

2455P
Prevalence and severity of hot flashes and their association with prostate-specific antigen (PSA) response: results from the initial treatment phase of LIBERTAS, a phase 3 study in metastatic hormone-sensitive prostate cancer (mHSPC)

A.K. Morgans¹, A.A. Azad², M.A. Badillo Santoyo³, Q. Dong⁴, D.E. Rathkopf⁵, K. Runcie⁶, T. Zhang⁷, G.T. Gotto⁸, A.S. Merseburger⁹, A. Dos Santos¹⁰, S. Shopeju¹⁰, A. Bhaumik¹¹, S. Todd¹², S.D. Mundle¹⁰, S.A. Mccarthy¹³, M. Wildgust¹⁴, N. Agarwal¹⁵

¹ Medicine Department, Harvard Medical School, Dana-Farber Cancer Institute, Boston, United States of America, ² Department of Medical Oncology, Peter MacCallum Cancer Centre, Melbourne, Australia, ³ Urology, Hospital Aranda de la Parra, Guanajuato, Mexico, ⁴ Department of Urology, West China Hospital of Sichuan University, Sichuan, China, ⁵ Medicine Department, Memorial Sloan Kettering Cancer Center, New York, United States of America, ⁶ Division of Hematology and Oncology, New York-Presbyterian/Columbia University Irving Medical Center, New York, United States of America, ⁷ Internal Medicine Department, University of Texas Southwestern Medical Center, Dallas, United States of America, ⁸ Department of Surgery and Oncology, University of Calgary, Calgary, Canada, ⁹ Department of Urology, University Hospital Schleswig-Holstein, Lübeck, Germany, ¹⁰ Global Medical Affairs, Johnson & Johnson, Raritan, United States of America, ¹¹ Biostatistics, Johnson & Johnson, Titusville, United States of America, ¹² Statistical Services and Software, Cytel, London, United Kingdom, ¹³ Clinical Development, Johnson & Johnson, Raritan, United States of America, ¹⁴ Medical Oncology, Johnson & Johnson, Raritan, United States of America¹⁵ Internal Medicine Department, Huntsman Cancer Institute, University of Utah, Salt Lake City, United States of America

Background

Apalutamide (APA) with continuous androgen deprivation therapy (cADT) showed rapid and deep PSA decline in TITAN (Chowdhury *Ann Oncol* 2023). Hot flashes, an ADT-related side effect, pose a high burden for pts, negatively impacting their quality of life. LIBERTAS, an ongoing ADT de-escalation study, is evaluating APA + intermittent ADT (iADT) vs APA + cADT in mHSPC pts with deep PSA response after initial tx (APA + cADT). Primary end points are radiographic progression-free survival and hot flash burden reduction after 18 mo of APA + iADT. Here we report PSA and hot flash data for the initial 6 mo tx phase.

Methods

LIBERTAS, a prospective, open-label, randomized study, enrolled pts with mHSPC (metastasis by conventional imaging and/or regional lymph node metastases by next-generation imaging, ≤3 mo ADT pre-enrolment, and ECOG PS 0 or 1 [2 or 3 if only related to stable physical disabilities]). Pts received 6 mo of APA (240 mg/d) + cADT; pts with confirmed PSA <0.2 ng/mL were randomized 1:1 to APA + iADT or APA + cADT in the main tx phase.

Results

For the initial tx phase, 420 pts (73 sites, 9 countries) were enrolled (full analysis set). Baseline (BL; last record before/on Day 1 of tx) median PSA was 7.3 ng/mL. Of the 383 pts who completed initial tx, 271 (71%) achieved PSA <0.2 ng/mL and were randomized (deep PSA data set, ITT). Hot flash diary compliance (collected per protocol across all sites/visits) was >93%/>95% within the initial tx for the full analysis/deep PSA data sets. Rate of hot flash increased by >23% from BL to 6 mo in both data sets; median average daily severity-adjusted hot flash score also increased (Table). Safety was consistent with prior experience.Table: 2455P

	Pts with hot flash/completed diaries ^a , n/n (%)		Median (IQR) average daily severity adjusted hot flash score ^b	
	Full analysis n=420	Deep PSA (ITT) n=271	Full analysis n=420	Deep PSA (ITT) n=271
BL	248/404 (61)	161/261 (62)	2.5 (0.8-7.4)	2.3 (0.8-7.1)
C7 D1 ^c (6 mos)	295/343 (86)	223/262 (85)	6.6 (2.9-12.5)	5.8 (2.4-12.3)

^aHot flash diaries completed: ≥7 d consecutive pre-C1D1 and C7D1. ^bTotal severity score: each hot flash event multiplied by severity factor (1-mild, 2-moderate, 3-severe, 4-very severe) and summed across collection days. Average daily: total severity score divided by number of collection days. ^cTx Cs were 28 days each. C, cycle; D, day; ITT, intent to treat; IQR, interquartile range

Conclusions

During tx with APA + cADT in the initial tx phase of LIBERTAS prior to randomization, hot flash burden was high and increased from BL to 6 mo. Notably, hot flash burden was independent of PSA response.

Clinical trial identification

NCT05884398.

Editorial acknowledgement

Writing assistance was provided by Breanne Landry, PhD, of Parexel, and was funded by Janssen Global Services, LLC, a Johnson & Johnson company.

Legal entity responsible for the study

Janssen Research & Development, LLC, a Johnson & Johnson company.

Funding

Janssen Research & Development, LLC, a Johnson & Johnson company.

Disclosure

A.K. Morgans: Financial Interests, Personal, Speaker, Consultant, Advisor, Research collaborator and consulting: Astellas, Bayer, Janssen, Pfizer, Novartis, SPMA; Financial Interests, Personal, Speaker, Consultant, Advisor, Consulting: AstraZeneca; Financial Interests, Personal, Speaker, Consultant, Advisor, Consulting: AAA, Curium, Exelixis, Telix, Lantheus, Macrogenics, Merck. A.A. Azad: Financial Interests, Personal, Advisory Board: Astellas, Novartis, Sanofi, AstraZeneca, Tolmar, Telix, Merck Serono, Janssen, Bristol Myers Squibb, Ipsen, Bayer, Pfizer, Amgen, Noxopharm, Merck Sharpe Dohme, Daiichi Sankyo, Arvinas; Financial Interests, Personal, Other, Consultant: Aculeus Therapeutics; Financial Interests, Personal, Invited Speaker: Astellas, Janssen, Novartis, Amgen, Ipsen, Bristol Myers Squibb, Merck Serono, Bayer; Financial Interests, Personal, Other, Travel + Accommodation: Astellas, Merck Serono, Amgen, Novartis, Janssen, Tolmar, Pfizer, Bayer; Financial Interests, Personal, Research Grant: Astellas, Merck Serono, AstraZeneca; Financial Interests, Personal, Steering Committee Member: Astellas, Pfizer, Exelixis; Financial Interests, Institutional, Local PI: Bristol Myers Squibb, Aptevo Therapeutics, AstraZeneca, Glaxo Smith Kline, Pfizer, Astellas, SYNthorx, Bionomics, Sanofi, Ipsen, Exelixis, Merck Sharpe Dohme, Janssen, Eli Lilly, Gilead Sciences, Merck Serono, Hinova; Financial Interests, Institutional, Trial Chair: Bayer; Financial Interests, Institutional, Coordinating PI: AstraZeneca, Hinova; Financial Interests, Personal, Trial Chair: Janssen, AstraZeneca; Non-Financial Interests, Leadership Role, Chair, Translational Research Committee: ANZUP Cancer Trials Group; Non-Financial Interests, Leadership Role, Member, Scientific Advisory Committee: ANZUP Cancer Trials Group; Non-Financial Interests, Leadership Role, Chair, Urologic Oncology Committee: Clinical Oncology Society of Australia; Non-Financial Interests, Other, Editorial Board Member: BMC Urology; Non-Financial Interests, Other, Associate Editor: Cancer Research Communications, Frontiers in Oncology, Clinical Genitourinary Cancer, Asia-Pacific Journal of Clinical Oncology. M.A. Badillo Santoyo: Financial Interests, Personal, Other, Honoraria: Janssen; Financial Interests, Personal, Speaker, Consultant, Advisor, Consulting or advisory role: Janssen; Financial Interests, Personal, Speaker's Bureau: Janssen; Financial Interests, Personal, Research Funding: Janssen Oncology; Financial Interests, Personal, Other, Patents, Royalties, Other Intellectual Property: Patent Pending BIO-MECHANICAL PROSTHESIS OF URINARY BLADDER; Financial Interests, Personal, Expert Testimony: Janssen; Financial Interests, Personal, Other, Travel, Accommodations, Expenses: Astellas Pharma, AstraZeneca, Bayer, Janssen Oncology. D.E. Rathkopf: Financial Interests, Personal, Other, Consulting/advisory role: Astellas Pharma, AstraZeneca, Bayer, Bristol-Myers Squibb/Celgene, Genentech, Janssen, Myovant Sciences, Novartis, Promontory Therapeutics; Financial Interests, Personal, Research Funding, Institutional Research Funding: AstraZeneca, Bristol-Myers Squibb/Celgene, Genentech/Roche, Janssen Oncology, Novartis, Promontory Therapeutics. K. Runcie: Financial Interests, Personal, Other, Virtual round table: VJ Oncology; Financial Interests, Personal and Institutional, Steering Committee Member: Janssen; Financial Interests, Institutional, Local PI: Exelixis, Inc., Bristol Myers Squibb, Xencor, Trisalus Life Sciences, Amgen, Novartis. T. Zhang: Financial Interests, Personal, Advisory Board: Merck, Exelixis, Sanofi-Aventis, Janssen, AstraZeneca, Pfizer, Amgen, BMS, Eisai, Aveo, Bayer, Eli Lilly, Gilead, Novartis, EMD Serono, Xencor, Dendreon; Financial Interests, Personal, Other, Consulting: MJH Associates, Vanaiam, Aptitude Health, PeerView, Clinical Care Options; Financial Interests, Institutional, Steering Committee Member: Merck; Financial Interests, Institutional, Coordinating PI: Janssen, Exelixis; Financial Interests, Institutional, Local PI: AstraZeneca, Pfizer, Astellas, Eli Lilly, Tempus, ALX Oncology, Janux Therapeutics, OncoC4, Bayer; Non-Financial Interests, Advisory Role, Medical Steering Committee: Kidney Cancer Association; Non-Financial Interests, Advisory Role, Scientific Advisory Board: KCCure; Non-Financial Interests, Advisory Role: Myrovlytis Trust; Non-Financial Interests, Member: ASCO, AACR. G.T. Gotto: Financial Interests, Personal, Advisory Board: Astellas, Bayer, Janssen, Merck, BMS, EMD Serono; Financial Interests, Personal, Invited Speaker: Astellas, Bayer, Janssen, Merck, AstraZeneca; Non-Financial Interests, Principal Investigator: Janssen, Bayer, Astellas, AstraZeneca, Pfizer, Ferring. A.S. Merseburger: Financial Interests, Personal, Advisory Board, Speaker: Janssen; Financial Interests, Personal, Advisory Board, Speaker, Advisor: Astellas; Financial Interests, Personal, Advisory Board, Advisor: Bayer, Seagen; Financial Interests, Personal, Advisory Board: Novartis; Financial Interests, Personal, Member of Board of Directors, Travel costs: EAU. A. Dos Santos: Financial Interests, Personal, Full or part-time Employment: Janssen; Financial Interests, Personal, Stocks/Shares: Janssen. S. Shopeju: Financial Interests, Personal, Full or part-time Employment: Janssen; Financial Interests, Personal, Stocks/Shares: Janssen. A. Bhaumik: Financial Interests, Personal, Full or part-time Employment: Janssen; Financial Interests, Personal, Stocks/Shares: Janssen, AbbVie. S. Todd: Financial Interests, Institutional, Full or part-time Employment, Employed by Janssen as a contractor: Janssen. S.D. Mundle: Financial Interests, Personal, Full or part-time Employment: Janssen; Financial Interests, Personal, Stocks or ownership: Johnson & Johnson. S.A. McCarthy: Financial Interests, Institutional, Full or part-time Employment: Johnson & Johnson;

Financial Interests, Institutional, Stocks/Shares: Johnson & Johnson. M. Wildgust: Financial Interests, Personal, Full or part-time Employment: Janssen; Financial Interests, Personal, Stocks/Shares: Janssen. N. Agarwal: Financial Interests, Personal, Invited Speaker, Invited speaker: Medscape; Financial Interests, Personal, Invited Speaker, Invited Speaker: Onclive, Research to Practice, Clinical Care Options; Financial Interests, Personal, Other, Urotoday discussant: UroToday; Financial Interests, Institutional, Other, I serve in the leadership of my cancer center (Huntsman Cancer Institute, University of Utah. Salt Lake City, UT, USA). There are multiple research projects sponsored by these companies which pay money to my institution.: Arnivas, Astellas, AstraZeneca, Bavarian Nordic , Bayer, Bristol Myers Squibb, Calithera, Celldex, Crispr, Eisai, Eli Lilly, EMD Serono, Exelixis, Genentech, Gilead, Glaxo Smith Kline, Immunomedics, Janssen, Lava, Medivation, Merck, Nektar, Neoleukin, New Link Genetics, Novartis, Oric, Pfizer, Prometheus, Rexahn, Roche, Sanofi, Seattle Genetics, Takeda, Telix, Tracon.; Financial Interests, Steering Committee Member, I am involved in the steering committee of the trials sponsored by these pharmas with no personal honorarium.: AstraZeneca, Calithera, Crispr, Eli Lilly, Exelixis, Immunomedics, Merck, Pfizer,; Financial Interests, Steering Committee Member, I am involved in the steering committee of the trials sponsored by these pharma companies with no personal honorarium.: Merck, Nektar, New Link Genetics, Oric, Pfizer, Prometheus, Rexahn, Takeda, Telix, Tracon; Financial Interests, Trial Chair, One of the two co-chairs of the clinical trials sponsored by these pharma companies. I have not received any honorarium for these roles.: Pfizer, Exelixis, Janssen, Telix, AstraZeneca; Non-Financial Interests, Member, I am a long-standing member of ASCO and a volunteer. I was awarded the fellow of ASCO in 2023. I also act as the editor of the ASCO Daily News as a volunteer.: American Society of Clinical Oncology; Non-Financial Interests, Member, I am a member of this NCI and NCTN-sponsored cooperative clinical trial network group.: SWOG; Non-Financial Interests, Member, I am a member of these professional organizations.: AACR, AUA, PCF. All other authors have declared no conflicts of interest.

© *European Society for Medical Oncology*