Oligometastatic Prostate Cancer

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Disclosures

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Speakers’ fees/Honorarium:
Varian, AstraZeneca, Janssen

Advisory/Consultancy roles:
Varian, Janssen, Astellas
Case example

- 60 yo ex sportsman
- No significant pmhx
- Sep 2014 – Diagnosed with HR-PCa
- Diagnostic details: cT3 (T3b on MRI), GS 4+3, PSA 16.0 ng/ml
- Jan 2015-Feb 2015 IGRT to Pelvis (46 Gy) and Prostate (74 Gy) + 2y ADT (Last LHRH antagonist Nov 2016)
- PSA nadir <0.03; Testosterone <0.35
Case example

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### PSA trend @ 1 y later

<table>
<thead>
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<tbody>
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<td>* ↓ &lt; 0.35</td>
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<tr>
<td>PSA Total, serum</td>
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<tr>
<td>* ↓ &lt; 0.03</td>
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<td>* 4.3</td>
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<td>* 7.2</td>
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<td>12.9</td>
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Oligometastatic PCa
- 2 sites: T6 and L hip
Oligometastatic PCa
- 2 sites: T6 and L hip

What’s next???
- ADT alone vs observation
- ADT + Chemo
- ADT + abiraterone/enza/apa
- SBRT to both T6 and L hip
- Or Any of the combo
Outline

- Concept of oligometastasis
  - Disease evolution; imaging; technologies

- Clinical evidence supporting local therapy in oligometastatic state
Evolution of high-risk prostate cancer

Locally Advanced
*(High risk of occult metastases)*

**Clinical:** cT3-4; GS 8-10; PSA>20-50

**Molecular:** Genomic instability; SCHLAP1+ve

**Treatment:** Long-term androgen deprivation (ADT) + Radiotherapy (IGRT vs IGRT + Brachytherapy boost);
Radical Prostatectomy +/- Pelvic nodal dissection

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Evolution of high-risk prostate cancer

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**Disseminated**
Hormone-sensitive

Clinical: M1; high-volume disease (visceral or multiple bone); PSA >150

Treatment: ADT + Systemic agent (Docetaxel vs Zytiga)

Conventional Paradigm of Progression

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Evolution of high-risk prostate cancer

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Clinical: Poor prognosis; high-volume
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**Oligometastatic state**
(Limited systemic disease)
Clinical: cT2-4; GS 7-10; PSA>50-150

De novo vs Recurrent
Site-specific – LN vs Bone vs Visceral
Molecular Hallmarks: Genomic instability; SChLAP1+ve; BRCA2-mut
Treatment: Systemic vs Local?

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Concepts and Disease states

Synchronous oligometastases

Metachronous oligometastases

Oligoprogression
Following prior therapy

Oligopersistence
When one, or few, lesions persist

Primary lesion
Distant metastases/recurrences

Controlled primary lesion
Distant metastases/recurrences
Concepts and Disease states

“True” Biology unknown…
Treatment naïve tumour clones
Reality: Unknown biology
“True” Biology unknown… Treatment naïve tumour clones

Reality: Unknown biology

Oligorecurrence of treatment resistant tumour clones

Reality: Best biology of the lot
Concepts and Disease states

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Treatment naïve tumour clones
Reality: Unknown biology

Oligorecurrence of treatment resistant tumour clones
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The advent of novel imaging

PET-imaging

Types of Tracers
- PSMA (Overall)
- F-Choline (LN)
- Na-F (Bone)
- Fluciclovine
The advent of novel imaging

PET-imaging

Bone

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Summary of sensitivity and specificity of meta-analyses evaluating PSMA, choline, and fluciclovine PET/CT</th>
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<tbody>
<tr>
<td>Systematic review and meta-analysis</td>
<td>No. of studies</td>
</tr>
<tr>
<td>PSMA Perera$^{10}$</td>
<td>N = 16</td>
</tr>
<tr>
<td>Choline Fanti$^{54}$</td>
<td>N = 12</td>
</tr>
<tr>
<td>Evangelista$^{55}$</td>
<td>N = 19</td>
</tr>
<tr>
<td>Umbehr$^{56}$</td>
<td>N = 12</td>
</tr>
<tr>
<td>Shen$^{57}$ (bone metastases)</td>
<td>N = 9</td>
</tr>
<tr>
<td>Fluciclovine Ren$^{59}$</td>
<td>N = 6</td>
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PSMA-PET as an ultrasensitive modality

Pattern of nodal relapses detected by PSMA matched RT lymph node CTV contouring consensus

Distribution of PSMA+ve lesions

Tan et al., Cancer Bio Med, 2019
### PSMA-PET as an ultrasensitive modality

Pattern of nodal relapses detected by PSMA matched RT lymph node CTV contouring consensus.

**Table 3** Summary of additional lesions detected by $^{68}$Ga PSMA PET/CT, and the influence on subsequent treatment

<table>
<thead>
<tr>
<th>Site of disease</th>
<th>Number of patients (n)</th>
<th>Number of additional lesions</th>
<th>Impact on management</th>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Overall PSA≤2.0 (ng/mL)</td>
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<tr>
<td><strong>Locoregional only</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prostate bed</td>
<td>18</td>
<td>32 (of 38)</td>
<td>WPRT + HT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>PSA≤2.0 (ng/mL)</td>
</tr>
<tr>
<td>Nodes+/−prostate bed</td>
<td>8</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distant</td>
<td>15</td>
<td>74 (of 137)</td>
<td>SBRT to metastases</td>
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<tr>
<td>Nodes only</td>
<td>3</td>
<td>10</td>
<td>(oligometastatic; &lt; 5 lesions)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>PSA≤2.0 (ng/mL)</td>
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<tr>
<td>Skeletal only</td>
<td>7</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nodes + skeletal</td>
<td>2</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Visceral</td>
<td>3</td>
<td>13</td>
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RT, radiotherapy; WPRT, whole pelvic radiotherapy; HT, hormonal therapy; SBRT, stereotactic body radiotherapy; PSA, prostate specific antigen.
Evolution of Management of HR PCa

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(High risk of occult metastases)
Clinical: cT3-4; GS 8-10; PSA>20-50
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CT, Bone Scan, MRI, PSA

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**Oligometastatic state**

**PSMA-PET**
CT, Bone Scan, MRI, PSA

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Why local tx for a systemic disease?

Targeting the bulk of the tumour clones in the primary and/or other gross metastatic sites

Scientific rationale: If imaging identified all regions of clinical disease, then targeting these regions will prevent future seeding of tumour clones

Metastatic progression in cancers is a dynamic clonal process.

Why **local tx** for a systemic disease?

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**Scientific rationale:** If imaging identified all regions of clinical disease, then targeting these regions will prevent future seeding of tumour clones

**Metastatic progression in cancers is a dynamic clonal process.**

**Clonal tracking reveals that metastases “seed” future metastases.**


Espiritu, et al., *CPC-GENE, Cell, 2018*
RT “the magic bullet”: targeting nodal mets

PET Contouring

Daily matching – transverse

CBCT

Planning CT

RT plan

Dose

Boost

Coronal

Planning CT

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RT “the magic bullet”: targeting spinal mets

RT plan – Dose plan & constraints

Dose constraints
- Thecal sac – D0.03cc = 17 Gy
- Bowel – D0.03cc = 20 Gy
- Great vessel – D0.03cc <30 Gy

Beam arrangements

Dose distribution

Dose distribution

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RT “the magic bullet”: targeting spinal mets

RT delivery techniques – VMAT (Arc) vs Multi-cone

**Multi-cone**

**VMAT**

**Pros and Cons**
- Single vs Multi-levels
- Speed of delivery – much faster with VMAT FFF
- Dose for Single (24 Gy/2#) vs Multi-level (30-50 Gy/5#)

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Clinical Evidence
Stereotactic Ablative Radiotherapy for oligometastatic cancers: Efficacy and toxicity results from the randomized SABR-COMET Trial (NCT01446744)


(Canada, Scotland, the Netherlands and Australia)
SABR-COMET design

Patients with up to 5 metastatic lesions from any primary tumor site, meeting inclusion criteria

RANDOMIZATION
(1:2 ratio of randomization to Arm 1 vs. Arm 2)

ARM 1: STANDARD OF CARE
Palliative RT to any symptomatic sites
Further chemotherapy at discretion of medical oncologist

FOLLOW-UP

ARM 2: STANDARD OF CARE + SABR
SABR to all sites of known disease
Further chemotherapy at discretion of medical oncologist

FOLLOW-UP

Palma DA, BMC Cancer
2012
SABR-COMET Main Results

28 months

vs 41 months (Upper limited of 95% CI ‘not reached’)

6 months

vs 12 months (95% CI UL 30 mo)

Palma DA, ASTRO AM Plenary, San Antonio, 2018
Senan, ESMO Asia, Singapore, 2018
Palma DA, et al., Lancet, 2019
Metastasis-directed therapy: STOMP trial

Surveillance or Metastasis-Directed Therapy for Oligometastatic Prostate Cancer Recurrence: A Prospective, Randomized, Multicenter Phase II Trial

Piet Ost, Dries Reynders, Karel Decaestecker, Valérie Fontyne, Nicolaas Lumen, Aurélie De Bruycker, Bieke Lambert, Louke Delrué, Renée Bultijnck, Tom Claey, Els Gooiheheu, Geert Villeirs, Kathia De Man, Filip Aneye Ignace Billiet, Steven Joniau, Friedl Vanhaverbeke, and Gert De Meerleer

2018

ESMO Advanced Course on PCa, 6 Sep 2019, Singapore
Metastasis-directed therapy: STOMP trial

Survance or Metastasis-Directed Therapy for Oligometastatic Prostate Cancer Recurrence: A Prospective, Randomized, Multicenter Phase II Trial

- BCR after radical RT or RadP
- ≤3 lesions on choline-PET
- SBRT (30Gy/3#) or metastatectomy

Do patients truly “cured”???

Table 2. Indications for Starting Androgen Deprivation Therapy

<table>
<thead>
<tr>
<th>Indication</th>
<th>Surveillance (n = 21)</th>
<th>Metastasis-Directed Therapy (n = 21)</th>
</tr>
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<tbody>
<tr>
<td>Not started yet</td>
<td>8 (19)</td>
<td>12 (39)</td>
</tr>
<tr>
<td>Polymetastatic progression</td>
<td>16 (55)</td>
<td>19 (61)</td>
</tr>
<tr>
<td>Symptomatic progression</td>
<td>3 (10)*</td>
<td>0 (0)</td>
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PSA-DT at inclusion

<table>
<thead>
<tr>
<th>PSA-DT at inclusion</th>
<th>≤ 3 months</th>
<th>&gt; 3 months</th>
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<tbody>
<tr>
<td></td>
<td>10 (32.3)</td>
<td>21 (67.7)</td>
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<tr>
<td>No. of metastases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>9 (29.0)</td>
<td>18 (58.1)</td>
</tr>
<tr>
<td>2</td>
<td>10 (32.3)</td>
<td>6 (19.3)</td>
</tr>
<tr>
<td>3</td>
<td>12 (38.7)</td>
<td>7 (22.6)</td>
</tr>
</tbody>
</table>

Long-term off ADT

Surveilance or Metastasis-Directed Therapy for Oligometastatic Prostate Cancer Recurrence: A Prospective, Randomized, Multicenter Phase II Trial

Piet Ost, Dries Reyners, Karel Decaestecker, Valérie Fonteyne, Nicolaas Lumen, Aurélie De Bruycker, Bieke Lambert, Louke Delruie, Renée Bultijnck, Tom Claey, Els Goetghebeur, Geert Villeirs, Kathia De Man, Filip Aneye Ignace Billiet, Steven Joniau, Fried Vanhaverbeke, and Gert De Meerleer

2018
Metastasis-directed therapy: POPSTAR

Stereotactic Abative Body Radiotherapy (SABR) for Oligometastatic Prostate Cancer: A Prospective Clinical Trial

Shankar Siva, Mathias Bressel, Declan G. Murphy, Mark Shaw, Sarat Chander, John Violet, Keen Hun Tai, Cristian Udocivich, Andrew Lim, Lisa Selbie, Michael S. Hofman, Tomas Kron, Daniel Moon, Jeremy Goad, Nathan Lawrentschuk, Farshad Foroudi

Stereotactic Body Radiotherapy for Oligometastatic Prostate Cancer Detected via Prostate-specific Membrane Antigen Positron Emission Tomography

Andrew Kneebone, George Hruby, Hannah Ainsworth, Keelan Byrne, Chris Brown, Linxin Guo, Alexander Guminiski, Thomas Eade

Local progression-free survival (%)

Distant progression-free survival (%)

Probability of PFS

Solitary LN failure: 4 (15) 0 0
Multiple LN failure: 8 (30) 4 (40) 0
Solitary bone failure: 1 (4) 1 (10) 2 (10)
Multiple bone failure: 0 1 (10) 9 (45)
Mixed failure: 1 (4) [PB + LN] 1 (10) [Lung] 3 (15) [1 prostate, 1 lung, 1 bone + LN]

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Take home message:
- Local ablative therapy is effective for target lesion
- Distant metastatic progression still dominates as pattern of relapse and **stratification for systemic tx is UNAVOIDABLE!!!**
Metastasis-directed therapy: ORIOLE

Eligibility
- ≤3 metastatic lesions (≤5 cm)
- Hormone-sensitive disease
- PSADT <15 months
- ECOG ≤2

Randomization

Observation 1:2 SBRT

Day 1:
- PSA, LDH, AP, T, ctDNA, and rectal swab
- DCFPyL-PET-MRI or DCFPyL-PET-CT, PSA, LDH, AP, T, CTC/ctDNA assays, PBMC (ImmunoSEQ), and rectal swab

Days 1–30:
- Observation
- SABR

Day 90:
- PSA, LDH, AP, T, and ctDNA
- PSA, LDH, AP, T, ctDNA, and PBMC (ImmunoSEQ)

Day 180:
- Bone scan, CT, PSA, LDH, AP, T, and ctDNA
- Bone scan, CT, and DCFPyL-PET-MRI or DCFPyL-PET-CT, PSA, LDH, AP, T, CTC/ctDNA assays

Patients progressing on observation can be crossed over off-protocol to receive SBRT

Observation: 67% of pts have progressed @ 6-mos
SABR: 29% of pts have progressed @ 6-mos

Presented by Phuoc Tran (PI), ASCO GU 2018 and PCF retreat 2018
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Randomization

Observation

SBRT

Included systemic targeting

Day 1:
PSA, LDH, AP, T, ctDNA, and rectal swab

Days 1–30:
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SABR: 29% of pts have progressed @ 6-mos

P=0.049

Presented by Phuoc Tran (PI), ASCO GU 2018 and PCF retreat 2018
<table>
<thead>
<tr>
<th>Site</th>
<th>Number of sites IR</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Florida (NCT018592221)</td>
<td>NS</td>
</tr>
<tr>
<td>CROP trial (Toronto; NCT02563691)</td>
<td>≤5</td>
</tr>
<tr>
<td>Sidney Kimmel CC (NCT02489357)</td>
<td>≤4</td>
</tr>
<tr>
<td>Mayo clinic (NCT01777802)</td>
<td>≤3</td>
</tr>
<tr>
<td>Spain (NCT02192788)</td>
<td>≤4</td>
</tr>
<tr>
<td>Ghent Uni (NCT01558427)</td>
<td>≤3</td>
</tr>
<tr>
<td>Dresden Uni (OncoRay; NCT02264379)</td>
<td>≤5</td>
</tr>
<tr>
<td>City of Hope (NCT00544830)</td>
<td>≤5</td>
</tr>
<tr>
<td>MSKCC (NCT02020070)</td>
<td>≤10</td>
</tr>
<tr>
<td>ORIOLE</td>
<td>≤3</td>
</tr>
<tr>
<td>GETUG P07 (NCT02274779)</td>
<td>≤5 (nodes only)</td>
</tr>
<tr>
<td>Site</td>
<td>Number of sites IR</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>--------------------</td>
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Case example: SBRT to T6 and L Hip

PSMA-PET
De novo M1 disease: Is there a role for RT?

Identifying Optimal Candidates for Local Treatment of the Primary Tumor Among Patients Diagnosed with Metastatic Prostate Cancer: A SEER-based Study

Nicola Fossati, Quoc-Dien Trinh, Jesse Sammon, Akshay Sood, Alessandro Larcher, Maxine Sun, Pierre Karakiewicz, Giorgio Guazzoni, Francesco Montorsi, Alberto Briganti, Mani Menon, Firas Abdallah

Improved Survival With Prostate Radiation in Addition to Androgen Deprivation Therapy for Men With Newly Diagnosed Metastatic Prostate Cancer

Chad G. Rusthoven, Bernard L. Jones, Thomas W. Fraig, E. David Crawford, Matthew Koshy, David J. Sher, Usama Mahmood, Ronald C. Chen, Brian F. Chapin, Brian D. Kavanagh, and Thomas J. Pugh

2015

2016

[Graphs showing survival rates with and without local treatment]
De novo M1 disease: Is there a role for RT?

Identifying Optimal Candidates for Local Treatment of the Primary Tumor Among Patients Diagnosed with Metastatic Prostate Cancer: A SEER-based Study

Nicola Fossati, a,b Quoc-Dien Trinh, c Jesse Sammon, d Akshay Sood, d Alessandro Larcher, b,c Maxine Sun, c Pierre Karakiewicz, c Giorgio Guazzoni, b Francesco Montorsi b, Alberto Briganti b, Mani Menon b Firas Abdallah b,a

Improved Survival With Prostate Radiation in Addition to Androgen Deprivation Therapy for Men With Newly Diagnosed Metastatic Prostate Cancer

Chad G. Rushton, Bernard L. Jones, Thomas W. Flaig, E. David Crawford, Matthew Kosh, David J. Sher, Usama Mahmood, Ronald C. Chen, Brian F. Chapin, Brian D. Kavanagh, and Thomas J. Pugh

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De novo M1 disease: Is there a role for RT?

Parker and investigators, STAMPEDE, UK

Boeve and investigators, HORRAD, Netherlands

Patients eligible for STAMPEDE

NEWLY DIAGNOSED M1 PATIENTS¹

ALL OTHER PATIENTS²

RANDOMIZATION

A ADT

H Arm A + RT to prostate

J Arm A + abiraterone + enzalutamide

RANDOMIZATION

A ADT (+RT if N0 M0)

J Arm A + abiraterone + enzalutamide

RT regime to the prostate:
- 55 Gy in 20#
- 36 Gy in 6#, once a week (6 Gy/#)
- IMRT/3D-CRT

RT regime to the prostate:
- 70 Gy in 35#
- 57.76 Gy in 19#
- IMRT/3D-CRT

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**De novo M1 disease: Is there a role for RT?**

Radiotherapy to the primary tumour for newly diagnosed, metastatic prostate cancer (STAMPEDE): a randomised controlled phase 3 trial

Christopher C Parker, Nicholas D James, Christopher D Brawley, Noel W Clarke, Alex P Hoyle, Adrian All, Alistair W S Ritchie, Gerhard Attard, Simon Chowdhury, William Cross, David F Dearmady, Sille Gillesean, Clare Gibson, Robert Jones, Ruth E Longley, Zafar I Malik, Malcolm D Mamo, David Matheson, Robin Millman, J Martin Russell, George N Thalmann, Claire L Amos, Roberto Alvari, Amit Buhl, Alison Birtie, Omar Dino, Hassan Daein, Chinmayani Eswar, Joanna Gale, Melissa R Gunnor, Sai Jannada, Sara Khukas, Jason P Lester, Joe M O'Sullivan, Omri A Pankh, Ian D Pedley, Delia M Pudney, Denise J Sheehan, Narayanan Nair Shri, Anna T H Tran, Mitesh K B Parmar*, Matthew R Sydes*, on behalf of the Systemic Therapy for Advanced or Metastatic Prostate cancer: Evaluation of Drug Efficacy (STAMPEDE) investigators

Effect on Survival of Androgen Deprivation Therapy Alone Compared to Androgen Deprivation Therapy to the Prostate in Patients with Primary Bone Metastatic Prostate Cancer in a Prospective Randomised Clinical Trial: Data from the HORRAD Trial

Platinum Priority – Prostate Cancer 2018

Lancet 2018

![Graph showing overall survival in low metastatic burden between control and radiotherapy groups](image)
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Radiotherapy to the primary tumour for newly diagnosed, metastatic prostate cancer (STAMPEDE): a randomised controlled phase 3 trial

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Lancet 2018

Effect on Survival of Androgen Deprivation Therapy Alone Compared to Androgen Deprivation Therapy Combined with Concurrent Radiation Therapy to the Prostate in Patients with Primary Bone Metastatic Prostate Cancer in a Prospective Randomised Clinical Trial: Data from the HORRAD Trial

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Lancet 2018
Prostate Radiotherapy for Metastatic Hormone-sensitive Prostate Cancer: A STOPCAP Systematic Review and Meta-analysis

Sarah Burdett, Liselotte M. Boevé, Fiona C. Ingleby, David J. Fisher, Larysa H. Rydzewska, Claire L. Vale, George van Andel, Noel W. Clarke, Maarten C. Hulshof, Nicholas D. James, Christopher C. Parker, Mahesh K. Parmar, Christopher J. Sweeney, Matthew R. Sydes, Bertrand Tombal, Paul C. Verhagen, Jayne F. Tierney, the STOPCAP M1 Radiotherapy Collaborators

**Intervention:** We included trials that randomised men to prostate radiotherapy and androgen deprivation therapy (ADT) or ADT only.

**Outcome measurements and statistical analysis:** Hazard ratios (HRs) for the effects of prostate radiotherapy on survival, progression-free survival (PFS), failure-free survival (FFS), biochemical progression, and subgroup interactions were combined using fixed-effect meta-analysis.

**Results and limitations:** We identified one ongoing (PEACE-1) and two completed (HORRAD and STAMPEDE) eligible trials. Pooled results of the latter (2126 men; 90% of those eligible) showed no overall improvement in survival (HR = 0.92, 95% confidence interval [CI] 0.81–1.04, p = 0.195) or PFS (HR = 0.94, 95% CI 0.84–1.05, p = 0.238) with prostate radiotherapy. There was an overall improvement in biochemical progression (HR = 0.74, 95% CI 0.67–0.82, p = 0.94 × 10⁻⁸) and FFS (HR = 0.76, 95% CI 0.69–0.84,
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Sarah Burdett a,*, Liselotte M. Boevé b,c,†, Fiona C. Ingleby d,†, David J. Fisher a, Larysa H. Rydzewska a, Claire L. Vale a, George van Andel c, Noel W. Clarke e, Maarten C. Hulshof f, Nicholas D. James g, Christopher C. Parker h, Mahesh K. Parmar d, Christopher J. Sweeney i, Matthew R. Sydes d, Bertrand Tombal j, Paul C. Verhagen k, Jayne F. Tierney a, the STOPCAP M1 Radiotherapy Collaborators

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Evolution of Management of M1 PCa

Locally Advanced
(High risk of occult metastases)
Clinical: cT3-4; GS 8-10; PSA>20-50
Molecular: Genomic instability; SCHLAP1+ve
Treatment: Long-term androgen deprivation (ADT) + Radiotherapy (IGRT vs IGRT + Brachytherapy boost); Radical Prostatectomy +/- Pelvic nodal dissection

Oligometastatic state
(Limited systemic disease)
Clinical: cT2-4; GS 7-10; PSA>50-150;
De novo vs Recurrent
Site-specific – LN vs Bone vs Visceral
Molecular Hallmarks: Genomic instability; SCHLAP1+ve; BRCA2-mut
Treatment: Systemic vs Local?

Disseminated Hormone-sensitive
Clinical: M1; high-volume disease (visceral or multiple bone); PSA >150
Treatment: ADT + Systemic agent (Docetaxel vs Zytiga)

Disseminated Castrate-resistant
Clinical: Poor prognosis; high-volume
Treatment: Chemotherapy; Novel systemic agents (Enza, ARN509, Zytiga, Rad223, Lu-PSMA)

PET imaging

CT, Bone Scan, MRI, PSA

Local treatment intensification

Systemic intensification

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Summary

- Acute emergence of data “supporting” the value of intensive local therapy in advanced disease
  - *Is RT the magic bullet to “catch them all”?*
  - *>70 Gy RT* to primary and metastatic sites
  - Data is stronger for *N+ & oligometas (≤5 sites)*

- Understand the biology driving progression of advanced disease
  - *True oligometastases vs occult poly-metastases*
  - *Better patient selection for local tx -> Health economics and burden of over-tx*

- Optimising systemic therapy is still crucial to maximize therapeutic ratio for combinatorial systemic-RT
Thank you!

Collaborations/positions (melvin.chua.l.k@singhealth.com.sg)

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