

| | | | | | | | | | | | | |
|---|----|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|---------|
| N | | | | | | | | | | | | <0.0001 |
| | 0 | 9,237 | 89.85 | 4,057 | 82.23 | 3,173 | 98.79 | 1,558 | 97.07 | 411 | 84.57 | |
| | 1 | 684 | 6.65 | 627 | 12.71 | 12 | 0.37 | 38 | 2.37 | 4 | 0.82 | |
| | X | 358 | 3.48 | 250 | 5.07 | 27 | 0.84 | 9 | 0.56 | 71 | 14.61 | |
| M | | | | | | | | | | | | <0.0001 |
| | 0 | 8,746 | 85.08 | 3,582 | 72.60 | 3,165 | 98.54 | 1,562 | 97.32 | 398 | 81.89 | |
| | 1a | 39 | 0.38 | 34 | 0.69 | 1 | 0.03 | 4 | 0.25 | 0 | 0.00 | |
| | 1b | 1,090 | 10.60 | 1,061 | 21.50 | 5 | 0.16 | 20 | 1.25 | 4 | 0.82 | |
| | 1c | 66 | 0.64 | 62 | 1.26 | 0 | 0.00 | 3 | 0.19 | 0 | 0.00 | |
| | X | 339 | 3.30 | 195 | 3.95 | 41 | 1.28 | 16 | 1.00 | 84 | 17.28 | |

* The 43 cases were treated with other modalities

RP, radical prostatectomy; Rx, radiation therapy; Hx, hormone ablation therapy; W/W, watchful waiting.

Table 2 Characteristics of 3,212* Radical prostatectomy patients

| Characteristic | Total (n=3,212) | | No NHT (n=2,045) | | ≤6m NHT (n=356) | | 6–12m NHT (n=724) | | >12m NHT (n=75) | | P |
|-------------------------------|-----------------|-------|------------------|-------|-----------------|-------|-------------------|-------|-----------------|-------|---------|
| | number | % | number | % | number | % | number | % | number | % | |
| Age | | | | | | | | | | | 0.15 |
| 40–44 | 3 | 0.09 | 1 | 0.05 | 1 | 0.28 | 1 | 0.14 | 0 | 0 | |
| 45–49 | 14 | 0.44 | 9 | 0.44 | 2 | 0.56 | 3 | 0.41 | 0 | 0 | |
| 50–54 | 97 | 3.02 | 68 | 3.33 | 4 | 1.12 | 22 | 3.04 | 3 | 4 | |
| 55–59 | 279 | 8.69 | 169 | 8.26 | 24 | 6.74 | 74 | 10.22 | 10 | 13.33 | |
| 60–64 | 693 | 21.58 | 433 | 21.17 | 86 | 24.16 | 161 | 22.24 | 12 | 16 | |
| 65–69 | 999 | 31.10 | 634 | 31.00 | 110 | 30.90 | 225 | 31.08 | 24 | 32 | |
| 70–74 | 916 | 28.52 | 579 | 28.31 | 107 | 30.06 | 203 | 28.04 | 24 | 32 | |
| 75–79 | 205 | 6.38 | 146 | 7.14 | 22 | 6.18 | 35 | 4.83 | 2 | 2.67 | |
| 80–84 | 4 | 0.12 | 4 | 0.20 | 0 | 0.00 | 0 | 0.00 | 0 | 0 | |
| mean/median | 67.0/68.0 | | 67.1/68.0 | | 67.2/68.0 | | 66.8/68.0 | | 66.5/67.0 | | |
| PSA (Tandem-R) (ng/ml) | | | | | | | | | | | <0.0001 |
| 0-10< | 701 | 54.30 | 478 | 60.74 | 77 | 55.00 | 132 | 40.49 | 12 | 16 | |
| 10-20< | 369 | 28.58 | 213 | 27.06 | 36 | 25.71 | 109 | 33.44 | 11 | 14.67 | |
| 20-30< | 109 | 8.44 | 59 | 7.50 | 12 | 8.57 | 34 | 10.43 | 4 | 5.33 | |
| 30-40< | 39 | 3.02 | 13 | 1.65 | 6 | 4.29 | 18 | 5.52 | 2 | 2.67 | |
| 40-50< | 29 | 2.25 | 12 | 1.52 | 3 | 2.14 | 14 | 4.29 | 0 | 0.00 | |
| 50-60< | 7 | 0.54 | 3 | 0.38 | 2 | 1.43 | 2 | 0.61 | 0 | 0.00 | |
| 60-70< | 8 | 0.62 | 3 | 0.38 | 0 | 0.00 | 4 | 1.23 | 1 | 1.33 | |
| 70-80< | 3 | 0.23 | 0 | 0.00 | 2 | 1.43 | 1 | 0.31 | 0 | 0.00 | |
| 80-90< | 5 | 0.39 | 3 | 0.38 | 0 | 0.00 | 1 | 0.31 | 1 | 1.33 | |

| | | | | | | | | | | |
|-------------|----------|------|----------|------|-----------|------|-----------|------|-----------|------|
| 90-100< | 4 | 0.31 | 0 | 0.00 | 0 | 0.00 | 4 | 1.23 | 0 | 0.00 |
| ≥100 | 17 | 1.32 | 3 | 0.38 | 2 | 1.43 | 7 | 2.15 | 5 | 6.67 |
| mean/median | 16.2/9.0 | | 12.8/8.2 | | 15.2/8.90 | | 22.6/10.9 | | 66.6/13.4 | |

Gleason score

<0.0001

| | | | | | | | | | | |
|--------|-------|-------|-----|-------|-----|-------|-----|-------|----|-------|
| ≤5 | 536 | 16.69 | 367 | 17.95 | 70 | 19.66 | 83 | 11.46 | 13 | 17.33 |
| 6 | 997 | 31.04 | 721 | 35.26 | 102 | 28.65 | 158 | 21.82 | 16 | 21.33 |
| 7 | 1,076 | 33.50 | 616 | 30.12 | 108 | 30.34 | 318 | 43.92 | 28 | 37.33 |
| 8 | 290 | 9.03 | 179 | 8.75 | 31 | 8.71 | 71 | 9.81 | 9 | 12.00 |
| 9 | 239 | 7.44 | 111 | 5.43 | 34 | 9.55 | 83 | 11.46 | 8 | 10.67 |
| 10 | 27 | 0.84 | 19 | 0.93 | 4 | 1.12 | 4 | 0.55 | 0 | 0.00 |
| median | 7 | | 6 | | 7 | | 7 | | 7 | |

T classification

<0.0001

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-----|-------|-----|-------|----|-------|
| 1a | 4 | 0.12 | 3 | 0.15 | 0 | 0.00 | 1 | 0.14 | 0 | 0 |
| 1b | 15 | 0.47 | 8 | 0.39 | 2 | 0.56 | 5 | 0.69 | 0 | 0 |
| 1c | 1,566 | 48.75 | 1,112 | 54.38 | 164 | 46.07 | 263 | 36.33 | 27 | 36.00 |
| 2a | 907 | 28.24 | 590 | 28.85 | 112 | 31.46 | 187 | 25.83 | 18 | 24.00 |
| 2b | 440 | 13.70 | 260 | 12.71 | 51 | 14.33 | 116 | 16.02 | 13 | 17.33 |
| 3a | 220 | 6.85 | 60 | 2.93 | 14 | 3.93 | 133 | 18.37 | 13 | 17.33 |
| 3b | 39 | 1.21 | 7 | 0.34 | 11 | 3.09 | 17 | 2.35 | 4 | 5.33 |
| 4 | 2 | 0.06 | 1 | 0.05 | 0 | 0.00 | 1 | 0.14 | 0 | 0 |
| X | 6 | 0.19 | 4 | 0.20 | 2 | 0.56 | 0 | 0.00 | 0 | 0 |

Approach

<0.0001

| | | | | | | | | | | |
|------------|-------|-------|-------|-------|-----|-------|-----|-------|----|-------|
| retropubic | 3,091 | 96.23 | 1,952 | 95.45 | 343 | 96.35 | 713 | 98.48 | 74 | 96.7 |
| open | 2,878 | 89.60 | 1,686 | 82.44 | 330 | 92.70 | 709 | 97.93 | 72 | 96.00 |

| | | | | | | | | | | | |
|----------------------|-------|-------|-------|-------|-----|-------|-----|-------|----|-------|---------|
| laparoscopic | 164 | 5.11 | 139 | 6.80 | 21 | 5.90 | 7 | 0.97 | 1 | 1.33 | |
| lap-assisted | 49 | 1.53 | 36 | 1.76 | 5 | 1.40 | 6 | 0.83 | 2 | 2.67 | |
| perineal | 86 | 2.68 | 77 | 3.77 | 4 | 1.12 | 3 | 0.41 | 1 | 1.33 | |
| NVB preservation | | | | | | | | | | | <0.0001 |
| bilateral | 186 | 5.79 | 107 | 5.23 | 35 | 9.83 | 38 | 5.25 | 5 | 6.67 | |
| hemi-lateral | 384 | 11.96 | 301 | 14.72 | 23 | 6.46 | 49 | 6.77 | 4 | 5.33 | |
| none | 2,262 | 70.42 | 1,355 | 66.26 | 256 | 71.91 | 588 | 81.22 | 60 | 80.00 | |
| LND | | | | | | | | | | | 0.0003 |
| performed | 2,926 | 91.10 | 1,872 | 91.54 | 229 | 64.33 | 676 | 93.37 | 69 | 92.00 | |
| not performed | 268 | 8.34 | 162 | 7.92 | 55 | 15.45 | 45 | 6.22 | 5 | 6.67 | |
| Extent of LND | | | | | | | | | | | 0.0012 |
| obt | 2,301 | 71.64 | 1,489 | 72.81 | 222 | 62.36 | 538 | 74.31 | 47 | 62.67 | |
| obt + int iliac | 105 | 3.27 | 58 | 2.84 | 24 | 6.74 | 20 | 2.76 | 3 | 4.00 | |
| obt + ext iliac | 189 | 5.88 | 128 | 6.26 | 19 | 5.34 | 40 | 5.52 | 2 | 2.67 | |
| obt, int + ext iliac | 196 | 6.10 | 132 | 6.45 | 19 | 5.34 | 38 | 5.25 | 7 | 9.33 | |
| int iliac | 44 | 1.37 | 17 | 0.83 | 3 | 0.84 | 18 | 2.49 | 5 | 6.67 | |
| ext iliac | 18 | 0.56 | 11 | 0.54 | 3 | 0.84 | 3 | 0.41 | 1 | 1.33 | |

* Twenty cases were revealed uncertain NHT status

NHT, neoadjuvant hormonal therapy; NVB, neurovascular bundle; LND, lymph node dissection; obt, obturator; int, internal; ext, external.

Table 3 Outcome of 3,200* radical prostatectomy cases with or without neoadjuvant hormonal therapy

| | No NHT (n=2, 045) | | ≤6m NHT (n=356) | | 6–12m NHT (n=724) | | >12m NHT (n=75) | | P |
|----------------------|-------------------|-------|-----------------|-------|-------------------|-------|-----------------|-------|---------|
| | number | % | number | % | number | % | number | % | |
| pT | | | | | | | | | <0.0001 |
| 0 | 32 | 1.56 | 20 | 5.62 | 111 | 15.33 | 15 | 20.00 | |
| 2a | 444 | 21.71 | 88 | 24.72 | 163 | 22.51 | 22 | 29.30 | |
| 2b | 775 | 37.90 | 130 | 36.52 | 247 | 34.12 | 20 | 26.66 | |
| 3a | 569 | 27.82 | 74 | 20.79 | 95 | 13.12 | 8 | 10.67 | |
| 3b | 166 | 8.12 | 27 | 7.58 | 50 | 6.91 | 8 | 10.67 | |
| 4 | 29 | 1.42 | 8 | 2.25 | 20 | 2.76 | 2 | 2.67 | |
| Gleason score | | | | | | | | | <0.0001 |
| ≤5 | 253 | 12.37 | 43 | 12.08 | 88 | 12.15 | 4 | 5.33 | |
| 6 | 463 | 22.64 | 53 | 14.89 | 88 | 12.15 | 7 | 9.33 | |
| 7 | 901 | 44.06 | 115 | 32.30 | 251 | 34.67 | 16 | 21.33 | |
| 8 | 176 | 8.61 | 32 | 8.99 | 53 | 7.32 | 5 | 6.67 | |
| 9 | 175 | 8.56 | 44 | 12.36 | 78 | 10.77 | 8 | 10.67 | |
| 10 | 11 | 0.54 | 6 | 1.69 | 8 | 1.10 | 1 | 1.33 | |
| ew | | | | | | | | | <0.0001 |
| (+) | 696 | 34.03 | 92 | 25.84 | 98 | 13.54 | 16 | 21.33 | |

| | | | | | | | | | | |
|-----|-----|-------|-------|-----|-------|-----|-------|----|-------|---------|
| | (-) | 1,265 | 61.86 | 250 | 70.22 | 571 | 78.87 | 56 | 74.67 | |
| cap | | | | | | | | | | <0.0001 |
| | (+) | 674 | 32.96 | 97 | 27.25 | 129 | 17.82 | 9 | 12.00 | |
| | (-) | 1,310 | 64.06 | 246 | 69.10 | 560 | 77.35 | 61 | 81.33 | |
| ly | | | | | | | | | | <0.0001 |
| | (+) | 546 | 26.70 | 90 | 25.28 | 70 | 9.67 | 10 | 13.33 | |
| | (-) | 1,395 | 68.22 | 253 | 71.07 | 610 | 84.25 | 61 | 81.33 | |
| v | | | | | | | | | | <0.0001 |
| | (+) | 219 | 10.71 | 30 | 8.43 | 34 | 4.70 | 4 | 5.33 | |
| | (-) | 1,716 | 83.91 | 307 | 86.24 | 643 | 88.81 | 67 | 89.33 | |
| pn | | | | | | | | | | <0.0001 |
| | (+) | 1,013 | 49.54 | 154 | 43.26 | 284 | 39.23 | 17 | 22.67 | |
| | (-) | 910 | 44.50 | 185 | 51.97 | 402 | 55.52 | 52 | 69.33 | |
| sv | | | | | | | | | | 0.0417 |
| | (+) | 161 | 7.87 | 30 | 8.43 | 52 | 7.18 | 7 | 9.33 | |
| | (-) | 1,839 | 89.93 | 311 | 87.36 | 643 | 88.81 | 64 | 85.33 | |
| br | | | | | | | | | | <0.0001 |
| | (+) | 20 | 0.98 | 7 | 1.97 | 19 | 2.62 | 0 | 0.00 | |
| | (-) | 1,429 | 69.88 | 277 | 77.81 | 561 | 77.49 | 59 | 78.67 | |

| | | | | | | | | | |
|-------------------------|-------|-------|-----|-------|-----|-------|----|-------|--------|
| pN | | | | | | | | | 0.3379 |
| 0 | 1,597 | 78.09 | 249 | 69.94 | 619 | 85.50 | 55 | 73.33 | |
| 1 | 54 | 2.64 | 11 | 3.09 | 14 | 1.93 | 1 | 1.33 | |
| Salvage Therapy | | | | | | | | | <0.001 |
| none | 2,025 | 99.02 | 330 | 92.70 | 658 | 90.88 | 71 | 94.67 | |
| Hx | 138 | 6.75 | 9 | 2.53 | 39 | 5.39 | 1 | 1.33 | |
| Rx | 53 | 2.59 | 9 | 2.53 | 26 | 3.59 | 3 | 4.00 | |
| Hx · Rx | 24 | 1.17 | 5 | 1.40 | 0 | 0.00 | 0 | 0.00 | |
| Survival status | | | | | | | | | 0.0611 |
| NED | 1,548 | 75.70 | 259 | 72.75 | 544 | 75.14 | 54 | 72.00 | |
| Alive with disease | 439 | 21.47 | 87 | 24.44 | 163 | 22.51 | 21 | 28.00 | |
| Stable disease | 127 | 6.21 | 35 | 9.83 | 62 | 8.56 | 7 | 9.33 | |
| PSA/clinical failure | 301 | 14.72 | 49 | 13.76 | 93 | 12.85 | 13 | 17.33 | |
| Progressive disease | 11 | 0.54 | 3 | 0.84 | 8 | 1.10 | 1 | 1.33 | |
| Died of prostate cancer | 2 | 0.10 | 3 | 0.84 | 3 | 0.41 | 0 | 0.00 | |
| Died of other causes | 45 | 2.20 | 6 | 1.69 | 14 | 1.93 | 0 | 0.00 | |

*12 cases were excluded due to uncertain NHT status.

NHT, neoadjuvant hormonal therapy; Hx, hormone ablation therapy; Rx, radiation therapy.

Table 4 Outcome of 4,934 patients treated with hormone ablation therapy alone

| M classification | M0 (n=3,582) | | M1a (n=34) | | M1b (n=1,061) | | M1c (n=62) | | Mx (n=195) | |
|------------------------------------|--------------|------|------------|------|---------------|------|------------|------|------------|------|
| | number | % | number | % | number | % | number | % | number | % |
| Type of hormone ablation therapy | | | | | | | | | | |
| LH-RH analogue | 3,210 | 89.6 | 29 | 85.3 | 910 | 85.8 | 52 | 83.9 | 163 | 83.6 |
| Surgical castration | 202 | 5.6 | 3 | 8.8 | 102 | 9.6 | 9 | 14.5 | 7 | 3.6 |
| Anti-androgen (non-steroid) | 2,326 | 64.9 | 27 | 79.4 | 803 | 75.7 | 49 | 79.0 | 120 | 61.5 |
| Chlormadinone acetate | 314 | 8.8 | 1 | 2.9 | 94 | 8.9 | 6 | 9.7 | 18 | 9.2 |
| Estrogen (DES) | 73 | 2.0 | 5 | 14.7 | 156 | 14.7 | 8 | 12.9 | 4 | 2.1 |
| Estramustine phosphate (EST) | 21 | 0.6 | 2 | 5.9 | 76 | 7.2 | 1 | 1.6 | 2 | 1.0 |
| Steroid | 1 | 0.0 | 0 | 0.0 | 4 | 0.4 | 1 | 1.6 | 0 | 0.0 |
| Combination | | | | | | | | | | |
| LH-RH or surgical castration alone | 904 | 25.2 | 4 | 11.8 | 115 | 10.8 | 6 | 9.7 | 55 | 28.2 |
| Anti-androgen alone | 173 | 4.8 | 0 | 0.0 | 21 | 2.0 | 4 | 6.5 | 25 | 12.8 |
| MAB | 2,413 | 67.4 | 24 | 70.6 | 723 | 68.1 | 44 | 71.0 | 109 | 55.9 |
| MAB+DES | 40 | 1.1 | 2 | 5.9 | 77 | 7.3 | 0 | 0.0 | 2 | 1.0 |
| MAB+EST | 10 | 0.3 | 1 | 2.9 | 39 | 3.7 | 0 | 0.0 | 2 | 1.0 |
| MAB+DES+EST | 3 | 0.1 | 1 | 2.9 | 31 | 2.9 | 1 | 1.6 | 0 | 0.0 |
| Anti-androgen+DES | 4 | 0.1 | 0 | 0.0 | 4 | 0.4 | 0 | 0.0 | 0 | 0.0 |
| Anti-androgen+EST | 2 | 0.1 | 0 | 0.0 | 2 | 0.2 | 0 | 0.0 | 0 | 0.0 |
| Other | 33 | 0.9 | 2 | 5.9 | 49 | 4.6 | 7 | 11.3 | 2 | 1.0 |
| Survival status | | | | | | | | | | |
| Alive | 3,090 | 86.3 | 19 | 55.9 | 648 | 61.1 | 35 | 56.5 | 167 | 85.6 |

| | | | | | | | | | | |
|-------------------------|-------|------|----|------|-----|------|----|------|-----|------|
| Stable disease | 2,733 | 76.3 | 11 | 32.4 | 354 | 33.4 | 16 | 25.8 | 146 | 74.9 |
| PSA/clinical failure | 208 | 5.8 | 3 | 8.8 | 125 | 11.8 | 11 | 17.7 | 12 | 6.2 |
| Progressive disease | 159 | 4.4 | 5 | 14.7 | 205 | 19.3 | 7 | 11.3 | 9 | 4.6 |
| Died of prostate cancer | 96 | 2.7 | 12 | 35.3 | 306 | 28.8 | 24 | 38.7 | 8 | 4.1 |
| Died of other causes | 300 | 8.4 | 3 | 8.8 | 63 | 5.9 | 3 | 4.8 | 18 | 9.2 |

MAB, maximum androgen blockade.

Table 5 Characteristics of patients treated with radiation therapy as the main treatment(n=1,499*)

| Method | EBRT (n=1,241) | | BT (n=210) | | BT+EBRT (n=48) | | P |
|---------------------|----------------|-------|------------|-------|----------------|-------|--------|
| | number | % | number | % | number | % | |
| Age | | | | | | | <0.001 |
| <50 | 0 | 0.00 | 1 | 0.48 | 0 | 0.00 | |
| 50-54 | 17 | 1.37 | 9 | 4.29 | 1 | 2.08 | |
| 55-59 | 33 | 2.66 | 15 | 7.14 | 3 | 6.25 | |
| 60-64 | 114 | 9.19 | 35 | 16.67 | 14 | 29.17 | |
| 65-69 | 260 | 20.95 | 47 | 22.38 | 11 | 22.92 | |
| 70-74 | 407 | 32.80 | 65 | 30.95 | 10 | 20.83 | |
| 75-79 | 364 | 29.33 | 32 | 15.24 | 9 | 18.75 | |
| 80-84 | 35 | 2.82 | 5 | 2.38 | 0 | 0.00 | |
| 85-90 | 8 | 0.64 | 1 | 0.48 | 0 | 0.00 | |
| mean/median | 71.74/72.9 | | 68.6/70.0 | | 67.9/67.1 | | |
| PSA (Tandem-R)ng/ml | | | | | | | <0.001 |
| 0-10< | 172 | 13.86 | 71 | 33.81 | 14 | 29.17 | |
| 10-20< | 134 | 10.80 | 15 | 7.14 | 5 | 10.42 | |
| 20-30< | 59 | 4.75 | 4 | 1.90 | 1 | 2.08 | |

| | | | | | | |
|-------------|-------------|------|------------|------|------------|------|
| 30-40< | 31 | 2.50 | 1 | 0.48 | 4 | 8.33 |
| 40-50< | 21 | 1.69 | 1 | 0.48 | 0 | 0.00 |
| 50-60< | 27 | 2.18 | 1 | 0.48 | 1 | 2.08 |
| 60-70< | 10 | 0.81 | 1 | 0.48 | 2 | 4.17 |
| 70-80< | 8 | 0.64 | 0 | 0.00 | 0 | 0.00 |
| 80-90< | 10 | 0.81 | 0 | 0.00 | 0 | 0.00 |
| 90-100< | 3 | 0.24 | 0 | 0.00 | 0 | 0.00 |
| 100-200< | 21 | 1.69 | 1 | 0.48 | 0 | 0.00 |
| ≥200 | 16 | 1.29 | 0 | 0.00 | 0 | 0.00 |
| mean/median | 36.52/15.00 | | 11.26/7.30 | | 18.42/9.78 | |

Gleason score

<0.001

| | | | | | | |
|--------|-----|-------|-----|-------|----|-------|
| ≤5 | 154 | 12.41 | 38 | 18.10 | 4 | 8.33 |
| 6 | 242 | 19.50 | 114 | 54.29 | 12 | 25.00 |
| 7 | 442 | 35.62 | 45 | 21.43 | 21 | 43.75 |
| 8 | 160 | 12.89 | 7 | 3.33 | 4 | 8.33 |
| 9 | 214 | 17.24 | 6 | 2.86 | 5 | 10.42 |
| 10 | 28 | 2.26 | 0 | 0.00 | 2 | 4.17 |
| median | 7 | | 6 | | 7 | |

T classification

<0.001

| | | | | | | |
|----|---|------|---|------|---|------|
| 1a | 2 | 0.16 | 0 | 0.00 | 0 | 0.00 |
|----|---|------|---|------|---|------|

| | | | | | | | |
|---------------------|-------|-------|-----|-------|----|--------|--------|
| 1b | 6 | 0.48 | 0 | 0.00 | 0 | 0.00 | |
| 1c | 357 | 28.77 | 138 | 65.71 | 22 | 45.83 | |
| 2a | 249 | 20.06 | 47 | 22.38 | 10 | 20.83 | |
| 2b | 134 | 10.80 | 18 | 8.57 | 8 | 16.67 | |
| 3a | 315 | 25.38 | 4 | 1.90 | 4 | 8.33 | |
| 3b | 145 | 11.68 | 1 | 0.48 | 4 | 8.33 | |
| 4 | 29 | 2.34 | 2 | 0.95 | 0 | 0.00 | |
| x | 4 | 0.32 | 0 | 0.00 | 0 | 0.00 | |
| N classification | | | | | | | 0.178 |
| N0 | 1,200 | 96.70 | 208 | 99.05 | 48 | 100.00 | |
| N1 | 20 | 1.61 | 0 | 0.00 | 0 | 0.00 | |
| Risk classification | | | | | | | <0.001 |
| low | 62 | 5.00 | 51 | 24.29 | 1 | 2.08 | |
| intermediate | 142 | 11.44 | 31 | 14.76 | 12 | 25.00 | |
| high | 719 | 57.94 | 23 | 10.95 | 18 | 37.50 | |
| N/A | 318 | 25.62 | 105 | 50.00 | 17 | 35.42 | |

* :There were 28 patients who received particle radiotherapy and 27 patients who were treated by uncertain modality that were excluded.

EBRT, external beam radiotherapy; BT, brachytherapy; N/A, not assessed.

Table 6 Outcome of patients treated with radiation therapy as the main treatment (n=1,449*)

| Method | EBRT (n=1,241) | | BT (n=210) | | BT+EBRT (n=48) | |
|-------------------------|----------------|-------|------------|-----|----------------|-------|
| | number | % | number | % | number | % |
| Field | | | | | | |
| prostate only | 1,099 | 88.56 | 210 | 100 | 43 | 89.58 |
| prostate + whole pelvis | 137 | 11.04 | - | | 5 | 10.42 |
| Dose, Gy | | | | | | |
| <60 | 22 | 1.77 | | | | |
| 60-64< | 118 | 9.51 | | | | |
| 64-68< | 143 | 11.52 | | | | |
| 68-72< | 572 | 46.09 | | | | |
| 72-76< | 137 | 11.04 | | | | |
| 76-80< | 142 | 11.44 | | | | |
| ≥80 | 2 | 0.16 | | | | |
| mean/median | 69.34/70.0 | | | | | |
| Combination | | | | | | |

| | | | | | | |
|----------------------|-----|-------|-----|-------|----|-------|
| ≤6m NHT | 240 | 19.34 | 5 | 2.38 | 8 | 16.67 |
| 6–12m NHT | 597 | 48.11 | 73 | 34.76 | 17 | 35.42 |
| >12m | 240 | 19.34 | 36 | 17.14 | 4 | 8.33 |
| none | 240 | 19.34 | 90 | 42.86 | 17 | 35.42 |
| Survival status | | | | | | |
| NED | 720 | 58.02 | 162 | 77.14 | 24 | 50.00 |
| Alive with cancer | 434 | 34.97 | 43 | 20.48 | 23 | 47.92 |
| Stable disease | 282 | 22.72 | 33 | 15.71 | 15 | 31.25 |
| PSA/clinical failure | 130 | 10.48 | 10 | 4.76 | 8 | 16.67 |
| Progressive disease | 22 | 1.77 | 0 | 0.00 | 0 | 0.00 |
| Died of cancer | 21 | 1.69 | 0 | 0.00 | 0 | 0.00 |
| Died of other causes | 45 | 3.63 | 0 | 0.00 | 0 | 0.00 |
| Uncertain | 21 | 1.69 | 5 | 2.38 | 0 | 0.00 |

* :There were 28 patients who received particle radiotherapy and 27 patients who were treated by uncertain modality that were excluded.

EBRT, external beam radiotherapy; BT, brachytherapy; NHT, neoadjuvant hormonal therapy, NED no evidence of disease.

Table 7 Outcome of 485 patients treated with watchful waiting

| | number | % |
|----------------------|--------|-------|
| Intended treatment | | |
| RP | 47 | 9.69 |
| Rx | 14 | 2.89 |
| Hx | 73 | 15.05 |
| Maintenance W/W | 351 | 72.37 |
| Survival status | | |
| NED | 51 | 10.52 |
| Alive with disease | 417 | 85.98 |
| Stable disease | 394 | 81.24 |
| PSA/clinical failure | 21 | 4.33 |
| Progressive disease | 3 | 0.62 |
| Died of cancer | 3 | 0.62 |
| Died of other causes | 13 | 2.68 |
| Uncertain | 1 | 0.21 |

RP, radical prostatectomy; Rx, radiation therapy; Hx, hormonal ablation therapy;

W/W, watchful waiting; NED, no evidence of disease

Appendix

| Institution | Number | Number of patients |
|---------------------|--------|--------------------|
| University Hospital | 32 | 2048 |
| National Hospital | 88 | 4506 |
| General Hospital | 119 | 4860 |
| Total | 239 | 11414 |

| Institution | Number of patients | Institution | Number of patients |
|--|--------------------|---|--------------------|
| Sapporo Medical University Hospital | 55 | Hitachi General Hospital | 59 |
| Sapporo Social Insurance General Hospital | 45 | Ibaraki Prefectural Center Hospital and Cancer Center | 46 |
| Otaru Municipal Hospital | 42 | Mito Saiseikai General Hospital | 48 |
| Tomakomai City Hospital | 25 | Tochigi National Hospital | 50 |
| Hokkaido Social Service Association Social Welfare Service Hakodate Hospital | 13 | Tochigi Cancer Center | 118 |
| Rumoi City Hospital | 14 | Gunma Cancer Center | 112 |
| Ashibetsu Municipal Hospital | 9 | Tatebayashi Kosei Hospital | 109 |
| Kitasaito Hospital | 23 | Saitama Cancer Center | 75 |
| Ebetsu City Hospital | 16 | Saitama Red Cross Hospital | 63 |
| Kushiro Red Cross Hospital | 15 | Saitama Medical Center, Saitama Medical University | 48 |
| Hokkaido Saiseikai Otaru Hospital | 26 | Kuki General Hospital | 31 |

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|--|-----|---|-----|
| Takikawa Municipal Hospital | 27 | Asakadai Central Hospital | 15 |
| Medical Corporation Bokoi Nikko Memorial Hospital | 26 | Social Insurance Omiya General Hospital | 38 |
| Hakodate Goryoukaku Hospital | 85 | Kawaguchi Municipal Medical Center | 44 |
| Fukagawa Municipal Hospital | 17 | Saitama Medical Center Jichi Medical University | 85 |
| Hokkaido Social Insurance Hospital | 19 | Chichibu City Hospital | 62 |
| Muroran City General Hospital | 34 | Soka Municipal Hospital | 23 |
| Megumino Hospital | 23 | Chiba Cancer Center | 264 |
| Social Welfare Corporation Hokkaido Social Work Association Obihiro Hospital | 0 | Kameda Medical Center | 103 |
| Aomori Prefectural Central Hospital | 29 | Shinmatsudo Central General Hospital | 12 |
| Aomori City Hospital | 37 | Chiba Aoba Municipal Hospital | 38 |
| Iwate Medical University | 67 | Gyoutoku Sougou Hospital | 0 |
| Iwate Prefectural Oofunato Hospital | 11 | Keio University School of Medicine | 210 |
| Kitakami Saiseikai Hospital | 30 | Tokyo Women's Medical University | 99 |
| Japanese Red Cross Sendai Hospital | 29 | Kyorin University Hospital | 53 |
| Kesennuma City Hospital | 75 | National Center for Global Health and Medicine | 77 |
| Miyagi Cancer Center | 165 | National Cancer Center Hospital | 273 |
| Akita University Hospital | 62 | Self-Defense Forces Central Hospital | 22 |
| Odate Municipal Hospital | 35 | Musashino Red Cross Hospital | 94 |
| Ogachi Chuo Hospital | 36 | Yamato Hospital | 47 |
| Nihonkai General Hospital | 82 | Kanto Central Hospital(of the Mutual Aid Association of Public School Teachers) | 87 |

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| Iwaki Urological Hospital | 25 | Toho University Ohashi Medical Center | 56 |
| Tsukuba University Hospital | 30 | Kitasato Institute Hospital | 46 |
| National Hospital Organization Mito Medical Center | 37 | Tokai University Tokyo Hospital | 42 |
| Mito Red Cross Hospital | 110 | Sempo Tokyo Takanawa Hospital | 27 |
| Tokyo Medical University Hachioji Medical Center | 81 | Fujieda Municipal General Hospital | 60 |
| National Hospital Organization Disaster Medical Center | 42 | Takegawa Municipal General Hospital | 46 |
| Nippon Medical School Tama Nagayama Hospital | 0 | Juntendo University Shizuoka Hospital | 67 |
| Tokyo Rinkai Hospital | 27 | Seirei Numazu Hospital | 18 |
| Showakai Hospital | 21 | Fuji City General Hospital | 73 |
| Juntendo University Nerima Hospital | 0 | Shizuoka City Shimizu Hospital | 58 |
| Hasegawa Hospital | 4 | Nagoya University Graduate School of Medicine | 52 |
| Tokai University Hospital | 121 | Fujita Health University Hospital | 113 |
| Fujisawa City Hospital | 72 | National Hospital Organization Nagoya Medical Center | 20 |
| Chigasaki Municipal Hospital | 37 | Chukyo Hospital | 30 |
| Yokosuka Kyosai Hospital | 40 | Chubu Rosai Hospital | 26 |
| Nippon Koukan Hospital | 10 | Nagoya Ekisaikai Hospital | 12 |
| Saiseikai Yokohamashi Tobu Hospital | 0 | Kariya Toyota General Hospital | 96 |
| Isehara Kyodo Hospital | 15 | Toyota Memorial Hospital | 56 |
| Odawara Municipal Hospital | 57 | J.A.Aichi Anjo Kosei Hospital | 85 |
| International Goodwill Hospital | 79 | Komaki City Hospital | 60 |
| Atsugi City Hospital | 75 | Minami Seikyo General Hospital | 8 |
| Yokohama City University Medical Center | 96 | Shinshiro Municipal Hospital | 46 |
| Niigata Cancer Center Hospital | 187 | Aichi Saiseikai Hospital | 56 |

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| Niigata Prefectural Central Hospital | 112 | Inazawa City Hospital | 18 |
| Saiseikai Niigata Daini Hospital | 4 | Chunichi Hospital | 3 |
| Kariwagun General Hospital | 40 | Nagoya Memorial Hospital | 49 |
| Toyama Red Cross Hospital | 40 | Takeuchi Hospital | 63 |
| Kouseiren Takaoka Hospital | 60 | Social Insurance Shiga Hospital | 10 |
| Saiseikai Toyama Hospital | 18 | Omihachiman Community Medical Center | 34 |
| Kanazawa University Hospital | 51 | Kohka Public Hospital | 36 |
| Kanazawa Medical University Hospital | 41 | Nagahama City Hospital | 25 |
| National Hospital Organization Kanazawa Medical Center | 36 | Kyoto University Hospital | 179 |
| Noto General Hospital | 29 | Kyoto Prefectural University of Medicine | 30 |
| Fukuiken Saiseikai Hospital | 66 | National Hospital Organization Kyoto Medical Center | 82 |
| Fujita Memorial Hospital | 11 | Kyoto Second Red Cross Hospital | 51 |
| Tsuruga Municipal Hospital | 21 | Rakuwakai Otowa Hospital | 15 |
| Yamanashi Prefectural Central Hospital | 84 | Osaka Medical College | 20 |
| Kanoiwa General Hospital | 11 | Kinki University School of Medicine | 41 |
| Fujiyoshida Municipal Hospital | 31 | National Hospital Organization Osaka Medical Center | 61 |
| Ina Central Hospital | 72 | Osaka General Medical Center | 77 |
| Japanese Red Cross Society Suwa Hospital | 14 | Minoh City Hospital | 71 |
| Aizawa Hospital | 87 | Izumi City Hospital | 18 |
| Gifu Prefectural General Medical Center | 62 | Federation of National Public Service and Affiliated Personnel Mutual Aid Association Otemae Hospital | 20 |

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| Ibi Kosei Hospital | 12 | NTT West Osaka Hospital | 39 |
| Chuno Kousei Hospital | 46 | Yao Municipal Hospital | 38 |
| Japanese Red Cross Shizuoka Hospital | 11 | Suita Municipal Hospital | 36 |
| Shimizu Welfare Hospital | 32 | Osaka Red Cross Hospital | 92 |
| Hoshigaoka Koseinenkin Hospital | 46 | Tokushima Red Cross Hospital | 43 |
| Rinku General Medical Center Izumisano Municipal Hospital | 32 | Health Insurance Naruto Hospital | 50 |
| PL General Hospital | 19 | Oe Kyodou Hospital | 35 |
| Tane General Hospital | 29 | Tsurugi Municipal Handa Hospital | 17 |
| Kansai Medical University Takii Hospital | 75 | National Hospital Organization Zentsuji Hospital | 37 |
| Saiseikai Suita Hospital | 34 | Uchinomi Hospital | 14 |
| Saiseikai Tondabayashi Hospital | 15 | Ehime University Hospital | 37 |
| Ajinkai Chibune General Hospital | 4 | National Hospital Organization Shikoku Cancer Center | 186 |
| Bellland General Hospital | 29 | Matsuyama Red Cross Hospital | 88 |
| Hyogo Prefectural Kakogawa Medical Hospital | 99 | Kochi Health Sciences Center | 0 |
| Itami City Hospital | 27 | National Hospital Organization Kochi National Hospital | 12 |
| Nishikobe Medical Center | 37 | Harasanshin Hospital | 216 |
| Saiseikai Hyogoken Hospital | 15 | Kitakyushu City Yahata Hospital | 1 |
| Nara Medical University | 81 | Tobata Kyoritsu Hospital | 7 |
| Nara City Hospital | 10 | Shin Yukuhashi Hospital | 4 |
| Yamato Takada Municipal Hospital | 27 | Takayama hospital | 40 |
| Nara Prefectural Mimuro Hospital | 48 | Moji Medical Center | 20 |