

FUSION BIOPSY + STANDARD BIOPSY IN NAÏVE PATIENTS: PRELIMINARY RESULTS



F. Porpiglia, E. Checcucci, M. Manfredi, A. Pecoraro, D. Garrou, G. Alleva, D. Amparore, S. De Luca, M. Cossu, M. Poggio, F. Ragni, I. Morra, E. Bollito*, D. Tota*, C. Fiori

¹ Department of Radiology, AOU San Luigi Gonzaga Orbassano – Turin; University of Turin

² Department of Urology, AOU San Luigi Gonzaga Orbassano – Turin; University of Turin

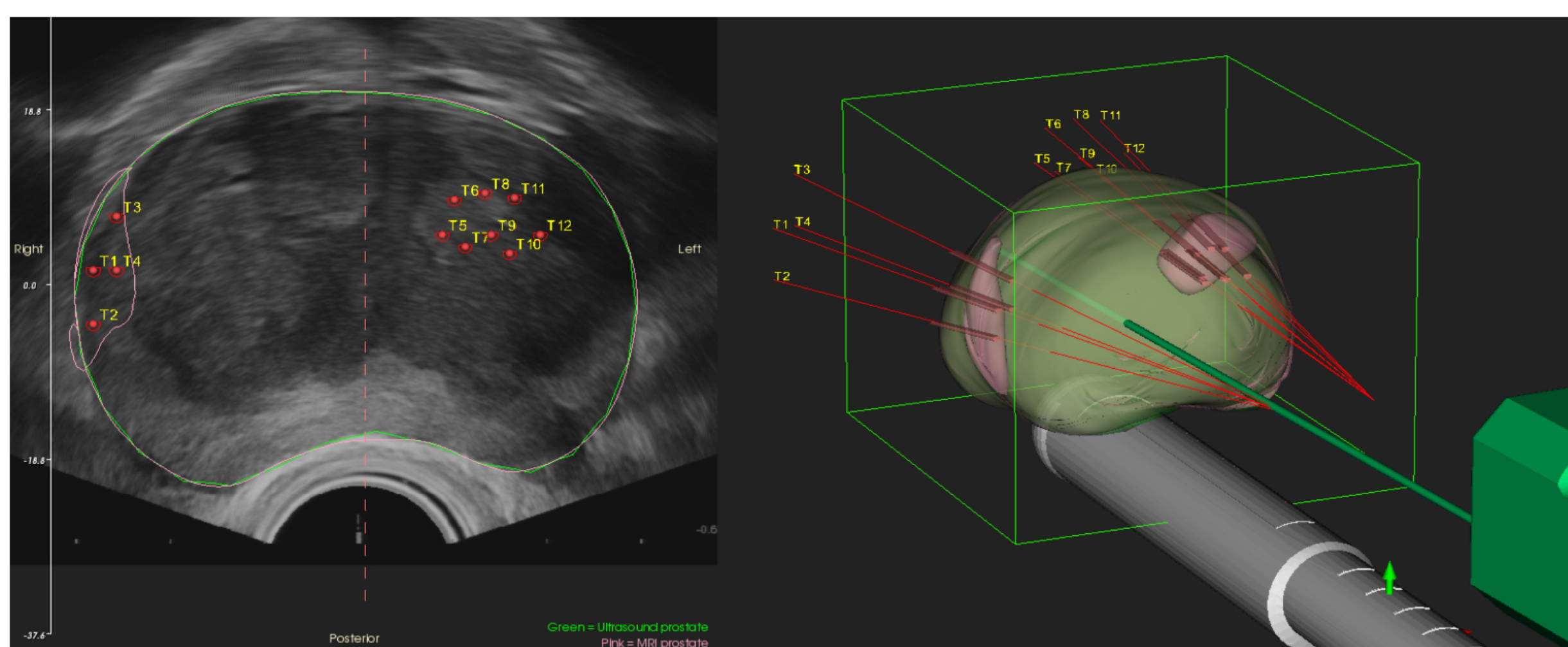
³ Department of Pathology, AOU San Luigi Gonzaga Orbassano – Turin; University of Turin

AIM OF THE STUDY

- For men undergoing initial biopsy with elevated PSA, prostate cancer detection rates are approximately 40–45% for the systematic 12-core SB
- MRI/TRUS fusion biopsy (FB) might allow to avoid unnecessary biopsy cores improving diagnostic accuracy
- Aim of this study was to evaluate the **performance of standard biopsy** and **fusion biopsy** in a cohort of **biopsy naïve patients** in terms of overall and clinically significant (CS) PCa diagnosis

MATERIAL METHODS :

- We extracted from our prospectively maintained database the biopsy naïve patients who underwent SB + FB
- The inclusion criteria were: no previous prostate biopsy, age ≤ 75 yr, PSA level 4-15 ng/ml, negative DRE, examination with mpMRI
- Three MRI-blinded urologists performed a **12-cores SB in all patients**, then the Biojet software was activated and the same urologists performed the **targeted biopsies of the PIRADS ≥ 3 index lesions** (4 cores in case of ≤ 8 mm lesion; 6 cores in case of > 8 mm lesion)
- The overall detection rate (DR) and CS-PCa DR were evaluated



CONCLUSIONS:

- When highly suspicious MRI lesions were targeted, the great majority of cancers found were clinically significant, and few were insignificant
- On biopsy naïve patients, the SB allowed to increase the overall PCa and the CS PCa DRs diagnosed by FB alone of 5.7% and 3.1% respectively
- A prospective randomized comparative study is mandatory in order to validate these preliminary results

RESULTS:

- 225 patients were included
- The **overall DR of FB** was **61.6%**, with a DR of **CS-PCa** of **52.4%**
- The **overall DR of SB** was **41.3%**, with a DR of **CS-PCa** of **32.0%**.
- 50 patients (22.2%) had a **positive FB with negative SB**. The **DR of CS PCa was 53.33%**
- 13 patients (5.7%) had a **negative FB with positive SB**. The DR of **CS PCa** was **3.1%**
- In 83 (36.8%) patients, both FB and SB were positive. In this cohort, the SB revealed a Gleason score upgrading in 2 (2.4%) patients only.

