SINGAPORE 2016 ESMO ASIA

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 IIb 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 4400**). 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 4410**). 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.

1. Park K, et al. Lancet Oncol 2016;17:577–89

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Webcasts

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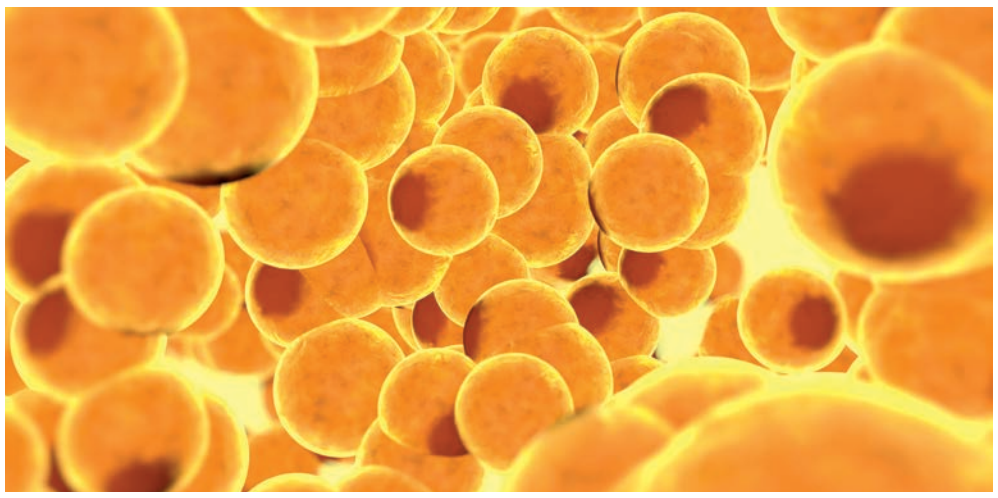
Adipose tissue influences tumour growth and metastasis



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 ACS 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**).

"Mice implanted with tumour cells in their white or brown adipose tissue had tumours that grew significantly faster than when tumour cells were implanted in subcutaneous tissue."

Sharon Lim (Karolinska University Hospital-Solna, Stockholm, Sweden)

The reasons for this disparity could be down to increased neovascularisation, blood perfusion and leakage from microvessels in adipose tissue.

Promising results from an *in vitro* study in prostate cancer cells were reported by Shoichiro Ohta (Josai University, Sakado, Japan) showing dose-dependent inhibitory effects of n-3 fatty acids (**Abstract 16P**). The n-3 fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) were tested against a prostate cancer cell line and displayed an ability to suppress cell migration and invasion, and inhibit cancer cell proliferation. The mechanisms behind these processes are yet to be fully elucidated.

Tumour treating fields – a potential strategy for breast cancer

Alternating low-intensity electric field therapy, commonly known as tumour treating fields (TTFields), is a somewhat controversial novel cancer treatment that has regulatory approval in some markets for certain types of brain tumour.[1] Investigation in other tumour types is underway.

In a poster presentation yesterday, Nadia Gharaee (Tehran University, Iran) reported that TTFields significantly inhibited the proliferation of MDA-MB-231 human breast cancer cells (**Abstract 10P**). Over a period of 30 hours, a frequency of 150 kHz caused the greatest inhibition. TTFields also enhanced tumour cell sensitivity to doxorubicin, the addition of which increased the inhibitory effect of therapy administered at the optimal frequency.

The combination of TTFields and doxorubicin merits further investigation in breast cancer patients.

1. www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm465744.htm

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 0.03–0.78).

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

ESMO YO

Find out what ESMO has in store for Young Oncologists

Why not join us at two special sessions today to learn more about the initiatives and resources available from ESMO.

Find out about **ESMO Fellowship and career development opportunities** (Sunday, 18 December, 11.00 – 12.30, Hall 325), such as tips on what makes a successful fellowship application and how the preceptorship programme works.

ESMO has a range of publications available to oncologists. Discover more at **An introduction to ESMO journals and other publications** (Sunday, 18 December, 14.30 – 16.00, Hall 325), including advice on how to get your work published.

See the Discussion hub programme at **www.esmo.org/Conferences/ESMO-Asia-2016-Congress/Programme/Sessions-for-Young-Oncologists** for more information.

ESMO Quiz

Win a free registration for the ESMO Asia 2017 Congress!

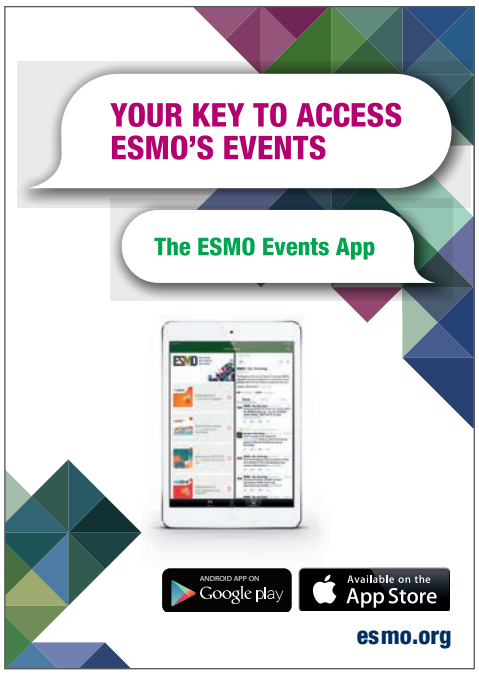
Do you think you know ESMO well? Find out in our 5-minute quiz and get the chance to win free registration for next year's ESMO Asia Congress.

It's easy to take part. Simply come along to the ESMO Booth, complete the quiz on the available iPads and enter the prize draw.

You'll find the ESMO Booth at B17 on Level 4 in the Exhibition Hall.

Good luck!

For more information about the ESMO Booth, including opening hours, visit: **esmo.org/Conferences/ESMO-Asia-2016-Congress/Lounge-Booth**



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).

1. Harbeck N, et al. Future Oncol 2016;12:1359–67
2. Blackwell K, et al. Oncologist 2016;21:789–94

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."
Li-Jun Di

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.

Meet the **ESMO Open Editor**

ESMO Open, ESMO's open access, online-only, peer-reviewed oncology journal publishes innovative clinical and translational cancer research, oncology policy and educational content from all disciplines of oncology. *ESMO Open* has recently been chosen as the official journal of the Chinese Society of Clinical Oncology (CSCO). Today, Christoph Zielinski, Editor-in-Chief of *ESMO Open*, will be on hand to answer your questions and explain more about the journal. Be sure to visit the ESMO Lounge at 12.30 – 14.30 to meet Christoph Zielinski.

Find out more about *ESMO Open* at: **esmo.org/About-Us/ESMO-Oncology-Journals/ESMO-Open**

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