clear data are lacking regarding the value of Bevacizumab (Avastin®) in comparison to Cetuximab (Erbix®). For kras mutant tumor FOLFOX or FOLFIRI plus Bevacizumab (Avastin®) or FOLFOX plus Irinotecan (Camp®) are the treatment of choice; comparative phase II data indicate that the chemotriplet might be superior in terms of response induction over a Bevacizumab-based chemodoublet. A randomised trial is needed to elucidate the optimal chemotherapy in this situation.

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INVITED

Multidisciplinary perspectives of the management of liver metastases from colorectal cancer (CRCLM)

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We have made major progress over the last 20 years in the management of patients with CRCLM. In 1989, very few patients (mostly those with solitary, easily resectable metachronous tumours) were considered for surgery with curative intent. Most were offered either best supportive care or at