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See related article on page 163

[177]Lu-PSMA-617 in a Canadian universal healthcare system

The phase 3 VISION trial established [177]Lu-PSMA-617 as standard of care for prostate-specific membrane antigen (PSMA)-positive metastatic castration-resistant prostate cancer (mCRPC),[1] and the phase 2 TheraP trial demonstrated superior PSA responses with fewer high-grade toxicities over cabazitaxel[2] — both within resourced specialist settings, leaving the real-world, single-payer question unanswered.

The reported outcomes by Pouliot et al in this month's *CUAJ* are broadly reassuring, with a PSA50 response and median OS comparable to those reported in VISION,[1] a reasonable result given the more advanced disease population. The median referral-to-first-dose interval of 42 days compares favorably with post-approval American data,[3,4] challenging the assumption that a publicly funded model is structurally slower to implement this pathway.

The baseline characteristics of the Quebec cohort describe a more advanced disease population than either pivotal trial. Visceral metastases were present in 30%, well above VISION (21%) and TheraP (7%),[1,2] and 74% received ≥3 prior lines of systemic therapy vs. a median of two in VISION. The relatively low baseline PSA despite this burden likely reflects prior sequential androgen receptor pathway inhibitor (ARPI) exposure selecting for androgen receptor-independent clones with reduced PSA transcription,[5] and the absence of a standardized pre-treatment washout period.[6] The lower treatment completion rate reflects earlier disease progression rather than treatment-related toxicity.[1,2]

Combining [68]Ga-PSMA-11 and [18]F-FDG positron emission tomography (PET) in 88% of patients is like the approach used by TheraP group,[7] and deserves particular attention. More refined than the PSMA-only criteria used in VISION, this approach likely enriched the cohort by excluding FDG-positive/PSMA-negative disease, contributing to the observed treatment efficacy. Disease monitoring, however, relied on post-treatment SPECT/CT rather than conventional cross-sectional imaging, limiting comparability with trial data.

Adverse event data, extracted from clinical notes rather than through prospective, protocol-mandated capture, likely underestimate lower-grade toxicities,[1,2] and preclude reliable conclusions about the safety profile in routine Canadian practice.

This series shows that [177]Lu-PSMA-617 can be delivered within a Canadian universal healthcare framework, with outcomes comparable to pivotal trial benchmarks despite a more advanced disease patient population. Indeed, the preservation of PSA50 response rates in this context suggests that [177]Lu-PSMA-617 retains intrinsic anti-tumor activity even in heavily pretreated patients, raising the question of whether earlier integration within the mCRPC treatment sequence could translate these biochemical responses into more meaningful survival benefit.

That said, important questions remain, including equitable access, reliance on SPECT/CT rather than conventional imaging, and the limitations of a single-center experience. As therapeutic indications attempt to expand, and PSMA-PET imaging assumes an increasingly central role in prostate cancer management, real-world data from universal healthcare settings represent a valuable addition to guide regional policy and program development.

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REFERENCES

1. Sartor O, de Bono J, Chi KN, et al. Lutetium-177-PSMA-617 for metastatic castration-resistant prostate cancer. *N Engl J Med* 2021;385:1091-103. https://doi.org/10.1056/NEJMoa2107322
2. Hofman MS, Emmett L, Sandhu S, et al. [177Lu]Lu-PSMA-617 vs. cabazitaxel in patients with metastatic castration-resistant prostate cancer (TheraP): A randomized, open-label, phase 2 trial. *Lancet* 2021;397:797-804. https://doi.org/10.1016/S0140-6736(21)00237-3
3. Gafita A, Voter A, Shesadri S, et al. Initial experience with [177Lu]Lu-PSMA-617 after regulatory approval for metastatic castration-resistant prostate cancer. *J Nucl Med* 2024;65:1724-30. https://doi.org/10.2967/jnumed.124.267723
4. Tuchayi AM, Yadav S, Jiang F, et al. Real-world experience with [177]Lu-PSMA-617 radioligand therapy after FDA approval. *J Nucl Med* 2024;65:735-9. https://doi.org/10.2967/jnumed.123.266842
5. Antonarakis ES, Lu C, Wang H, et al. AR-V7 and resistance to enzalutamide and abiraterone in prostate cancer. *N Engl J Med* 2014;371:1028-38. https://doi.org/10.1056/NEJMoa1315815
6. Scher HI, Morris MJ, Stadler WM, et al. Trial design and objectives for castration-resistant prostate cancer: Updated recommendations from the Prostate Cancer Clinical Trials Working Group 3. J Clin Oncol 2016;34:1402-18. https://doi.org/10.1200/JCO.2015.64.2702
7. Buteau JP, Martin AJ, Emmett L, et al. PSMA and FDG-PET as predictive and prognostic biomarkers in patients given [177Lu]Lu-PSMA-617 vs. cabazitaxel for metastatic castration-resistant prostate cancer (TheraP): A biomarker analysis from a randomized, open-label, phase 2 trial. *Lancet Oncol* 2022;23:1389-97. https://doi.org/10.1016/S1470-2045(22)00605-2

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