

2661R0

Results of a multicenter, phase II, open-label, randomized trial evaluating OSE2101 plus docetaxel or OSE2101 plus nivolumab as second-line therapy in metastatic non-small cell lung cancer (NSCLC) progressing after first-line chemo-immunotherapy

F. Cappuzzo¹, N. Pourel², G. Metro³, F. Mazzoni⁴, C. Mascaux⁵, G. Pasello⁶, S. Guillemois⁷, A. Delmonte⁸, M.R. Garcia Campelo⁹, M.A. Cobo Dols¹⁰, D. Mangiola¹¹, G. Borra¹², L. Punti Brun¹³, S. Gori¹⁴, E. Felip¹⁵, R. Lacoste- Badie¹⁶, F. Montestruc¹⁶, D. Debieuvre¹⁷, G. Minuti¹⁸, L. Landi¹

¹ Department of Oncology, IRCCS Istituto Nazionale Tumori Regina Elena (IRE), Rome, Italy, ² Medical Oncology, Institut Sainte-Catherine, Avignon, France, ³ Medical Oncology department, Ospedale Santa Maria della Misericordia - URP, Perugia, Italy, ⁴ Department of Oncology, Careggi University Hospital, Florence, Italy, ⁵ Department of Pulmonology, Hopitaux Universitaires de Strasbourg - Nouvel Hopital Civil, Strasbourg, France, ⁶ Department of Oncology, IOV - Istituto Oncologico Veneto IRCCS, Padua, Italy, ⁷ Medical Oncology, CH Cholet, Cholet, France, ⁸ Medical Oncology dept., IRST - Istituto Romagnolo per lo Studio dei Tumori Dino Amadori IRCCS S.r.l., Meldola, Italy, ⁹ Department of Medical Oncology, CHUAC - Complejo Hospitalario Universitario A Coruña, A Coruña, Spain, ¹⁰ Medical Oncology Dept., Hospital Regional Universitario Málaga Carlos Haya, Malaga, Spain, ¹¹ Department of Medical Oncology, Ospedale Mater Salutis di Legnago, Legnago, Italy, ¹² Medical Oncology, AOU Maggiore della Carità di Novara, Novara, Italy, ¹³ Department of Medical Oncology, Hospital de Mataro - Consorcio Sanitario del Maresme, Mataro, Spain, ¹⁴ Medical Oncology dept., IRCCS Ospedale Sacro Cuore Don Calabria, Negrar, Italy, ¹⁵ Department of Medical Oncology, Vall d'Hebron University Hospital, Barcelona, Spain, ¹⁶ Statistic Unit, EXYSTAT, Malakoff, France, ¹⁷ Pneumology, GHRMSA, Mulhouse, France ¹⁸ Medical Oncology, IRCCS Istituto Nazionale Tumori Regina Elena (IRE), Rome, Italy

Background

OSE2101 is a neo-epitope vaccine designed to induce antigen-specific cytotoxic T lymphocyte responses in HLA-A2 positive patients. Prognosis after progression following first-line chemo-immunotherapy for metastatic NSCLC remains poor. Combi-TED evaluated OSE2101 combined with docetaxel or nivolumab in this setting.

Methods

Adults with metastatic/unresectable HLA-A2 positive NSCLC, without actionable EGFR mutations or ALK/ROS1 rearrangements, progressing after at least 4 cycles of chemo- immunotherapy or 2 cycles of chemo-immunotherapy followed by 2 cycles of immunotherapy, were randomized (1:1:1) to OSE2101+docetaxel (O+D), OSE2101+nivolumab (O+N), or docetaxel alone (D). Primary endpoint was 1-year overall survival (OS). Secondary endpoints included OS, progression-free survival (PFS), and safety. A one-sided exact binomial test evaluated whether 1-year OS exceeded the predefined 20% threshold. Bayesian analyses assessed the probability of improved 1-year OS versus D. Final results will be available in SEP2026.

Results

At the cut-off date (30MAR2026), 106 patients were randomized (35 in T+D, 34 in T+N, and 29 in D) and 93 reached 1-year of follow-up. 1-year, OS rates are 15/34: 44% (90% confidence interval [CI], 30–60) for O+D, 14/32: 44% (CI, 29–60) for O+N, and 7/27: 26% (CI, 13–43) for D. The statistical significance is confirmed for O+D (p=0.001), O+N (p=0.002), but not for D (p=0.287). Bayesian analyses suggested posterior probability >90% of improved 1-year survival versus docetaxel alone for both OSE2101-based combinations. Treatment-related adverse events occurred in 89%, 82%, and 79% of patients. Drug-related serious adverse events were reported in 17%, 24%, and 17% of patients. No unexpected safety signals were observed.

Conclusions

OSE2101-based combinations showed improved 1-year overall survival compared with docetaxel alone in metastatic NSCLC progressing after first-line chemo-immunotherapy, without increasing toxicity, supporting further evaluation of vaccine-based immunotherapy strategies in this setting.

Clinical trial identification

EUDRACT NUMBER: 2020-005170-10 EUCT NUMBER: 2024-518224-74-01 ID NCT04884282.

Legal entity responsible for the study

Fondazione Ricerca Traslazionale (FoRT).

Funding

Ose Immunotherapeutics - Société de biotechnologie intégrée OSE Immunotherapeutics.

Disclosure

F. Cappuzzo: Financial Interests, Personal, Advisory Board: Roche, AstraZeneca, BMS, Pfizer, Takeda, Lilly, Bayer, Amgen, Sanofi, Mirati, PharmaMar, Novocure, OSE, GALECTO and MSD; Financial Interests, Personal, Invited Speaker: Roche, AstraZeneca, BMS, Pfizer, Takeda, Lilly, Bayer, Amgen, Sanofi, PharmaMar, Mirati, Novocure, OSE, and MSD, Pierre Fabre. G. Metro: Financial Interests, Personal, Advisory Board: Daiichi Sankyo, Pfizer; Financial Interests, Personal, Invited Speaker: AstraZeneca, Amgen, Roche; Financial Interests, Personal, Other, Travel expenses for medical congresses: Takeda Pharmaceuticals. F. Mazzone: Financial Interests, Personal, Advisory Board: AstraZeneca, MSD, Regeneron Pharmaceuticals; Financial Interests, Personal, Invited Speaker: Johnson and Johnson, Roche, Bristol Myers Squibb International, Amgen. C. Mascia: Financial Interests, Personal, Invited Speaker: AstraZeneca, Roche, Bristol Myers Squibb, Pfizer, MSD, Amgen, Janssens; Financial Interests, Personal, Advisory Board: MSD, AstraZeneca, Roche, Bristol Myers Squibb, Pfizer, Kephren, Janssens, Takeda, Sanofi, Novartis, Regeneron. S. Guillemin: Financial Interests, Institutional, Invited Speaker: AstraZeneca; Financial Interests, Institutional, Advisory Board: GSK, Sanofi, Pierre Fabre. A. Delmonte: Financial Interests, Personal, Writing Engagement: Takeda; Financial Interests, Personal, Advisory Board: Pfizer; Financial Interests, Personal, Invited Speaker: Johnson and Johnson, AstraZeneca; Financial Interests, Personal, Other, chair of a session of a sponsored event: Daiichi Sankyo; Financial Interests, Institutional, Coordinating PI, Sponsorship for a spontaneous investigator initiated trial: MSD. E. Felip: Financial Interests, Personal, Advisory Board: AbbVie, Amgen, AstraZeneca, Boehringer Ingelheim, Bristol Myers Squibb, Genentech - Roche, GSK, Johnson & Johnson / Janssen, Merck Sharp & Dohme, Regeneron, Pfizer, Daiichi Sankyo, ITeos Therapeutics, Pierre Fabre, PharmaMar, Seagen, Tubulis, Moderna, Ellipses Pharma, Bayer, BeiGene, Daiichi Sankyo, Gilead; Financial Interests, Personal, Invited Speaker: Amgen, Daiichi Sankyo, Merck Sharp & Dohme, Pfizer, Eli Lilly, Roche – Genentech, Johnson & Johnson / Janssen, Medical Trends, Medscape, PeerVoice, AstraZeneca, e-Cancer, PER; Financial Interests, Personal, Member of Board of Directors, Independent member: Grifols; Financial Interests, Institutional, Local PI, Clinical Trial: AstraZeneca AB, AbbVie, Amgen, Bayer Consumer Care AG, BeiGene, Boehringer Ingelheim GmbH, Bristol Myers Squibb International Corporation, Daiichi Sankyo Inc., Exelixis Inc., F. Hoffmann-La Roche Ltd., Genentech Inc., GSK Research and Development Limited, Janssen Cilag International NV, Merck Sharp & Dohme Corp, Merck KGAA, Mirati Therapeutics Inc, Novartis Pharmaceutica SA, Pfizer, Takeda Pharmaceuticals International, Nuvalent, Lilly, BerGenBio, Seattle Genetics, MedImmune, Turning Point Therapeutics, Genmab, Ribon Therapeutics, Gilead Sciences, Biontech Therapeutics, Merus, Iteos Belgium SA, Summit Therapeutics Sub, Inc, Regeneron Pharmaceuticals, Scorpion, Pierre Fabre; Non-Financial Interests, , Leadership Role, President (2021-2023): SEOM (Sociedad Espanola de Oncologia Medica); Non-Financial Interests, Member, Member of Scientific Committee: ETOP (European Thoracic Oncology Platform); Non-Financial Interests, , Member, Member of the Scientific Advisory Committee: CAC Hospital Universitari Parc Taulí; Other, Support for attending Meeting / Congress.: AstraZeneca, Johnson and Johnson, Roche, Pfizer. F. Montestruc: Financial Interests, Personal, Member of Board of Directors, CEO of the company: eXYSTAT SAS; Financial Interests, Institutional, Other, Statistician Consultant: Ose immunotherapeutics, IFM, Bioprojet, Eurofins, Mapreg, Carely, PTC, CEVA, ARTIC, Orphelia, AbbVie; Financial Interests, Institutional, Other, Statistician consultant: Pfizer, Gensight, Geneuro, AbbVie, Biocodex, Imcheck, Takeda, Arcagy, Cureety; Non-Financial Interests, , Other, Statistician consultant and Training: Institut Pasteur. D. Debievre: Financial Interests, Personal, Advisory Board: AstraZeneca, BMS, MSD, Janssen, Amgen, Roche, Chugai, Pfizer; Financial Interests, Institutional, Funding: Roche, AstraZeneca, Janssen, MSD, Pfizer, BMS, Lilly, Chugai, Takeda, Bayer, Sanofi-Winthrop, Amgen, AbbVie, Regeneron, Novocure, Pierre Fabre. All other authors have declared no conflicts of interest.

© European Society for Medical Oncology