

## Actualité RIV tumeurs solides incluant les phases précoces

Radioligand or radionuclide therapy (RT) is a form of treatment that leverages the theranostic paradigm consisting of a diagnostic and therapeutic procedure which are tightly coupled. As Lutathera brought highly interesting results in endocrine tumors, the wave of RT is now growing in numbers being extended to metastatic prostate cancer with again highly promising results and great tolerance. Indeed, the multi-national phase III VISION trial (Endocyte, NCT03511664) enrolled 831 mCRPC patients and in a 2:1 ratio to receive either 6 cycles of 7.4 GBq of <sup>177</sup>Lu-PSMA-617 plus best supportive/best standard of care (SOC) (n=551) versus SOC only (n=280). The difference in OS was statistically significant, with an estimated 38% reduction in risk of death in the <sup>177</sup>Lu-PSMA-617 arm compared to the best standard of care only arm (median 15.3 months versus 11.3 months, hazard ratio 0.62, p<0.001) In the <sup>177</sup>Lu-PSMA-617 plus standard of care (SOC) arm, 11.9% of patients discontinued <sup>177</sup>Lu-PSMA-617 and 8.5% discontinued SOC; this compares favorably to the SOC alone arm where 7.8% of patients discontinued treatment. Serious drug-related treatment emergent adverse events occurred in 9.3% of patients in the <sup>177</sup>Lu-PSMA-617 arm compared to 2.4% in the best standard of care only arm. Acute kidney injury was only observed in 3.0% of the <sup>177</sup>Lu-PSMA-617 arm compared to 2.5% on the SOC only arm. Despite encouraging results, one-third of patients do not respond to treatment. Additionally, responses are often followed by rapid progression. Treatments association or alpha-therapy may increase the number of responders. These results encourage laboratories and researchers to develop new radiopharmaceuticals increasing the number of early phase trials for which the nuclear medicine department must get organized.

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