

^{68}Ga -DOTATATE and ^{11}C -Choline PET/CT in patients with hormone-resistant prostate cancer at biochemical recurrence are related to inflamed lesions



Omar Alonso,^{1,2} Gerardo Dos Santos,^{1,2} Eduardo Savio,¹ Henry Engler.¹

¹Uruguayan Center of Molecular Imaging (CUDIM), Clinical University Hospital, University of Uruguay, Montevideo, **Uruguay.**

Trabajo presentado en el Congreso Internacional de ISORBE 2015. Izmir, Turquía.

Background/Objective

- For an oncological tracer is relevant to know the uptake in inflamed/infected lesions.
- In the framework of a prospective trial aiming to compare the clinical value of ^{68}Ga -DOTATATE and ^{11}C -Choline PET/CT in patients with hormone-resistant prostate cancer at biochemical recurrence, we evaluated the false-positive findings of both techniques.

Results

- False-positive lesions (n=5) were found, for both tracers, in 3 patients and were located in the prostate bed (n=1) and regional lymph nodes (n=4, being 3 discordant).
- In all cases, pathology revealed non-specific inflammatory lesions.

^{11}C -Choline

TN



^{68}Ga -DOTATATE

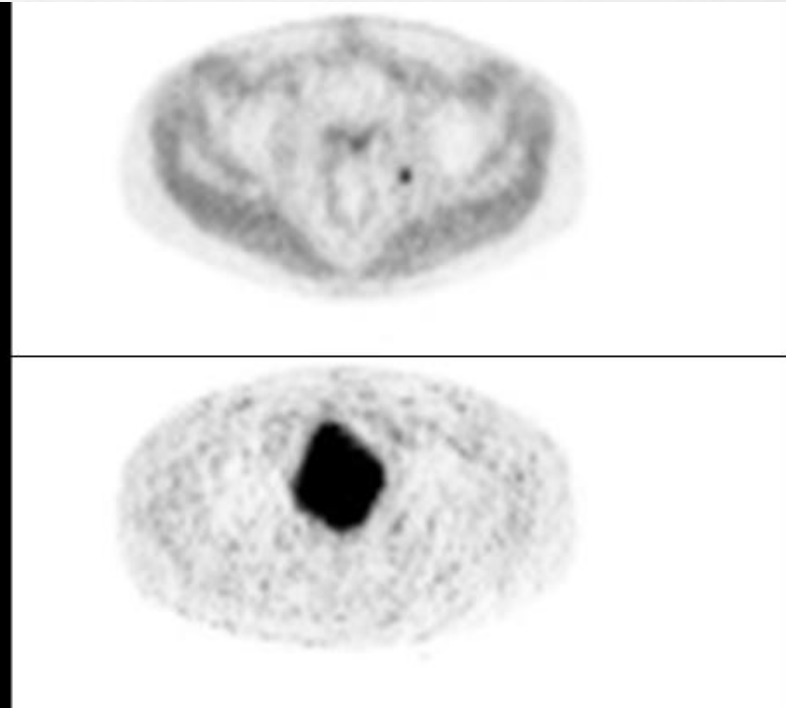
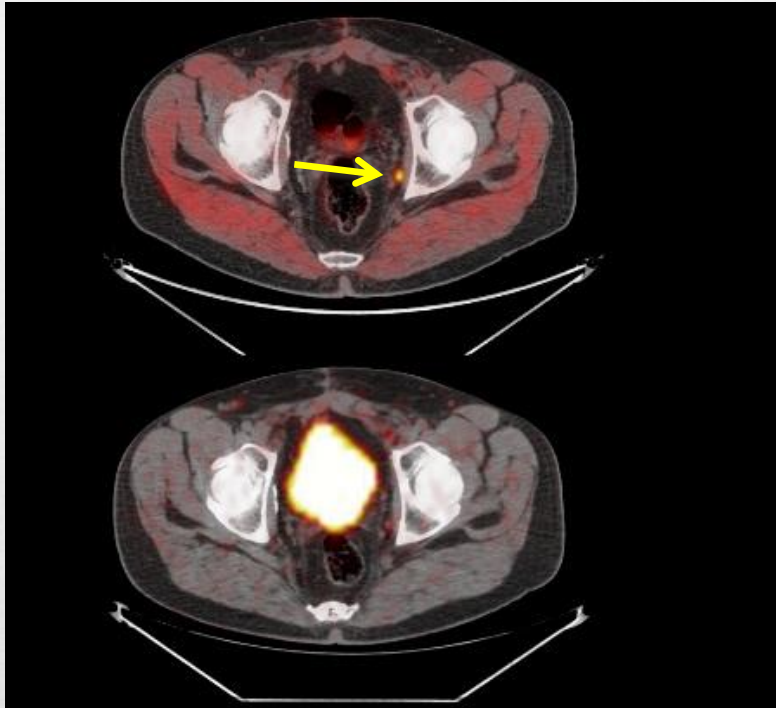
FP



Increased ^{68}Ga -DOTATATE accumulation in a perirectal lymph node (arrow) which was histologically confirmed as a false-positive result for metastasis (inflammation). ^{11}C -Choline PET/CT was normal.

^{11}C -Choline

FP



^{68}Ga -DOTATATE

TN

^{11}C -Choline abnormal uptake in a left obturator node (arrow) which was confirmed after surgery as an inflammatory lesion (false positive result). ^{68}Ga -DOTATATE PET/CT was normal.

Conclusion

- ^{68}Ga -DOTATATE and ^{11}C -Choline seem to have ***complementary value*** for the evaluation of hormone resistant prostate cancer patients with biochemical recurrence.
- This study demonstrates avid ^{68}Ga -DOTATATE and ^{11}C -Choline accumulation in ***inflammatory tissue***, which ***may limit the specificity*** of these techniques for the detection of occult metastatic disease.