Teaching Lectures

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Epidemiology of cancer in Europe – What are the trends?

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The ageing of the population of Europe at the present time is the most important influence on the determination of the large increases in the numbers of cases of cancer in Europe. Against this background, there are two separate components of this presentation. Firstly, there are several important temporal and geographic trends in cancer risk. The decreases in stomach cancer throughout Europe and very welcome but contrast with the large increases being seen everywhere in Non-Hodgkin's Lymphoma and Malignant Melanoma. The high levels, which are still increasing, in Lung Cancer and other smoking-related cancers in central and eastern Europe present very worrying aspects. The epidemic of lung cancer in women, particularly in southern Europe, programmed to take place in the coming decades will be a major problem for public health and oncology services. The second important observation is that there must be an acceleration of the trend for Epidemiology to focus less on data and information collection and to concentrate more on implementing cancer control activities based on existing knowledge. Within the limit of our current knowledge it is practically possible to eliminate, at the very least, one half of all cancers. It is time to take steps to do this, rather than to continue to discuss it.

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The value of adjuvant chemotherapy in the treatment of bladder cancer

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For patients with TaTI bladder cancer many trials have demonstrated that adjuvant intravesical chemotherapy reduces the likelihood of superficial tumour recurrence such that this adjuvant chemotherapy has become routine treatment for most patients with superficial bladder cancer. However, recent meta-analysis has failed to demonstrate that adjuvant treatment reduces the small risk of disease progression or death from bladder cancer.

For muscle invasive bladder cancer numerous non-randomised studies have shown that Cisplatin based combination chemotherapy is active. Although multi-centre trial has confirmed a response rate for the MVAC (Methotrexato, Vinblastine Adriamycin and Cisplatin) regimen that was lower than previous single institution experience invasive bladder cancer is still regarded as more chemo-sensitive than most other solid tumours.

The first trials of neo-adjuvant chemotherapy used Cisplatin alone to try and improve survival after cystectomy or radiotherapy for non-metastatic T2, T3 and T4a transitional cell carcinoma (TCC). By current standards the number of patients in these trials was small but the collective results showed no impact on survival of clinical importance from neo-adjuvant Cisplatin used by itself. Neo-adjuvant or adjuvant combination chemotherapy (MVAC, CMV, MVEC) has been tested in several small trials. They have suggested that the addition of chemotherapy to cystectomy delayed the development of metasteses and improves survival but these studies were either terminated prematurely or were of inadequate statistical power. The Nordic cystectomy trial showed a survival benefit from neo-adjuvant Cisplatin and Adriamycin in a sub-set of patients with muscle invasive bladder cancer but the number of patients was small.

By contrast, the largest trial (EORTC 30894/MRC BA06) of neo-adjuvant chemotherapy has shown an insignificant difference in survival between patients with T2–T4a TCC treated by cystectomy or radiotherapy and similar patients given 3 cycles of CMV prior to definitive treatment. 976 patients were randomised, 406 had died with a median follow-up of 29 months. For practical purposes neo-adjuvant CMV is not recommended at the present time but it is possible that adjuvant chemotherapy or other drug combinations may succeed where neo-adjuvant CMV appears to have failed. However, patients should be aware that this treatment is still experimental.

4

Radical gastrectomy – How do I do it?

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Introduction: Nowadays the majority of gastric cancers arise in the proximal stomach. The traditional surgical approach has been a standard gastrectomy without consideration for lymphadenectomy. Our resection rates have remained constant at 48% and 5 year survival remains under 20% over the last 20 years. Recently we have changed our approach towards radical gastrectomy in association with neo-adjuvant chemotherapy in an attempt to improve outcome.

Patient selection: Radical gastrectomy is reserved for patients under 70 years of age without significant comorbid disease. Pre-operative staging includes ultrasound, CT scan, staging laparoscopy with intra-operative ultrasound, and peritoneal lavage cytology.

Technique for radical gastrectomy: The abdomen is opened using a bilateral subcostal "rooftop" incision and retraction is achieved using an Omnitract retractor. Antral tumours >5 cms from the oesophago-gastric junction are treated by subtotal gastrectomy with preservation of spleen and pancreas. All others receive a total gastrectomy with en-bloc splenectomy and distal pancreatectomy. The omentum and anterior leaf of the mesocolon are mobilised upwards over the pancreas. The infra-pyloric vessels are ligated low and the duodenum Kockerised. The lesser omentum is mobilised from the liver and dissection continued over the anterior surface of the bile duct to the duodenum. The 2nd part of duodenum is transected. The hepatic artery and portal vein are cleared of tissue including the retropancreatic nodes. The common hepatic artery and splenic arteries are skeletalised and the left gastric artery is ligated at its origin. The tissue in front of the aorta is removed.

Reconstruction: Is performed using a 50 cm Roux-en-Y anastomosis. In total gastrectomy a blind limb with end to side oesophago-jejunal anastomosis is performed using a 28 mm curved stapler. The head of the stapler as well as the purse-string suture are inserted prior to division of the posterior wall of the oesophagus. Adequate proximal clearance is achieved by splitting the left hemidiaphragm and taking the anastomosis into the chest when necessary.

5

Quality of life as an outcome measure in cancer care

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Although quality of life (QoL) always has been an important goal in medicine, only recently this aspect has gained importance as an explicit endpoint in evaluating treatment outcomes. QoL can be an important issue especially in cancer research, where it has been acknowledged that length of life parameters such as disease free or overall survival are often unsatisfactory outcome measures and where treatments are often very intrusive. Therefore, increasing attention is being given to more systematic and quantitative ways to evaluate the impact of diseases and medical interventions on QoL.

The aim of this presentation is to provide some insight in the rationale for QoL evaluation in cancer clinical trials and some of the methodological and practical issues relevant to its assessment. The following topics shall be addressed:

(a) Why and when should quality of life be studied in cancer clinical trials?
(b) Which aspects of QoL should be measured?
(c) What are the main approaches in design and methods?
(d) What are the basic type of instruments?
(e) Selection of instruments.
(f) How to facilitate and improve QoL data collection?
(g) Interpretation and presentation of results.

These aspects will be illustrated in the context of EORTC trials.