Prostate Cancer: Summary of important changes to original decision tree

Localised prostate cancer: all risk groups

- Hypofractionated EBRT (60Gy/20#) is now by far the most commonly used schedule as first line RT treatment of localised prostate cancer.
- 36Gy/6#/6 weeks can be used for older men who cannot come every day for four weeks of treatment. This is used infrequently and only in high-risk frail patients at CUH, but much more commonly at RMH.
- Salvage RT (most commonly 52.5-55Gy/20#, also sometimes 66Gy/33#) is now recommended for recurrence after surgery in all patients (as opposed to 'automatic' adjuvant RT), irrespective of margin status.

Localised prostate cancer: low-intermediate risk groups

- Significant reduction in low-risk prostate cancer patients receiving radical RT in the first instance.
- Consider SABR to the prostate (36.25Gy/5#) as an alternative to conventional/ moderate hypo-fractionation- uncommon, but use is likely to increase if PACE-B shows non-inferiority of 5# SABR to 20# conventional RT. May be used for high intermediate/ high risk patients as well if PACE-C shows the same in this group. However, patients who require nodal irradiation or have very locally advanced disease would still be treated with 20# in this scenario.

Metastatic prostate cancer at initial presentation

Good performance status and low metastatic burden (<4 bony metastases or more if confined to the axial skeleton, no visceral metastases): consider EBRT to the prostate- 36Gy/6#/6w or 55Gy/20#/4w

New Decision Tree

<table>
<tr><td rowspan="11">Low Risk
T1a-2a AND Gleason Score <7 AND PSA<10

20%</td><td rowspan="10">Fit for radical treatment

78%</td><td rowspan="3">Active surveillance
No RT
90%</td><td colspan="4">No progression 45%</td></tr>
<tr><td rowspan="2">Progression 55%</td><td rowspan="2">Local 90% (10% Distant→ M1)</td><td colspan="2">Surgery 50%</td></tr>
<tr><td colspan="2">Brachytherapy 10% and/or EBRT 40% (60Gy in 20# now, 36.25Gy/5# for PACE)</td></tr>
<tr><td rowspan="3">Surgery (Laparoscopic/ Robot- assisted radical prostatectomy)
4%</td><td rowspan="3">Surveillance</td><td>No Recurrence 90%</td><td colspan="2">No RT</td></tr>
<tr><td rowspan="2">Recurrence 10%</td><td>Local 85%</td><td>Salvage RT <u>66Gy/33f/6.5w</u> or <u>52.5-55Gy/20f/4w</u> +/- ADT</td></tr>
<tr><td>Distant 15%</td><td>ADT +/- chemotherapy +/- palliative RT</td></tr>
<tr><td rowspan="3">Brachytherapy (3%)
or EBRT (3%)</td><td rowspan="3">Brachytherapy monotherapy (<u>LDR-140Gy</u> or HDR)
OR
EBRT <u>60Gy/20f/4w</u> (90%+ now)
OR
<u>74Gy/37#/7.4w</u> (<5% now)
OR
<u>36Gy/6f/6w</u> (<5% now)
OR
SABR <u>36.25Gy/5f/1.5w</u> (0% now, but ~100% if PACE-B/C successful)</td><td>No recurrence 85%</td><td colspan="2">No RT</td></tr>
<tr><td rowspan="2">Recurrence 15%</td><td>Local 80%</td><td>Consider surgical or HDR brachytherapy salvage- otherwise as for distant recurrence</td></tr>
<tr><td>Distant 20%</td><td>ADT +/- chemotherapy +/- palliative RT</td></tr>
<tr><td rowspan="2">Unfit for radical treatment 22%</td><td rowspan="2">Watchful waiting
No RT</td><td colspan="4">No progression 70%</td></tr>
<tr><td>Progression (Local/distant) 30%</td><td colspan="3">ADT +/- palliative RT</td></tr>
</table>

<table>
<tr><td rowspan="12">Intermediate Risk
T2b-2c OR Gleason Score = 7 OR PSA: 10-20

28%</td><td rowspan="10">Fit for radical treatment 78%</td><td rowspan="4">Active surveillance 10%</td><td>No progression 60%</td><td colspan="3">No RT</td></tr>
<tr><td rowspan="3">Progression 40%</td><td rowspan="2">Local progression 90%</td><td colspan="2">Surgery 15%</td></tr>
<tr><td colspan="2">EBRT 57-<u>60Gy/19-20f/4w</u> or <u>36Gy/6f/6w</u> or <u>36.25Gy/5f/1.5w</u>
ALL + ADT
72%</td></tr>
<tr><td colspan="2">Brachytherapy 23%</td></tr>
<tr><td>Distant metastases 10%</td><td colspan="2">ADT +/- chemotherapy +/- palliative RT</td></tr>
<tr><td rowspan="3">Surgery 20%</td><td rowspan="3">Surveillance</td><td>No recurrence 90%</td><td colspan="2">No RT</td></tr>
<tr><td rowspan="2">Recurrence 10%</td><td>Local 90%</td><td>Salvage RT <u>66Gy/33f/6.5w</u> 50% or <u>52.5Gy/20f/4w</u> 50% +/- ADT</td></tr>
<tr><td>Distant 10%</td><td>ADT +/- chemotherapy +/- palliative RT</td></tr>
<tr><td rowspan="3">Brachytherapy and/or EBRT 70%</td><td rowspan="3">Brachytherapy monotherapy (<u>LDR-140Gy</u> or HDR)
OR
EBRT <u>60Gy/20f/4w</u> (90%+ now)
OR
<u>74Gy/37#/7.4w</u> (<5% now)
OR
<u>36Gy/6f/6w</u> (<5% now)
OR
SABR <u>36.25Gy/5f/1.5w</u> (0% now, but ~100% if PACE-C successful)</td><td>No recurrence 85%</td><td colspan="2">No RT</td></tr>
<tr><td rowspan="2">Recurrence 15%</td><td>Local 80%</td><td>Consider surgical/HDR salvage- otherwise as for distant recurrence (not for SABR)</td></tr>
<tr><td>Distant 20%</td><td>ADT +/- chemotherapy +/- palliative RT</td></tr>
<tr><td rowspan="2">Unfit for radical treatment 22%</td><td colspan="2" rowspan="2">Watchful waiting
No RT</td><td colspan="3">No progression 70%</td></tr>
<tr><td>Progression 30%</td><td colspan="2">ADT +/- palliative RT</td></tr>
</table>

<table>
<tr><td rowspan="6">High Risk
T3-4 OR Gleason Score >7 OR PSA>20
35%</td><td rowspan="5">Fit for radical treatment 78%</td><td rowspan="4">EBRT +/- brachytherapy + neoadjuvant ADT 80%</td><td rowspan="4">EBRT 60Gy/20f/4w (90%+ now, <50% post- PACE-C)
OR
74Gy/37#/7.4w (<5% now)
OR
36Gy/6f/6w (5% now)
OR
SABR 36.25Gy/5f/1.5w (0% now, but ~50% post- PACE-C)

Consider brachytherapy boost

ALL + ADT

Consider WPRT</td><td>No recurrence 85%</td><td colspan="2">No RT</td></tr>
<tr><td rowspan="3">Recurrence 15%</td><td>Local 10%</td><td>ADT +/- chemo +/- palliative RT</td></tr>
<tr><td>Distant 90%</td><td>ADT +/- chemo +/- palliative RT</td></tr>
<tr><td>Surgery 10%</td><td>Surveillance</td><td>No progression 30%</td><td colspan="2">No RT</td></tr>
<tr><td rowspan="2">Progression 70%</td><td>Local 50%</td><td>Salvage RT 66Gy/33f/6.5w 50% or 52.5-55Gy/20f/4w 50% +/- ADT</td></tr>
<tr><td>Distant 50%</td><td>ADT +/- chemo +/- palliative RT</td></tr>
<tr><td>Unfit for radical treatment 22%</td><td>Watchful waiting
No RT
Consider starting ADT</td><td colspan="4">No progression 70%</td></tr>
<tr><td>Progression 30%</td><td colspan="3">ADT +/- palliative RT</td></tr>
<tr><td rowspan="3">M1 17%</td><td rowspan="2">Low metastatic burden (i.e. <4 bony metastases, or more if all within the vertebrae/pelvis, and no visceral metastases) 42%</td><td rowspan="2">Consider starting docetaxel chemotherapy</td><td>Fit for radical treatment 75-90%</td><td colspan="2">Neoadjuvant ADT + EBRT to the prostate
36Gy/6f/6w (50%) or
55Gy/20f/4w (50%)
Palliative RT to bone mets for symptoms only (usually 1#)</td></tr>
<tr><td>Not fit for radical treatment 10-25%</td><td colspan="2">ADT +/- chemotherapy +/- palliative RT (as per below)</td></tr>
<tr><td>High metastatic burden (i.e. 4 or</td><td colspan="4">ADT +/- palliative RT for symptomatic treatment:
Prostate bed: 30Gy/10f/2w 8% or 20Gy/5f/1w 44% or 8Gy/1f 35%</td></tr>
</table>

	more bone metastases, at least one outside the vertebrae/pelvis, and/or visceral metastases) 58%	Bone: 8Gy/1f 8% or 20Gy/5f/1w 1% Brain: 20Gy/5f /1w 1% or (if good PS) 30Gy/10f/2w 1% Spinal cord compression: 20Gy/5f/1w 2%