Osimertinib improves progression-free survival in patients with EGFR mutated lung cancer

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Osimertinib improves progression-free survival by 54% compared to standard first line therapy in patients with EGFR mutated non-small-cell lung cancer (NSCLC), according to late-breaking results from the FLAURA trial presented today at the ESMO 2017 Congress in Madrid.

EGFR mutations are present in around 15% of NSCLC in Western populations, rising to 35% in Asian populations. EGFR inhibitors are superior to chemotherapy in the first line treatment of these patients. However, despite high response rates and good progression-free survival, patients invariably develop resistance to drugs such as erlotinib and gefitinib. In the majority of patients this resistance is mediated by a T790M mutation.

"We hypothesised that a drug which targets EGFR sensitising mutations and the T790M resistance mutation would be associated with a better outcome," said principal investigator Professor Suresh Ramalingam, MD, Deputy Director, Winship Cancer Institute of Emory University, Atlanta, Georgia, US.

Osimertinib is a third generation EGFR-tyrosine kinase inhibitor (TKI) that potently and selectively inhibits both EGFR and T790M resistance mutations. A preliminary study in 60 treatment naive patients with EGFR mutations found that the median progression-free survival with osimertinib was 20.5 months, which was almost two-fold higher than

results achieved with erlotinib or gefitinib.

FLAURA was a randomised phase III clinical trial comparing osimertinib to standard of care erlotinib or gefitinib as first line therapy in NSCLC patients with EGFR exon 19 or 21 mutations. The primary endpoint was progression-free survival. A total of 556 patients from Asia, Europe, and North America were randomised 1:1 to treatment with osimertinib or standard of care.

The median progression-free survival was 18.9 months with osimertinib compared to 10.2 months for the standard therapy, with a hazard ratio of 0.46 (95% confidence interval, 0.37-0.57; p