ESMO 2016 Congress

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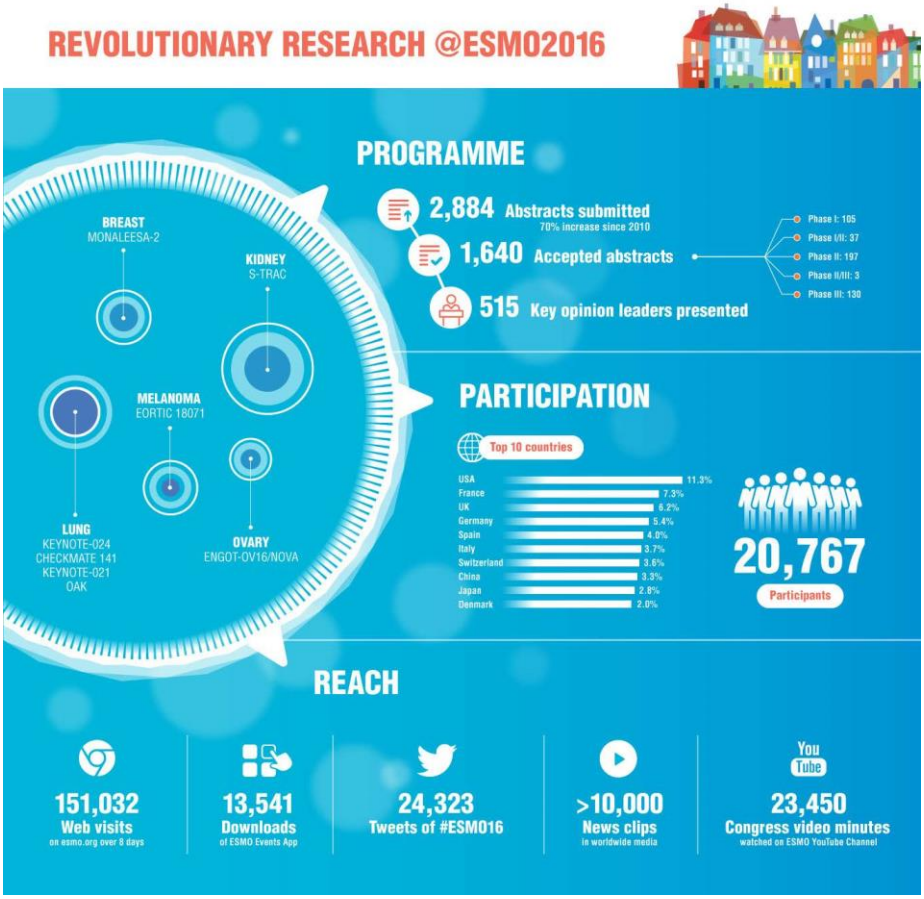
Summary

The European Society for Medical Oncology (ESMO) 2016 Congress, held October 7 to 11 in Copenhagen, Denmark, was a record-breaker on all levels. It was resounding success and in a dedicated infographic you can find the congress programme statistics. A primary emphasis in the scientific programme was placed on two areas: precision medicine and immunology and immunotherapy across multiple tumour types and how these advances change the treatment landscape in oncology. 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 2016 scientific programme, as well as advances in oncology.



ESMO 2016 record breaking Congress

THORACIC MALIGNANCIES - OTHER

NGR-hTNF added to best investigator choice of treatment demonstrates activity in previously treated patients with malignant pleural mesothelioma

Vanessa Gregorc, Department of Oncology, San Raffaele Scientific Institute, Milan, Italy, reported findings from the phase III NGR015 trial of NGR-hTNF, a recombinant protein derived from the fusion between a peptide and human tumour necrosis factor alpha (TNFα). NGR-hTNF selectively binds to CD13-expressing blood vessels. CD13 is upregulated by tumour hypoxia/angiogenesis, which associate with high lactate dehydrogenase (LDH) serum levels. NGR015 enrolled patients with malignant pleural mesothelioma (MPM) who progressed on a first-line pemetrexed-based regimen; 200 patents were randomised to weekly NGR-hTNF and 200 patients were randomly assigned to placebo, both administered with best investigator choice, which included gemcitabine, vinorelbine or doxorubicin in 95% of patients or supportive care for 5% of patients. Patient reported outcome (PRO) was assessed by the malignant pleural mesothelioma-lung cancer symptom scale (MPM-LCSS) questionnaire, based on a 100-mm visual analogy scale (with 0 as best rating) for 5 major symptoms, including appetite loss, fatigue, cough, dyspnoea and pain, and 3 summary items of total distress, activity and quality of life (QoL). PRO measures were the time to symptomatic deterioration (TSD; ≥ 25% increase) and responder analysis (≥ 10% decrease). The trial also evaluated baseline LDH levels (median 274 U/L; IQR 196 to 388) as a predictor of outcome following treatment with NGR-hTNF.

The completion rate and scores for the PRO were balanced between treatment arms. The scores were found to inversely correlate with overall survival (OS; $p < 0.0001$). Analyses of the intent to treat population reveal that TSD (HR 1.01; $p = 0.97$) and OS (HR 0.94; $p = 0.61$) did not differ between arms. Predefined OS analyses indicated an interaction only between treatment and treatment-free interval (TFI) from end of first-line to start of second-line therapy (HR 0.54; $p = 0.008$). Patients having a short TFI, defined as less than the median 4.8 months (n=198) demonstrated improved OS and TSD with NGR-hTNF over placebo; median OS was 9.0 versus 6.3 months, HR 0.69 ($p = 0.02$) and median TSD was 3.3 versus 2.8 months, HR 0.66 for the respective treatments. With NGR-hTNF and best investigator choice, 49% compared to 37% of patients, respectively, showed a decrease in LDL levels of ≥ 10% was 49% versus 37%. The median OS in patients showing a lowered LDH level was 15.6 with NGR-hTNF versus 8.4 months with best investigator choice. Overall, LDH levels were inversely related to TFI ($p < 0.0001$) and LDH levels were higher in patients having short rather than long TFI ($p < 0.0001$). In the short TFI subset, the HR for PFS was 0.56 ($p = 0.001$) with LDH ≥ 1st quartile and 0.36 ($p = 0.001$) with LDH ≥ 3rd quartile and the increase in median OS was 3.7 and 7 months, respectively. NCT01098266. Gregorc *et al.* Abstract 1508PD

Practice point and future research opportunities

This study demonstrated that NGR-hTNF plus best investigator choice of treatment improved overall survival over best investigator choice in patients with malignant pleural mesothelioma who progress rapidly after front-line therapy. Quality of life was comparable between the two groups. LDH levels seem to be a marker for NGR-hTNF activity.

Resection of stage III thymic epithelial tumours emerges as a significant prognostic factor for improved overall survival

Maria Virginia Bluthgen, Cancer Medicine, Institut Gustave Roussy, Villejuif, France, reviewed the RYTHMIC (Réseau tumeurs THYMiques et Cancer), a French nationwide network for thymic epithelial tumours (TET) to evaluate the treatment outcome following tumour board recommendations and a multidisciplinary approach. The investigators conducted a retrospective analysis of 150 cases of stage III TET discussed at the RYTHMIC tumour board from January 2012 to December 2015. Clinical, pathologic and surgical data were prospectively collected in a central database and survival rates were determined by Kaplan-Meier estimation.

The patients' median age was 64 years (range: 18 to 91 years), 56% of patients were male, 47% of patients had thymoma A-B2, and 47% of patients had B3-thymic carcinoma. Autoimmune disorder was also present in 12% of patients and 76% of these patients had myasthenia. Surgical treatment was the most often recommended modality and was given to 134 (90%) patients, which was followed by radiotherapy in 90 patients, and 26 patients received preoperative chemotherapy. The resection rate (R0) was 53%.

Of 38 patients determined not to be surgical candidates at diagnosis, 26 patients became resectable after induction chemotherapy and the R0 rate in this cohort was 58%. Patients who were not resected (n=12) received primary treatment with chemotherapy plus radiotherapy and/or chemotherapy. The recurrence rate in patients overall was 38% and the first sites of recurrence were pleural in 32 patients and lung in 12 patients. For all TET patients, the 5-year overall survival (OS) and disease-free survival (DFS) rates were 88% and 32%, respectively. On multivariate analysis, receiving surgery as the primary treatment modality emerged as the most significant prognostic factor for OS ($p < 0.001$) followed by histology ($p = 0.02$), and gender ($p = 0.04$). Prognostic factors for DFS were histology ($p=0.02$) and the administration of adjuvant radiotherapy ($p = 0.05$). Completeness of resection was not associated with survival in this cohort. Bluthgen *et al.* Abstract 1509PD

Practice point and future research opportunities

The heterogeneity of stage III thymic epithelial tumours makes determination of an optimal treatment approach difficult; this analysis used a national network of thymic epithelial tumours to determine that surgery was the treatment most often given to patients with stage III TET. Surgery followed by adjuvant radiotherapy improved outcome irrespective of the resection rate. Patients with stage III TET that were not surgical candidates at diagnosis who received induction chemotherapy to reduce the tumour followed by surgery showed an improved resection rate.

Pathological central review of 400 thymic epithelial tumours highlights the value of the RYTHMIC French national network

Lead author Thierry Molina, Department of Pathology, GH Necker - Enfants Malades, Paris, France, and colleagues performed this audit of discordance between the diagnosis made by the initial institution and the panel review of RYTHMIC (Réseau tumeurs THYMiques et Cancer), a nationwide network for thymic epithelial tumours (TET) initiated in 2012 by the French National Cancer Institute. The network goal is the management of a clinical tumour board and central pathologic review of all cases based on initial histopathological diagnosis.

Pathological central review of patients diagnosed with TET from January 2012 to May 2016 was made by a panel of 10 expert pathologists from the working group of RYTHMIC. Assessment of diagnostic agreement was made according the WHO 2004/2015 and new International Thymic Malignancy Interest Group (ITMIG) proposals for histologic typing and staging. Discordances were classified as “major” when they would have changed the therapy or management of patients according to the RYTHMIC guidelines.

Review of 400 specimens that was made according to histological subtype and/or staging revealed 172 discordances in 157 (39%) patients; of these, 111 concerned histological diagnosis and 61 discordances regarded the tumour stage. A total of 31 major treatment altering discordances were identified in 29 (7%) patients that would have changed the post-surgical treatment recommendation concerning adjuvant radiotherapy for 18 patients and the management of disease should have been modified for 11 patients.

The most frequently occurring disagreement between the initial and RYTHMIC network was the sub-diagnosis of stage III disease, which emphasised the underlying difficulty in defining pericardial and/or mediastinal pleura histological invasion. Also, major disagreement between the initial and panel pathology’s stage and subsequent interpretation by the working group at the national tumour board was found in 4 patients, underscoring the importance of having an expert pathologist on the RYTHMIC network committee. Molina *et al.* Abstract 1510PD

Practice point and future research opportunities

This study adds to the growing body of evidence that emphasises the importance of tumour boards and registries and the value that central review by experts provides to patient care. The RYTHMIC experience confirms the relevance of an expert histopathological panel diagnosis of thymic malignancies for better decision-making, particularly concerning post-operative radiotherapy to avoid over- or under-treatment of the patients.

RELATED INFORMATION

Click here to access the Congress abstracts.

Click here to access the meeting webcast page.

Save the date

ESMO 2017 Congress, Madrid, Spain, 8-12 September 2017.

Affiliations and Disclosure

Affiliation

Dr Svetlana Jezdic, ESMO Head Office.

Disclosure

No conflicts of interest to disclose.

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