

**Table 1** Patient and lesion characteristics

|                                            | TP group            | TR group            | p-value |
|--------------------------------------------|---------------------|---------------------|---------|
| Patient characteristic                     | n=251               | n=200               |         |
| Median age, years (range)                  | 71 (40–85)          | 71 (48–87)          | 0.600   |
| Median PSA level, ng/mL (range)            | 7.18 (1.15–42.61)   | 6.93 (1.20–40.29)   | 0.488   |
| Median prostate volume, mL (range)         | 30.4 (10.0–201.0)   | 29.1 (9.7–127.5)    | 0.114   |
| Median PSAD, ng/mL/mL (range)              | 0.247 (0.030–2.086) | 0.248 (0.037–2.023) | 0.150   |
| Pathology result, n (%)                    |                     |                     |         |
| over all cancer detection rate             | 141 (76.2)          | 134 (67.0)          | 0.457   |
| Gleason Grading Group                      |                     |                     |         |
| 1                                          | 18 (7.2)            | 30 (15.0)           | 0.009   |
| 2                                          | 74 (29.5)           | 50 (25.0)           | 0.339   |
| 3                                          | 36 (14.3)           | 20 (10.0)           | 0.196   |
| 4                                          | 7 (2.8)             | 22 (11.0)           | <0.001  |
| 5                                          | 6 (2.4)             | 12 (6.0)            | 0.056   |
| Sites of target by PI-RADS category, n (%) | n=364               | n=200               |         |
| 2                                          | 134 (36.8)          | 66 (33.0)           | 0.408   |
| 3                                          | 76 (20.9)           | 33 (16.5)           | 0.222   |
| 4                                          | 103 (28.3)          | 56 (28.0)           | 0.698   |
| 5                                          | 51 (14.0)           | 45 (22.5)           | 0.013   |

**Table 2** Target lesion and Cancer detection rates of PI-RADS category 4–5

|                           | MRI/US target biopsy (TP)<br>n=154 |         | Cognitive fusion biopsy (TR)<br>n=101 |        | P-value |
|---------------------------|------------------------------------|---------|---------------------------------------|--------|---------|
| Cancer Detection rate (%) |                                    |         |                                       |        |         |
| Over all                  | 131/154                            | (85.1)  | 85/101                                | (84.2) | 0.860   |
| Laterality of the lesion  |                                    |         |                                       |        |         |
| Left                      | 55/67                              | (82.1)  | 33/39                                 | (84.6) | 0.795   |
| Right                     | 61/72                              | (84.7)  | 39/47                                 | (82.9) | 0.803   |
| other                     | 15/15                              | (100.0) | 13/15                                 | (86.6) |         |
| Location of the lesion    |                                    |         |                                       |        |         |
| Peripheral zone (PZ)      | 73/87                              | (83.1)  | 62/71                                 | (87.3) | 0.625   |
| Transitional zone (TZ)    | 43/51                              | (84.3)  | 16/22                                 | (72.7) | 0.332   |
| other                     | 15/16                              | (93.8)  | 7/8                                   | (87.5) |         |
| Site of the lesion        |                                    |         |                                       |        |         |
| Anterior                  | 51/54                              | (94.4)  | 11/15                                 | (73.3) | 0.036   |
| Apex                      | 36/39                              | (92.3)  | 11/17                                 | (64.7) | 0.017   |
| Lateral                   | 25/36                              | (69.4)  | 28/30                                 | (93.3) | 0.055   |
| Posterior                 | 12/18                              | (66.7)  | 27/28                                 | (89.3) | 0.010   |
| Other                     | 7/7                                | (100.0) | 8/11                                  | (96.4) |         |