ESMO 2014 Congress Scientific Meeting Report – Endocrine Cancers Extract

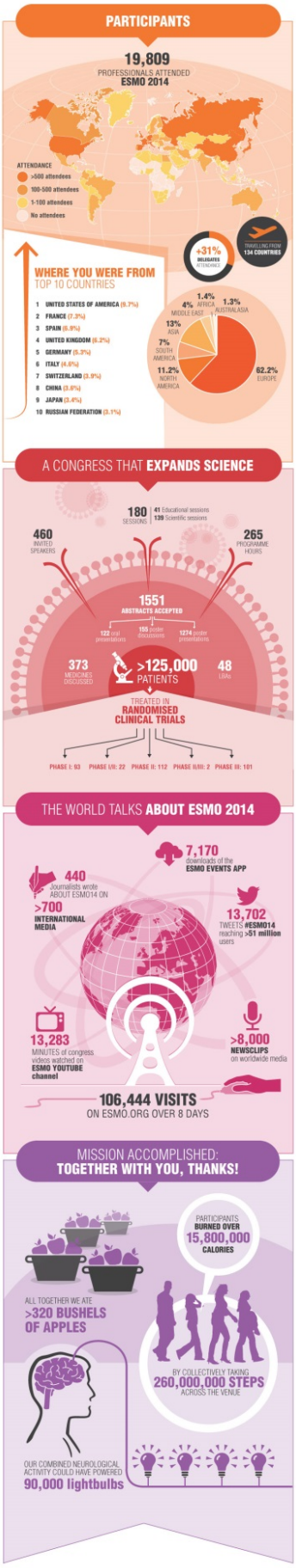
26-30 September 2014

Madrid, Spain

Summary

The European Society for Medical Oncology (ESMO) Congress, held September 26 to 30 in Madrid, Spain, was a record-breaker on nearly all levels. It was resounding success and in a dedicated infographic you can find the congress statistics. A primary emphasis in the scientific programme was placed on precision medicine and how it will change the future treatment landscape in oncology. In addition, a number of scientific presentations were dedicated to cancer immunology and immunotherapy across multiple tumour types. This report is an overview of key scientific presentations made during the congress by leading international investigators. It attempts to represent the diversity and depth of the ESMO 2014 scientific programme, as well as advances in oncology.

Infographic (right): ESMO 2014 record breaking Congress



Endocrine Cancers

Comprehensive analysis of serum biomarker and tumour gene mutation associated with clinical outcomes in the phase III study of lenvatinib in differentiated thyroid cancer

Dr Makoto Tahara of the National Cancer Center Hospital East, Kashiwa, Japan reported results from the comprehensive analysis of serum biomarker and tumour gene mutations in the SELECT study. Lenvatinib vs. placebo benefit in PFS was maintained regardless of baseline circulating cytokine/angiogenic factors (CAFs) or BRAF/RAS mutational status. Baseline angiopoietin-2 (Ang2) was predictive of tumour shrinkage and PFS in a subset of patients (lowest quartile, 0-25%) with lenvatinib, indicating that Ang2 may play a predictive role in defining sensitivity to lenvatinib. Additionally, BRAF mutation may be a positive prognostic factor in papillary thyroid cancer.

Lenvatinib—an oral multikinase inhibitor of VEGFR1–3, FGFR1–4, PDGFRα, RET, and KIT—significantly prolonged PFS by 14,7 months vs. placebo in patients with 131I-refractory differentiated thyroid cancer in the phase III SELECT study. This analysis investigated potential lenvatinib efficacy biomarkers from the SELECT study.

Blood samples were collected at baseline, cycle 1/day 15, day 1 of subsequent cycles, and at treatment end. Circulating CAFs were measured by ELISA. Tumour tissues were analysed for mutations of BRAF, NRAS, KRAS and HRAS. For prognostic and predictive biomarker analyses (p for interaction) of baseline CAFs, patients were dichotomised: low (first quartile) vs. high (others).

CAF and tissue samples were analysed from 387 (99%) and 183 (47%) of all randomised patients (in total 392), respectively. PFS HR was similar between these groups and the overall study; lenvatinib PFS benefit was maintained in all assessments.

Low baseline Ang2 was significantly associated with tumour shrinkage in lenvatinib ($p = 0.017$), but not placebo. PFS HR of lenvatinib to placebo for low Ang2 (0.08; $p < 0.001$) was lower than for high Ang2 (0.24; $p < 0.001$); low Ang2 was a positive predictive factor for lenvatinib PFS ($p = 0.018$).

High baseline thyroglobulin (Tg) was a negative prognostic factor for PFS ($p = 0.023$); PFS HR of lenvatinib to placebo for high Tg (0.14; $p < 0.001$) was lower than for low Tg (0.32; $p < 0.001$). With lenvatinib, Tg rapidly decreased by cycle 1/day 15; a large change correlated to better objective response (cycle 1/day 15 and later).

In mutation analyses, no significant differences in clinical outcomes were observed; BRAF mutation was an independent positive prognostic factor for PFS in papillary thyroid cancer ($p = 0.019$). BRAF mutation and NRAS mutation have significantly low and high baseline Tg, respectively, compared with wild type.

Dr Sandrine Faivre of the Beaujon University Hospital, Clichy, France, who discussed the study results, said that a large set of biological data (47% of tumours, 99% of serum) from this phase III study explored the multikinase inhibitor lenvatinib in patients with differentiated thyroid cancers. Tumour mutations (BRAF, RAS) do not impact on lenvatinib effects but on prognosis of certain histological subgroups (BRAFV600 in papillary thyroid cancer). In contrast, low level of Ang2 serum biomarker might be predictive of lenvatinib treatment benefit (associated with tumour size

reduction and favorable PFS). Other angiogenesis-related biomarkers (VEGF, sTie2) were not predictive of lenvatinib effect. Tg remains an important biomarker of monitoring to follow response to lenvatinib.

The study was sponsored by Eisai Inc.

Reference

LBA30: Comprehensive analysis of serum biomarker and tumor gene mutation associated with clinical outcomes in the phase 3 study of (E7080) lenvatinib in differentiated cancer of the thyroid (SELECT)

RELATED INFORMATION

Click here to access the Conference abstracts.

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Save the date

European Cancer Congress 2015 (ECC 2015), Vienna, Austria, 25-29 September 2015.

Affiliations and Disclosure

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Disclosure

No conflicts of interest to disclose.

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