

LBA11

IMpassion031: Results from a phase III study of neoadjuvant (neoadj) atezolizumab + chemotherapy in early triple-negative breast cancer (TNBC)

N. Harbeck¹, H. Zhang², C.H. Barrios³, S. Saji⁴, K.H. Jung⁵, R. Hegg⁶, A. Koehler⁷, J. Sohn⁸, H. Iwata⁹, M.L. Telli¹⁰, C. Ferrario¹¹, K. Punie¹², F. Penault-Llorca¹³, S. Patel¹⁴, A. Nguyen Duc¹⁵, M. Liste-Hermoso¹⁶, V. Maiya¹⁷, L. Molinero¹⁸, S.Y. Chui¹⁹, E. Mittendorf²⁰

¹ Breast Center, Dept. OB&GYN and CCLMU, Ludwig Maximilians University Hospital- Grosshadern, Munich, Germany, ² Department of Pathology, Memorial Sloan Kettering Cancer Center, New York, NY, USA, ³ Medical Oncology, Centro de Pesquisa em Oncologia HSL, PUCRS, Porto Alegre, Brazil, ⁴ Medical Oncology, Fukushima Medical University, Fukushima, Japan, ⁵ Department of Oncology, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Republic of Korea, ⁶ Faculty of Medicine, University of São Paulo, São Paulo, Brazil, ⁷ Oncology and Hematology, Gemeinschaftspraxis für Haematologie und Onkologie Langen, Langen, Germany, ⁸ Division of Medical Oncology, Yonsei Cancer Center, Yonsei University Health System, Seoul, Republic of Korea, ⁹ Breast Oncology, Aichi Cancer Center Hospital, Nagoya, Japan, ¹⁰ Department of Medicine, Stanford University School of Medicine, Stanford, CA, USA, ¹¹ Department of Oncology and Surgery, Jewish General Hospital–McGill University, Montreal, QC, Canada, ¹² Department of General Medical Oncology and Multidisciplinary Breast Centre, Leuven Cancer Institute, University Hospitals Leuven, Leuven, Belgium, ¹³ Department of Biopathology, Centre Jean Perrin and University Clermont Auvergne/INSERM U1240, Clermont-Ferrand, France, ¹⁴ Product Development Oncology, Genentech, Inc., South San Francisco, CA, USA, ¹⁵ Biostatistics, F. Hoffmann-La Roche, Ltd., Basel, Switzerland, ¹⁶ Global Product Development, F. Hoffmann-La Roche, Ltd., Basel, Switzerland, ¹⁷ Product Development Safety Risk Management Department, Genentech, Inc., South San Francisco, CA, USA, ¹⁸ Oncology Biomarker Development, Genentech, Inc., South San Francisco, CA, USA, ¹⁹ Product Development, Genentech, Inc., South San Francisco, CA, USA, ²⁰ Department of Surgery, Brigham and Women's Hospital, Boston, MA, USA

Background

Preferred neoadj regimens for patients (pts) with early-stage (e)TNBC include taxane + anthracycline-based therapy. IMpassion031 is a global, phase III, multicentre, double-blind, randomised, placebo-controlled study in pts with high-risk primary invasive eTNBC evaluating the efficacy and safety of neoadj atezolizumab (A) or placebo (P) with *nab*-paclitaxel (nP) followed by A or P with dose-dense doxorubicin + cyclophosphamide. Here, we report the primary analysis of IMpassion031.

Methods

Eligible pts were ≥ 18 years old with previously untreated, centrally confirmed, invasive stage II-III eTNBC and tumour size > 2 cm. Pts ($n = 333$) were randomized 1:1 to receive A 840 mg or P q2w + nP 125 mg/m² qw for 6 doses of A followed by A 840 mg or P q2w + doxorubicin 60 mg/m² + cyclophosphamide 600 mg/m² q2w for 4 doses of A followed by surgery. After surgery, pathologic complete response (pCR; ypT0/isN0) was assessed in all pts and investigators were unblinded to study treatment. Stratification was by diagnosis stage (II vs III) and PD-L1 expression on tumour-infiltrating immune cells (IC; $\geq 1\%$ vs $< 1\%$). Co-primary endpoints were locally assessed pCR in ITT or PD-L1+ (PD-L1 IC $\geq 1\%$) pts. Event-free survival (EFS) was a secondary endpoint. Safety was assessed.

Results

333 pts were assigned to A-chemo ($n = 165$) or P-chemo ($n = 168$). Median follow-up was 20.6 mos in the A-chemo arm and 19.8 mos in the P-chemo arm (data cutoff 3 Apr 2020). pCR was seen in 57.6% (95% CI: 49.7, 65.2) of pts in the A-chemo arm and 41.1% (33.6, 48.9) in the P-chemo arm ($\Delta 16.5\%$; 5.9, 27.1; 1-sided $P = 0.0044$ [significance boundary, 0.0184], $P = 0.0085$ for the intersection hypothesis of ITT and PD-L1+ populations). In PD-L1+ pts ($n=152$), pCR was seen in 68.8% (57.3, 78.9) vs 49.3% (37.6, 61.1) of pts ($\Delta 19.5\%$; 4.2, 34.8; 1-sided $P = 0.021$; not significant). Median EFS was not reached in either arm (HR, 0.76; 95% CI: 0.40, 1.44). In the neoadj phase, Grade 3/4 adverse events (AEs) were balanced, treatment-related serious AEs occurred in 22.6% (A-chemo) and 15.6% (P-chemo), and 1 pt per arm had an unrelated Grade 5 AE.

Conclusions

In pts with eTNBC, A + neoadj chemo significantly improved pCR rates regardless of PD-L1 status with an acceptable safety profile.

Clinical trial identification

Editorial acknowledgement

Medical writing assistance for this abstract was provided by Christopher Lum, PhD of Health Interactions, Inc.

Legal entity responsible for the study

F. Hoffmann-La Roche, Ltd.

Funding

F. Hoffmann-La Roche, Ltd.

Disclosure

N. Harbeck: Advisory/Consultancy, Speaker Bureau/Expert testimony: AstraZeneca; Advisory/Consultancy: Bristol Myers Squibb; Advisory/Consultancy, Speaker Bureau/Expert testimony: MSD; Advisory/Consultancy, Speaker Bureau/Expert testimony: Roche. H. Zhang: Research grant/Funding (institution), Non-financial support: F. Hoffmann-La Roche. C.H. Barrios: Advisory/Consultancy: Boehringer-Ingelheim; Advisory/Consultancy: Glaxo-Smith-Kline; Advisory/Consultancy, Research grant/Funding (institution): Novartis; Advisory/Consultancy, Research grant/Funding (institution): Pfizer; Advisory/Consultancy: Eisai; Advisory/Consultancy, Research grant/Funding (institution): Merck Sharp Dohme; Advisory/Consultancy, Research grant/Funding (institution): AstraZeneca; Advisory/Consultancy: Bayer; Research grant/Funding (institution): AbbVie; Research grant/Funding (institution): Amgen; Research grant/Funding (institution): Astellas Pharma; Research grant/Funding (institution): Bristol-Myers Squibb; Research grant/Funding (institution): Celgene; Research grant/Funding (institution): Covance; Research grant/Funding (institution): Lilly; Research grant/Funding (institution): Medivation; Research grant/Funding (institution): Merck Serono; Research grant/Funding (institution): PharmaMar; Research grant/Funding (institution): CPO; Research grant/Funding (institution): PUCRS; Research grant/Funding (institution): LACOG; Research grant/Funding (institution): GBECAM; Research grant/Funding (institution): INCA-Brazil. S. Saji: Research grant/Funding (institution), Non-financial support: F. Hoffmann-La Roche; Honoraria (self), Advisory/Consultancy, Research grant/Funding (institution), Lecture, Consultation: Chugai; Honoraria (self), Advisory/Consultancy, Research grant/Funding (institution), Lecture, Consultation: Kyowa Kirin; Honoraria (self), Research grant/Funding (institution), Lecture: Eli Lilly; Honoraria (self), Research grant/Funding (institution), Lecture: AstraZeneca; Honoraria (self), Lecture: Pfizer; Honoraria (self), Lecture: MSD; Honoraria (self), Advisory/Consultancy, Research grant/Funding (institution), Lecture, Consultation: Novartis; Honoraria (self), Research grant/Funding (institution), Lecture: Eisai; Honoraria (self), Research grant/Funding (institution), Lecture: Takeda; Research grant/Funding (institution): Taiho. K.H. Jung: Honoraria (self), Research grant/Funding (institution), Personal fees, Non-financial support: F. Hoffmann-La Roche; Honoraria (self), Personal fees: Novartis; Honoraria (self), Personal fees: AstraZeneca; Honoraria (self), Personal fees: Takeda; Honoraria (self), Personal fees: Celgene. R. Hegg: Research grant/Funding (institution), Non-financial support: F. Hoffmann-La Roche. A. Koehler: Research grant/Funding (institution), Travel/Accommodation/Expenses, Non-financial support: F. Hoffmann-La Roche; Travel/Accommodation/Expenses: Novartis; Travel/Accommodation/Expenses: Celgene; Travel/Accommodation/Expenses: Amgen. J. Sohn: Research grant/Funding (institution), Non-financial support: F. Hoffmann-La Roche; Research grant/Funding (institution): MSD; Research grant/Funding (institution): Novartis; Research grant/Funding (institution): AstraZeneca; Research grant/Funding (institution): Lilly; Research grant/Funding (institution): Pfizer; Research grant/Funding (institution): Bayer; Research grant/Funding (institution): GSK; Research grant/Funding (institution): Contessa; Research grant/Funding (institution): Daiichi Sankyo. H. Iwata: Honoraria (self), Advisory/Consultancy, Research grant/Funding (institution): Chugai; Honoraria (self), Advisory/Consultancy, Research grant/Funding (institution): Novartis; Honoraria (self), Advisory/Consultancy, Research grant/Funding (institution): AstraZeneca; Honoraria (self), Advisory/Consultancy, Research grant/Funding (institution): Pfizer; Honoraria (self), Advisory/Consultancy, Research grant/Funding (institution): Lilly; Honoraria (self), Advisory/Consultancy, Research grant/Funding (institution): Daiichi-Sankyo; Research grant/Funding (institution): MSD; Honoraria (self), Advisory/Consultancy: Eisai; Honoraria (self), Advisory/Consultancy, Research grant/Funding (institution): Kyowa Hakko Kirin; Research grant/Funding (institution): Bayer; Research grant/Funding (institution): Boehringer-Ingelheim; Research grant/Funding (institution): Nihon Kayaku; Research grant/Funding (institution): Sanofi. M.L. Telli: Research grant/Funding (institution), Non-financial support: F. Hoffmann-La Roche; Honoraria (self), Research grant/Funding (institution), Personal fees, Non-financial support: AbbVie; Honoraria (self), Research grant/Funding (institution), Personal fees, Non-financial support: Pfizer; Honoraria (self), Research grant/Funding (institution), Personal fees, Non-financial support: Merck; Research grant/Funding (institution): PharmaMar; Research grant/Funding (institution): Bayer; Research grant/Funding (institution): Vertex; Honoraria (self), Personal fees: Lilly; Honoraria (self), Personal fees: Immunomedics; Honoraria (self), Personal fees, Non-financial support: Celgene; Honoraria (self), Personal fees: G1 Therapeutics; Honoraria (self), Personal fees: Daiichi Sankyo; Honoraria (self), Personal fees: Aduro; Honoraria (self), Personal fees: Celldex; Honoraria (self), Research grant/Funding (institution), Personal fees, Non-financial support: Tesaro; Research grant/Funding (institution): AstraZeneca; Research grant/Funding (institution): Calithera Biosciences; Research grant/Funding (institution): Biothera; Research grant/Funding (institution): OncoSec Medical; Honoraria (self), Research grant/Funding (institution), Personal fees, Non-financial support: Roche/Genentech; Research grant/Funding (institution): EMD Serono. C. Ferrario: Research grant/Funding (institution), Non-financial support, Other: F. Hoffmann-La Roche; Honoraria (self), Research grant/Funding (institution), Personal fees: Pfizer; Honoraria (self), Research grant/Funding (institution), Personal fees, Other:

Bayer; Honoraria (self), Research grant/Funding (institution), Personal fees, Other: Novartis; Honoraria (self), Research grant/Funding (institution), Personal fees: AstraZeneca; Honoraria (self), Research grant/Funding (institution), Personal fees: Merck; Honoraria (self), Personal fees: Astellas Pharma; Honoraria (self), Personal fees: Genomic Health; Research grant/Funding (institution): Amgen; Research grant/Funding (institution): Casadian Therapeutics; Research grant/Funding (institution): Lilly; Research grant/Funding (institution): Janssen Oncology; Research grant/Funding (institution): Zymeworks. K. Punie: Honoraria (institution), Advisory/Consultancy, Research grant/Funding (institution), Travel/Accommodation/Expenses, Non-financial support: F. Hoffmann-La Roche; Speaker Bureau/Expert testimony, Research grant/Funding (institution), Travel/Accommodation/Expenses: Pfizer; Honoraria (institution), Advisory/Consultancy: Lilly; Honoraria (institution), Advisory/Consultancy: Novartis; Honoraria (institution): Mundi Pharma; Advisory/Consultancy, Travel/Accommodation/Expenses: AstraZeneca; Honoraria (institution), Advisory/Consultancy: Eli Lilly; Honoraria (institution), Advisory/Consultancy: Pierre Fabre; Honoraria (institution), Advisory/Consultancy: Vifor Pharma; Honoraria (institution), Advisory/Consultancy: Teva; Research grant/Funding (institution): Sanofi; Travel/Accommodation/Expenses: PharmaMar; Travel/Accommodation/Expenses: Novartis. F. Penault-Llorca: Honoraria (self), Research grant/Funding (institution), Personal fees: Myriad; Honoraria (self), Research grant/Funding (institution), Personal fees: Nanostring; Honoraria (self), Personal fees: Genomic Health; Honoraria (self), Personal fees: Novartis; Honoraria (self), Research grant/Funding (institution), Personal fees: AstraZeneca; Honoraria (self), Personal fees: Pfizer; Honoraria (self), Research grant/Funding (institution), Personal fees: Roche. S. Patel: Research grant/Funding (institution), Shareholder/Stockholder/Stock options, Non-financial support: F. Hoffmann-La Roche. A. Nguyen Duc: Research grant/Funding (institution), Full/Part-time employment, Non-financial support: F. Hoffmann-La Roche. M. Liste-Hermoso: Research grant/Funding (institution), Full/Part-time employment, Non-financial support: F. Hoffmann-La Roche. V. Maiya: Full/Part-time employment: F. Hoffmann-La Roche. L. Molinero: Research grant/Funding (institution), Shareholder/Stockholder/Stock options, Full/Part-time employment, Non-financial support: F. Hoffmann-La Roche. S.Y. Chui: Research grant/Funding (institution), Shareholder/Stockholder/Stock options, Full/Part-time employment, Non-financial support: F. Hoffmann-La Roche. E. Mittendorf: Advisory/Consultancy: Merck; Advisory/Consultancy: Genomic Health; Advisory/Consultancy: Sellas Life Sciences; Research grant/Funding (institution): GlaxoSmithKline.

© European Society for Medical Oncology