Adipose tissue and cancer
Mounting evidence for importance of adipose tissue

Korean medical oncologists
Survey emphasises their broad role in multidisciplinary cancer teams

Epigenetic-targeted drugs
Meta-analysis shows encouraging results for combination of epigenetic- and DNA-targeted drugs

Triple-negative breast cancer: predicting relapse
High baseline cell-free DNA level may be a potential biomarker

CONGRESS HIGHLIGHTS
SUNDAY 18 DECEMBER 2016

Which way now for TKIs in EGFR mutation-positive lung cancer?

EGFR tyrosine kinase inhibitors (TKIs) are established first-line treatments for EGFR mutation-positive non-small-cell lung cancer (NSCLC) but their optimum use continues to be explored. Yesterday’s Proffered Paper session featured results from first-line studies with the potential to influence the application of these agents in practice.

In the overall survival analysis of the phase Ib LUX-Lung 7 trial (with a median follow-up of 42.6 months), afatinib improved survival compared with gefitinib (median 27.9 months versus 24.5 months), although the difference was not significant (hazard ratio 0.86; p=0.258) (Abstract 440O). The effect, said Li Zhang (Sun-Yat-sen University Cancer Center, Guangzhou, China), was consistent across del19 and L858R mutation subtypes. In line with the primary analysis,1 updated progression-free survival, time-to-treatment failure and overall response analyses significantly favoured afatinib and the adverse event (AE) profiles were unchanged.

Afatinib prolonged progression-free survival and time to treatment failure compared with gefitinib.

Combining erlotinib with the anti-PD-L1 antibody atezolizumab, in an effort to prolong TKI response, was associated with manageable safety in a phase Ib study of 28 patients, according to Brigette Ma (The Chinese University of Hong Kong, Shatin, China) (Abstract 441O). Altogether, 39% of patients had treatment-related grade 3–4 AEs and five receiving atezolizumab discontinued due to AEs. There was no pneumonitis. Efficacy was promising, with response and disease control rates of 75% and 90%, respectively, among 20 patients with EGFR mutation-positive NSCLC.

Adipose tissue influences
tumour growth and metastasis

Findings from three studies presented yesterday place growing importance on the role of adipose tissue in the growth, development and progression of tumours.

Jun Kinoshita (Kanazawa University, Japan) (Abstract 14P) reported that adipose-tissue derived stem cells (ASCs) promoted tumour progression in an in vivo study of gastric cancer. Tumour volume was significantly greater and the ratio of fibrotic tissue was significantly lower, while the expression of α-SMA was higher and that of E-cadherin was lower for animals in which tumour cells were co-injected with ASCs compared with those injected with tumour cells alone.

Findings from an in vivo study of various tumours, including breast cancer and melanoma, revealed that adipose tissue vasculature has important implications for tumour growth and progression (Abstract 15P).

EGFR inhibitors, hypomagnesaemia and depression

Hypomagnesaemia is a recognised side effect of treatment with EGFR inhibitors and proton pump inhibitors (PPIs). A retrospective cohort analysis of 50 patients reported by Patrick Connolly (Lyell McEwin Hospital, Adelaide, Australia) in a poster yesterday investigated two issues: whether magnesium levels are reduced further by simultaneous administration of EGFR inhibitors and PPIs and what are the implications of hypomagnesaemia in terms of patient wellbeing (Abstract 11P).

While the EGFR inhibitors cetuximab and panitumumab significantly reduced serum magnesium levels (p<0.0001), which returned to within normal limits after treatment completion, hypomagnesaemia severity was not increased by concurrent treatment with PPIs. Curiously, low magnesium levels and potential risk for depression were found in patients receiving EGFR inhibitors.

For every one unit increase in magnesium level there was an 85% reduction in the rate of depression (odds ratio 0.15; 95% confidence interval 0.03–0.79).

The role of magnesium supplementation should be investigated in this setting.
**CONGRESS HIGHLIGHTS**

**Pegfilgrastim and biosimilar: Comparable activity in Asian patients with breast cancer?**

Two prospective randomised trials have confirmed that the pegfilgrastim biosimilar, LA-EP2006, has equivalent activity to reference pegfilgrastim in patients receiving myelotoxic chemotherapy for breast cancer.1,2 Does this finding hold true for Asian patients? Find out in tomorrow’s late-breaking abstract presentation from Nadia Harbeck (LMU Klinikum der Universität München, Germany).

In a pooled sub-group analysis of 174 Asian patients from the trials, there was equivalence in the primary endpoint—duration of severe neutropenia in the first cycle—for the two agents (difference 0.01 days). There were no clinically meaningful differences between agents in secondary endpoints or adverse events and no neutralising anti-pegfilgrastim antibodies.

**Hear more about the comparison of pegfilgrastim and its biosimilar in Asian patients with breast cancer tomorrow (09.00 – 10.00, Summit 2, Abstract LBA2).**


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**Epigenetic-targeted drugs increase sensitivity to conventional treatment via chromatin remodelling**

Deregulation of the epigenome is becoming increasingly recognised as a factor in the development of some cancers. Epigenetic-targeted drugs (ETDs) are approved for haematological malignancies and are under investigation for solid tumours. But how do they work?

According to a meta-analysis of clinical trials reported in a poster presentation yesterday by Li-Jun Di (University of Macau, China), single-agent ETDs show little efficacy in solid tumours (2% response rate in 1,153 patients) but demonstrate encouraging activity when combined with DNA-targeted chemotherapy (Abstract 22P). Laboratory analyses have revealed that inhibitors of histone deacetylase and DNA methyltransferase work by loosening chromatin, leading to increased integration of cisplatin and doxorubicin into the chromatin and escalation of cell death.

“Combining epigenetic-targeted drugs with DNA-targeted chemotherapy or radiotherapy is a promising approach for solid tumours and should be explored further.”

**Survey highlights contribution made by Korean medical oncologists**

As key members of multidisciplinary cancer teams, medical oncologists facilitate the appropriate and safe use of cancer medications while ensuring that patients have optimal quality of care.

With cancer treatment becoming increasingly complex, the need for integrated approaches to patient care is growing.

In an effort to better understand the role played by medical oncologists in Korea, the Korean Association for Clinical Oncology (KACO) conducted the first national survey of medical oncologists. Today, Do Yeun Kim (Dongguk University Ilsan Medical Center, Goyang, Republic of Korea) will present the results, which show that from the 214 individuals who completed the survey, it is evident that Korean medical oncologists are involved in patient management from diagnosis to end-of-life care, and actively contribute to research on a global level (13.30 – 14.15, Exhibition Hall, Abstract 566P). The survey found that most (94%) institutions had dedicated medical oncology departments, with a large proportion (86%) being involved in clinical research.

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Simple fluorescence cell-free DNA assay predicts relapse in triple-negative breast cancer?

Baseline cell-free DNA (CFD) indicates the likelihood of relapse in triple-negative breast cancer (TNBC) and can be assessed using a simple and convenient fluorescence assay. This was the message from a poster presented yesterday by Kwonoh Park (Pusan National University Yangsan Hospital, Republic of Korea) (Abstract 49P).

Among 72 patients receiving neoadjuvant doxorubicin plus cyclophosphamide for TNBC, the 18 who relapsed had a higher baseline CFD level than those who didn’t relapse, although the effect was not significant. ROC curve analysis showed the relapse rate to be higher for patients with baseline CFD values above 264 ng/mL (hazard ratio 2.84; 95% confidence interval 1.11–7.24). There was no association between baseline CFD, which was obtained by a fluorescence assay, and tumour stage or response to chemotherapy.

“Baseline CFD may be a potential biomarker for TNBC risk stratification.”

Kwonoh Park

Faces in the crowd