

signals in a synergistic way, while in other cases one tumour suppressor network may actually back up for the dysfunction of another.

These principles are well illustrated by investigation of the p53 pathway. A major tumour suppressor and arguably the most frequent target of driver mutations in human cancer, p53 is the hub of a wide array of signals. The immediate p53 network contains tumour suppressors such as Arf and oncogenes such as Mdm2 and Mdmx. In addition, however, p53 communicates extensively with the pRb tumour suppressor pathway, as documented by many studies. We will focus primarily on the crosstalk between p53 and the Hippo tumour suppressor pathway, and particularly on the role of the Lats2 tumour suppressor, a major component of that pathway, in relaying oncogenic stress signals to p53 and mediating the apoptotic elimination of cancer-prone cells. In addition, we will address the link between the putative tumour suppressor RNF20 and p53.

## **Society Session (Sun, 25 Sep, 16:45–18:15)** **Flims Alumni Club (FAC)**

**230** FAC Achievement Award  
**The Delicate Balance Between Clinic, Research and Education in Your Career in Oncology**

Abstract not received

**231** INVITED  
**How to Submit a Good Application?**

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The joint ECCO – AACR – EORTC – ESMO Workshop on ‘Methods in Clinical Cancer Research’ organized yearly in Flims since 1999 provides a great opportunity for young clinicians to discuss and learn from a selected myriad of experts from various fields of oncology clinical research. Thanks to the financial support of oncology professional organizations access to the workshop is for free for those candidates whose applications have been selected by the workshop chairpersons. This selection is based on pre-defined criteria assessed by expert reviewers looking at each application individually and providing ranking and comments for each applicants. There is usually much more applicants than seats available on the workshop and the selection can be hard hence the need for criteria's that can help differentiating applications. These includes the profile of the applicant, his (clinical research) career development perspectives, his accomplishment so far, the support of his/her supervisor, the quality and feasibility of the proposed research project and how convincingly this can be embedded into the motivation letter introducing the applicant. These criteria's do no weight equally in the assessment and of course are exposed to subjective variation in their implementation by different experts. However, benchmarking the applications against some principles that are going to be presented provides some good predictive value of the chance of success of the applicants. Of course this is not robust science since the quality of an application will always depend of the quality of the other applications which by default cannot be predicted. But more than 900 clinicians will already tell you... this is really worth trying!

**232** INVITED  
**Design and Conduct of a Successful Clinical Trial**

Abstract not received

**233** INVITED  
**How to Write and Review a Good Article?**

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Publishing a paper is an accepted form of communicating important findings to the oncology community and of adding to the existing knowledge. The main focus is on originality and impact on current practice when both writing and reviewing a manuscript. The key elements are scientific reliability and appropriate study design with respect to the research question, its clear definition and appropriate answer.

The goals of peer review are to assist the editors in forming a decision concerning publication of a manuscript and to provide constructive feedback to authors in order to enhance the quality of the final written product. The important points to consider when reviewing a manuscript are appropriateness of the overall study design, adequate description of methods, patients, inclusion and exclusion criteria and a clear outcome measure. Randomised clinical trials, systematic reviews, observational

studies and health economics studies have specific reporting guidelines and those must be adhered to. A review should assess whether the results of the study answer the research question and if results are discussed in light of previous evidence. The interpretation and conclusions need to be sufficiently derived from and focused on acquired data. The reviewer needs to assess whether the study was conducted according to ethical principles. The references should include relevant, up-to-date papers.

## **Society Session (Sun, 25 Sep, 16:45–18:15)** **European Association of Nuclear Medicine (EANM)**

**234** INVITED  
**Molecular Imaging in Radiation Oncology**

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The use of Molecular imaging in radiotherapy has becoming increasingly popular over the years...! Molecular imaging can be used either as a predictive factor for tumour response, as an aid for treatment planning, or as a tool to evaluate modifications in organ function after treatment. The use of PET in general, and of FDG-PET in particular, for radiotherapy planning purposes has really taken a increasing importance up to a point that more and more radiation oncologists believe that adequate target volume selection and delineation cannot be performed adequately anymore without the use of FDG-PET! But what are the evidences supporting the use of FDG-PET in the treatment planning process?

When introducing a new imaging modality (e.g. FDG-PET), the question is thus whether the new comer is more sensitive and/or specific than what one were used to use (e.g. CT), and consequently how could it modify the planning processes. For example, if an additional lymph node is visualized with a new imaging modality known to be more specific than the standard modality, it might be legitimate to enlarge -if necessary- the target volume(s) beyond what would have been done using a standard procedure to include this new node; conversely, if fewer nodes are visualized with a new imaging modality known to be more sensitive than the standard modality, it might be legitimate to decrease the target volume(s) below what would have been done using a standard procedure.

Another use of FDG-PET in the radiotherapy planning process is the delineation of the primary tumour GTV. For the primary tumour, the benefit of FDG-PET in the radiotherapy planning process should be evaluated more in term of 3D delineation and demarcation of the tumour volume from peri-tumoral inflammation, edema or atelectasis (for lung primary). In this respect, comprehensive studies have been already reported for lung, brain and head and neck tumours. Studies are ongoing for other locations such as esophageal and rectal tumours.

Last, in the framework of target volume delineation, molecular imaging needs to be validated for its ability to depict spatial and temporal variation in tumour physiology (e.g. metabolism, proliferation, hypoxia), leading to a novel paradigm in radiation dose prescription. The so-called “dose-painting” approach refers to an intentionally created dose heterogeneity aiming at tailoring the dose prescription to variation in tumour physiology.

**235** INVITED  
**Molecular Imaging for Response Monitoring in Esophageal Cancer**

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Metabolic imaging and early response assessment by positron emission tomography (PET) are gaining importance in guiding treatment of localized and metastatic esophago-gastric cancer. The most consistent results have been obtained during neoadjuvant treatment of adenocarcinoma of the esophagus and the esophago-gastric junction (AEG). It was demonstrated that PET is highly accurate for identifying non-responding and responding tumours within 2 weeks after the initiation of neoadjuvant chemotherapy when a quantitative threshold for metabolic response is used [Weber WA et al. JCO 2001; Ott K et al. JCO 2006]. In consecutive phase II studies the metabolic activity, defined by the standardized uptake (SUV) of 18-FDG before and during chemotherapy, was measured. Significant decreases of the SUV after only two weeks of induction chemotherapy were observed. A drop of  $\geq 35\%$  measured 2 weeks after the start of chemotherapy revealed as the most accurate cut-off to predict response after a full-course of preoperative chemotherapy lasting for 12 weeks. It was further noticed that the metabolic response to induction chemotherapy revealed as an independent prognostic factor in locally advanced AEG. This suggests that PET can be used to tailor treatment according to the