Special Session (Thu, 24 Sep, 11:15−12:15)
Locoregional control of advanced breast cancer

326 INVITED

Locoregional control in metastasized breast cancer, the role of the radiation oncologist

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The oncologic society tends to act according to certain assumptions or axioms, derived from scientific developments in history. Sometimes these assumptions limit our openness towards new possibilities and hence impair developments. One of these axioms is the incurability of stage IIIB and IV breast cancer. It was long believed that locally advanced breast cancer was to be treated with palliative intent and that locoregional treatment was meant (only) to avoid local complaints. This attitude still holds for the 3.5% of patients presenting with primary metastasized disease.
Recently it is clearly shown that optimal locoregional radiotherapy in addition to surgery and systemic therapy improves long term survival in early stage breast cancer. It is well known that surgery as well as radiotherapy are much more potent in achieving definitive eradication of macroscopic tumours than systemic treatment alone. Also it has become clear that breast cancer metastasizes in an orderly manner, implying that distant metastases are usually much smaller than the locoregional disease. In other words, these patients tend to have a huge locoregional tumour load, far too much for systemic treatment alone.
Though hard evidence is lacking, several reports suggest that survival or distant progression free interval may be prolonged in M1 patients after resection of the primary tumour. This phenomenon might be explained by a rapid diminishing of tumour stem cells below the threshold of (further) metastatic spread, cessation of tumour mediated immune suppression or of other humoral factors facilitating adhesion and outgrowth of metastatic disease. Also eradication of quiescent tumour stem cells, believed to be resistant to systemic treatment might be explanatory. Although these explanations are hypothetic, we should be open minded, and not stick to our assumption that patients with primary metastatic disease should be treated strictly palliative by systemic means only.
The role of intensive locoregional treatment consisting of surgery or high dose radiotherapy, or both, in patients with primary metastatic breast cancer is worth exploring in clinical studies.

Special Session (Thu, 24 Sep, 11:15−12:15)
Drug and lifestyle mediated prevention intiatives in Europe

327 INVITED

Obesity and overall cancer risk

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Background: Increased body adiposity is an established risk factor for cancer development. The author and collaborators recently reported findings from a standardised meta-analysis (Renehan et al. Lancet 2008;371:569–578) of prospective observational studies quantifying risk associations with body mass index (BMI) in 20 cancer types. These analyses demonstrated that associations are: (i) modest (risk estimates range from 1.1. to 1.6) per 5 kg/m^2 incremental increase; (ii) sex-specific; (iii) exist for a wider range of malignancies than previously thought; and (iv) are broadly consistent across geographic populations. Given the biological plausibility, the consistency of associations, and the sufficiently long latency times between BMI measurement and cancer occurrence, these associations are probably causal. Added to these, recent data from cohorts of grossly obese patients undergoing bariatric surgery demonstrate the strongest evidence yet that weight reduction may confer a cancer protective effect.
Methods: The emphasis of our obesity and cancer research group has been to explore mechanistic links between obesity and cancer (both risk and progression) based on robust clinical observations, which in turn direct our questions in the laboratory. Hence, the group works within an international collaborative network of epidemiologists and cancer modeller, and translate these observations with in vitro models (e.g. of chronic insulin exposure) and animal models (e.g. obese mice and tumour growth).
Results: Our recent further analyses of the forementioned meta-analysis database has demonstrated and quantified the following: (i) the associations between lung cancer and BMI are heavily confounded by smoking; (ii) the associations between BMI and risk of post-menopausal breast cancer and endometrial cancer are dependent on HRT status; and (iii) the BMI-cancer risk association is generally linear but there are examples of non-linearity. These point to a diversity of potential processes operating for different cancer types – it is unlikely that there is a "one system fits all" mechanism.
Conclusions: As the obesity epidemic shows few signs of abating, incidences of obesity-related cancers may rise. There is an urgent need to better understand the biological and molecular mechanisms underpinning the link between obesity and different cancers, so that targeted-based strategies are developed to integrate with population-based weight control policies.

329 INVITED

Drug/lifestyle and colon cancer prevention

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Lifestyle changes have been advocated for prevention of colorectal cancer. Epidemiological studies have shown that diets high in vegetable fibers can reduce the risk of colorectal cancer. Similar observations have been made for folic acid, calcium, magnesium, and vitamin B6. However, there are also conflicting data as to the influence of these dietary factors on the incidence of colorectal cancer. Alcohol consumption, a low level of physical activity, obesity and insulin resistance have all been shown to positively correlate with the risk for colorectal cancer. It is less clear, however, to what extent modifications in diet, physical activity and other aspects of lifestyle can influence an individual's risk of developing colorectal cancer. Since most of the above mentioned factors have several benefits besides a reduction in cancer incidence as well as little side effects, recommendation are not difficult to make.
Observational as well as randomized studies have shown non-steroidal anti-inflammatory drugs (NSAIDs) to reduce the risk of developing colorectal adenomas as well as invasive cancers. For acetylsalicylic acid (ASA) continuous medication over several years seems to be necessary to reduce the incidence of colorectal cancer after a latency period of approximately 15 years. There are conflicting results regarding the required daily dose. Cyclooxygenase-2 (COX2) specific inhibitors like rofecoxib and celecoxib have been shown to reduce the number of colorectal adenomas not only in high-risk patients with familial adenomatous polyposis (FAP), but also the risk to develop sporadic colorectal adenomas. In addition there is a growing body of evidence that the combination of difluoromethylornithine (DFMO) and sulindac may have a role in chemoprevention of colorectal neoplasias by interfering with the polyamine synthesis pathway.
Any chemo preventive interventions have to be safe to be recommended for the general population. However to date data on risk/benefit ratio are scarce. In addition early detection of colorectal cancer and precursor lesions will get more sensitive in near future by an increasing use of screening colonoscopy and the development of molecular stool and blood tests. Therefore the benefits of any chemo preventive efforts have to be thoroughly weighed against the risks of drug side effects as well as the increasing likelihood of early detection.
While certain life style modifications can clearly be advised to reduce the risk of colon cancer, data on risk/benefit ratio of chemoprevention for colorectal cancer are not sufficient to make a recommendation.

Special Session (Thu, 24 Sep, 11:15−12:15)
Endoscopic treatment of gastroesophageal cancer

331 INVITED

New developments in the endoscopic detection and treatment of early Barrett's neoplasia

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The last years have brought a dramatic increase in the quality of gastrointestinal endoscopy. State-of-the-art white light endoscopy nowadays is of superb quality due to CCDs that consist of over 1 million pixels, optimal post-processing of the CCD information, and transmission on high definition television screens. The combination of optical and electronical zoom and the use of filter technology that either change the composition of the exitation light or, by post-processing, selected specific information coming from the CCD, allows for detailed imaging of the mucosal and vascular patterns. Examples of these are techniques known as NBI, FICE, or I-scan. In autofluorescence endoscopy the different fluorescent properties of dysplastic and non-dysplastic tissue can be used to identify early neoplastic lesions that are inconspicuous with white light endoscopy.