Docetaxel and/or zoledronic acid for hormone-naïve prostate cancer: First survival results from STAMPEDE

Nicholas James
University of Warwick and Queen Elizabeth Hospital Birmingham

on behalf of

Matthew Sydes, Malcolm Mason, Noel Clarke, David Dearnaley, Melissa Spears, Robin Millman, Chris Parker, Alastair Ritchie, J. Martin Russell, John Staffurth, Robert Jones, Shaun Tolan, John Wagstaff, Andrew Protheroe, Rajaguru Srinivasan, Alison Birtle, Joe O'Sullivan, Richard Cathomas, Mahesh Parmar and the STAMPEDE Investigators
Setting and hypothesis

• Setting
  ▪ Hormone therapy the mainstay of treatment since 1940s
  ▪ Addition of radiotherapy to N0M0 disease improves outcomes

• Hypothesis
  ▪ Early use of active therapies may give a larger absolute benefit in overall survival
Rationale for study agents

• **Docetaxel**
  - Prolongs survival in metastatic castrate refractory disease
  - Well tolerated in elderly population

• **Zoledronic acid**
  - Reduces skeletal related events in bony metastatic castrate refractory disease
  - At time of set up under investigation as metastasis prevention agent in range of settings

• **Combination therapy**
  - In vitro evidence of synergy
  - Anticipated the combination well tolerated
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Inclusion criteria

Newly-diagnosed
Any of:
• Metastatic
• Node-Positive
• ≥2 of: Stage T3/4
  PSA ≥ 40ng/ml
  Gleason 8-10

Full criteria
www.stampedetrial.org
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Relapsing after previous RP or RT with ≥1 of:
• PSA ≥4ng/ml and rising with doubling time <6m
• PSA ≥20ng/ml
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• Metastatic

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• Node-positive
• Metastatic

All patients
Fit for all protocol treatment
Fit for follow-up
WHO performance status 0-2
Written informed consent

Full criteria
www.stampedetrial.org
Outcome measures

Primary outcome measure
Overall survival
## Outcome measures

### Primary outcome measure
- Overall survival

### Secondary outcome measures
- Failure-free survival (FFS)
- Toxicity
- Quality of life
- Skeletal-related events
- Cost effectiveness
### Outcome measures

<table>
<thead>
<tr>
<th>Primary outcome measure</th>
<th>Secondary outcome measures</th>
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<tbody>
<tr>
<td>Overall survival</td>
<td>Failure-free survival (FFS)</td>
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<tr>
<td></td>
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<td>Skeletal-related events</td>
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<td></td>
<td>Cost effectiveness</td>
</tr>
</tbody>
</table>

### FFS definition

First of:
- PSA failure
- Local failure
- Lymph node failure
- Distant metastases
- Prostate cancer death
## Outcome measures

**Primary outcome measure**
- Overall survival

**Secondary outcome measures**
- Failure-free survival (FFS)
- Toxicity
- Quality of life
- Skeletal-related events
- Cost effectiveness

### FFS definition
First of:
- PSA failure
- Local failure
- Lymph node failure
- Distant metastases
- Prostate cancer death

### PSA failure definition
PSA fall $\geq 50\%$
- $\rightarrow$ 24wk nadir + 50% and $\rightarrow$ >4ng/ml

PSA fall of <50%
- $\rightarrow$ failure at $t=0$
Multi-arm multi-stage (MAMS) design

For each research comparison

• Allocation ratio of 2 control to 1 research

• Target 25% relative improvement in overall survival
  ▪ HR=0.75

• Interim analysis
  ▪ 3 lack-of-benefit analyses on failure-free survival

• Main analysis on primary outcome measure
  → Requires ~400 control arm deaths
  ▪ Power and alpha 90% and 0.025, 1-sided

Overall original comparisons

▪ Power and alpha 83% and 0.013, 1-sided
▪ Familywise error rate ~5%
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Over all original comparisons

▪ Power and alpha 83% and 0.013, 1-sided
▪ Familywise error rate \(~5\%)
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STAMPEDE: Initiation

Trial arms:

- A: Standard-of-care (SOC) = ADT (+/-RT)
- B: SOC + zoledronic acid
- C: SOC + docetaxel
- D: SOC + celecoxib
- E: SOC + zoledronic acid + docetaxel
- F: SOC + zoledronic acid + celecoxib

Oct-2005: Start of trial

- Accrual - past
- Accrual - future
- FU and main analysis
STAMPEDE: Activity Stage 2 -- celecoxib stops accrual

STAMPEDE: All docetaxel and zoledronic acid comparisons

A = ~1200 pts --> ~404 primary outcome measure events
B = ~600 pts, C = ~600 pts, E = ~600 pts
Comparison
Open: Oct-2005
Closed: Mar-2013
Accrual: 2962

Number of patients
1184 A Standard-of-care (SOC)
593  B SOC + zoledronic acid
592  C SOC + docetaxel
593  E SOC + zoledronic acid + docetaxel
Accrual

Comparison
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1184 A Standard-of-care (SOC)
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## Patient characteristics

<table>
<thead>
<tr>
<th>Percentage</th>
<th>WHO PS 1</th>
<th>WHO PS 2</th>
<th>Median age</th>
</tr>
</thead>
<tbody>
<tr>
<td>21%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65yr</td>
<td></td>
<td></td>
<td>(min 40, max 84)</td>
</tr>
</tbody>
</table>

- Planned for RT (72% of N0M0 pts)
- Previous local therapy
- LHRH analogues 29%
- Metastatic (85% Bony mets)
- 24% N+M0
- 98% N0M0

Balanced by arm

[s] Stratification factors + hospital + NSAID/aspirin
### Patient characteristics

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>[s]</th>
</tr>
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<td>[s]</td>
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</tr>
<tr>
<td>61%</td>
<td>Metastatic</td>
<td>[s]</td>
</tr>
<tr>
<td></td>
<td>(85% Bony mets)</td>
<td></td>
</tr>
<tr>
<td>15%</td>
<td>N+M0</td>
<td></td>
</tr>
<tr>
<td>24%</td>
<td>NOMO</td>
<td></td>
</tr>
</tbody>
</table>

Balanced by arm

[s] Stratification factors + hospital + NSAID/aspirin
## Patient characteristics

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<td>LHRH analogues</td>
<td>[s]</td>
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<td>29%</td>
<td>Planned for RT (72% of N0M0 pts)</td>
<td>[s]</td>
</tr>
<tr>
<td>6%</td>
<td>Previous local therapy</td>
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</tr>
</tbody>
</table>

Balanced by arm

[s] Stratification factors + hospital + NSAID/aspirin
Zoledronic acid: Failure-free survival

**SOC**
- Median FFS (95% CI): 21m (18, 24m)

**SOC+ZA**
- Median FFS (95% CI): 21m (18, 25m)

**HR (95%CI)**
- 0.93 (0.82, 1.05)
- P-value: 0.26

**Non-PH p-value**: 0.99

**Restricted mean FFS time**
- SOC: 35.2m
- SOC+Doc: 36.9m
- Diff (95%CI): 1.7m (-0.8, 4.2m)
Zoledronic acid: Survival

SOC: 405 deaths
SOC+ZA: 197 deaths

HR (95%CI): 0.93 (0.79, 1.11)
P-value: 0.44

Non-PH p-value: 0.83

Median OS (95% CI):
SOC: 67m (60, 91m)
SOC+ZA: 80m (70, NR)

Restricted mean OS time:
SOC: 58.5m
SOC+Doc: 59.5m
Diff (95%CI): 1.0m (-1.4, 3.4m)
Docetaxel: Failure-free survival

<table>
<thead>
<tr>
<th>Group</th>
<th>Events</th>
<th>Median FFS (95% CI)</th>
<th>HR (95% CI)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC</td>
<td>750</td>
<td>21m (18, 24m)</td>
<td>0.62 (0.54, 0.70)</td>
<td>&lt;0.00000000001*</td>
</tr>
<tr>
<td>SOC+Doc</td>
<td>371</td>
<td>37m (33, 42m)</td>
<td></td>
<td>0.0002</td>
</tr>
</tbody>
</table>

Non-PH p-value 0.0002

Restricted mean FFS time
- SOC: 35.3m
- SOC+Doc: 44.4m

Diff (95% CI): 9.1m (6.3, 11.9m)

*exact p-value 0.0000000000002014
Docetaxel: Survival

- SOC: 405 deaths
- SOC+Doc: 165 deaths

HR (95%CI): 0.76 (0.63, 0.91)
P-value: 0.003

Non-PH p-value: 0.51

Median OS (95% CI):
- SOC: 67m (60, 91m)
- SOC+Doc: 77m (70, NR)

Restricted mean OS time:
- SOC: 58.8m
- SOC+Doc: 63.4m

Diff (95%CI): 4.6m (1.8, 7.3m)
Docetaxel: Survival

**SOC**

- 405 deaths
- HR (95%CI) 0.76 (0.63, 0.91)
- P-value 0.003

**SOC+Doc**

- 165 deaths
- Non-PH p-value 0.51

**Median OS (95% CI)**

- SOC 67m (60, 91m)
- SOC+Doc 77m (70, NR)

**Restricted mean OS time**

- SOC 58.8m
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- Diff (95%CI) 4.6m (1.8, 7.3m)
Docetaxel: Survival

<table>
<thead>
<tr>
<th></th>
<th>SOC deaths</th>
<th>SOC+Doc deaths</th>
<th>HR (95%CI)</th>
<th>P-value</th>
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<tr>
<td>SOC</td>
<td>405</td>
<td>165</td>
<td>0.76 (0.63, 0.91)</td>
<td>0.003</td>
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<tr>
<td>SOC+Doc</td>
<td>165</td>
<td>405</td>
<td></td>
<td>0.51</td>
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Non-PH p-value 0.51

Median OS (95% CI):
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Restricted mean OS time:
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- SOC+Doc: 63.4m
Diff (95%CI): 4.6m (1.8, 7.3m)
Zoledronic acid + docetaxel: Failure-free survival

SOC 750 FFS events
SOC+ZA+Doc 371 FFS events

HR (95%CI) 0.62 (0.54, 0.71)
P-value <0.0000000001*a

Non-PH p-value <0.0000000001*b

Median FFS (95% CI)
SOC 21m (18, 24m)
SOC+ZA+Doc 37m (31, 42m)

Restricted mean FFS time
SOC 35.3m
SOC+ZA+Doc 43.5m
Diff (95%CI) 8.2m (5.5, 11.1m)

*aexact HR p-value 0.000000000005038
*bexact non-PH p-value 0.000000010376
Zoledronic acid + docetaxel: Survival

SOC 405 deaths
SOC+ZA+Doc 181 deaths
HR (95%CI) 0.81 (0.68, 0.97)
P-value 0.02
Non-PH p-value 0.40

Median OS (95% CI)
SOC 67m (60, 91m)
SOC+ZA+Doc 72m (63, 90m)

Restricted mean OS time
SOC 58.4m
SOC+Doc 61.5m
Diff (95%CI) 3.4m (0.5, 6.2m)
Consistency of treatment effect

• Subgroups included:
  - Metastatic status (M0, M1)
  - Nodal status (N0, N+, NX)
  - Gleason sum score (≤7, 8+, unknown)
  - PSA pre-hormone therapy (0-20ng/ml, 20-40, 40-100, 100+)
  - Age at randomisation (under 70, 70 or over)
  - WHO PS (0, 1-2)
  - NSAID/Aspirin use (no use, uses either)

• No good evidence of heterogeneity
Consistency of treatment effect

• Subgroups included:
  - Metastatic status (M0, M1)
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• No good evidence of heterogeneity
Treatment effect by metastatic status: FFS

Pre-planned analysis

<table>
<thead>
<tr>
<th>Mets status</th>
<th>FFS events</th>
<th>No. pts</th>
<th>Haz. Ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD</td>
<td>255</td>
<td>686</td>
<td>0.98 (0.75, 1.28)</td>
</tr>
<tr>
<td>M1</td>
<td>866</td>
<td>1091</td>
<td>0.90 (0.78, 1.04)</td>
</tr>
<tr>
<td>Overall</td>
<td>1121</td>
<td>1777</td>
<td>0.93 (0.82, 1.05)</td>
</tr>
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</table>

+ZA

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<tr>
<td>MD</td>
<td>229</td>
<td>689</td>
<td>0.57 (0.42, 0.76)</td>
</tr>
<tr>
<td>M1</td>
<td>832</td>
<td>1087</td>
<td>0.62 (0.54, 0.73)</td>
</tr>
<tr>
<td>Overall</td>
<td>1061</td>
<td>1776</td>
<td>0.62 (0.54, 0.70)</td>
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+Doc

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<tr>
<td>MD</td>
<td>232</td>
<td>687</td>
<td>0.70 (0.52, 0.94)</td>
</tr>
<tr>
<td>M1</td>
<td>832</td>
<td>1090</td>
<td>0.60 (0.52, 0.70)</td>
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<td>Overall</td>
<td>1064</td>
<td>1777</td>
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+ZA+Doc
Treatment effect by metastatic status: Overall survival

Pre-planned analysis

<table>
<thead>
<tr>
<th>Mets status</th>
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<tbody>
<tr>
<td>M0</td>
<td>93</td>
<td>686</td>
<td>0.96 (0.62, 1.48)</td>
</tr>
<tr>
<td>M1</td>
<td>509</td>
<td>1091</td>
<td>0.92 (0.76, 1.11)</td>
</tr>
<tr>
<td>Overall</td>
<td>602</td>
<td>1777</td>
<td>0.93 (0.79, 1.11)</td>
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+ZA

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<td>689</td>
<td>1.01 (0.65, 1.56)</td>
</tr>
<tr>
<td>M1</td>
<td>477</td>
<td>1087</td>
<td>0.73 (0.59, 0.89)</td>
</tr>
<tr>
<td>Overall</td>
<td>570</td>
<td>1776</td>
<td>0.76 (0.63, 0.91)</td>
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+Doc

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<tr>
<td>M0</td>
<td>91</td>
<td>687</td>
<td>1.03 (0.66, 1.61)</td>
</tr>
<tr>
<td>M1</td>
<td>495</td>
<td>1090</td>
<td>0.78 (0.65, 0.95)</td>
</tr>
<tr>
<td>Overall</td>
<td>586</td>
<td>1777</td>
<td>0.81 (0.68, 0.97)</td>
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+ZA+Doc
Docetaxel: Survival – M1 Patients

SOC  343 deaths
SOC+Doc  134 deaths
HR (95%CI)  0.73 (0.59, 0.89)
P-value  0.002
Non-PH p-value  0.23

Median OS (95% CI)
SOC  43m (24, 88m)
SOC+Doc  65m (27, NR)

Restricted mean OS time
SOC  49.3m
SOC+Doc  56.1m
Diff (95%CI)  6.8m (2.8, 11.0m)
Docetaxel treatment

**Target Dose:** 75mg/m$^2$, every 3 weeks for 6 cycles (+prednisolone 10mg od)
Docetaxel treatment

**Target Dose:** 75mg/m², every 3 weeks for 6 cycles (+prednisolone 10mg od)

<table>
<thead>
<tr>
<th></th>
<th>Doc</th>
<th>ZA+Doc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report receiving 6 cycles</td>
<td>76%</td>
<td>69%</td>
</tr>
<tr>
<td>Report receiving ≥5 cycles</td>
<td>80%</td>
<td>74%</td>
</tr>
</tbody>
</table>
Zoledronic acid treatment

**Target Dose:** 4mg every 3 weeks, up to 18 weeks then every 4 weeks up to 2 years
## Grade 3+ adverse events ever reported

<table>
<thead>
<tr>
<th>Patients randomised</th>
<th>A (SOC)</th>
<th>B (SOC+ZA)</th>
<th>C (SOC+Doc)</th>
<th>E (SOC+ZA+Doc)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1184</td>
<td>593</td>
<td>592</td>
<td>593</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patients with adverse event data</th>
<th>A (SOC)</th>
<th>B (SOC+ZA)</th>
<th>C (SOC+Doc)</th>
<th>E (SOC+ZA+Doc)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1174</td>
<td>587</td>
<td>579</td>
<td>564</td>
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<table>
<thead>
<tr>
<th>Grade 3-5 AE (G5)</th>
<th>N</th>
<th>%</th>
<th>N</th>
<th>%</th>
<th>N</th>
<th>%</th>
<th>N</th>
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<tbody>
<tr>
<td></td>
<td>363</td>
<td>31%</td>
<td>185</td>
<td>31%</td>
<td>291</td>
<td>51%</td>
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<td>52%</td>
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<thead>
<tr>
<th>Adverse Event Category</th>
<th>A (SOC)</th>
<th>B (SOC+ZA)</th>
<th>C (SOC+Doc)</th>
<th>E (SOC+ZA+Doc)</th>
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<tbody>
<tr>
<td>Endocrine disorder</td>
<td>12%</td>
<td>12%</td>
<td>10%</td>
<td>12%</td>
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<tr>
<td>Blood and lymphatic (febrile neutropenia)</td>
<td>1%</td>
<td>2%</td>
<td>12%</td>
<td>12%</td>
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<tr>
<td>Blood/bone marrow (neutrophils)</td>
<td>1%</td>
<td>1%</td>
<td>12%</td>
<td>11%</td>
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<tr>
<td>General disorder</td>
<td>4%</td>
<td>5%</td>
<td>8%</td>
<td>11%</td>
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<tr>
<td>Musculo-skeletal</td>
<td>5%</td>
<td>5%</td>
<td>6%</td>
<td>8%</td>
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<tr>
<td>Gastrointestinal disorder</td>
<td>3%</td>
<td>3%</td>
<td>7%</td>
<td>7%</td>
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<tr>
<td>Renal</td>
<td>5%</td>
<td>4%</td>
<td>4%</td>
<td>6%</td>
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## Grade 3+ adverse events ever reported

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
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<tr>
<td></td>
<td>SOC</td>
<td>SOC+ZA</td>
<td>SOC+Doc</td>
<td>SOC+ZA+Doc</td>
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<tr>
<td><strong>Patients randomised</strong></td>
<td>1184</td>
<td>593</td>
<td>592</td>
<td>593</td>
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<td><strong>Patients with adverse event data</strong></td>
<td>1174</td>
<td>587</td>
<td>579</td>
<td>564</td>
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<tr>
<td><strong>Grade 3-5 AE (G5)</strong></td>
<td></td>
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<tr>
<td><strong>N</strong></td>
<td>363 (3)</td>
<td>185 (1)</td>
<td>291 (3)</td>
<td>294 (7)</td>
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<tr>
<td><strong>%</strong></td>
<td>31%</td>
<td>31%</td>
<td>51%</td>
<td>52%</td>
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<tr>
<td><strong>Endocrine disorder</strong></td>
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<td></td>
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<tr>
<td><strong>Blood and lymphatic</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(febrile neutropenia)</td>
<td>1%</td>
<td>2%</td>
<td>12%</td>
<td>12%</td>
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<tr>
<td><strong>Blood/bone marrow</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(neutrophils)</td>
<td>1%</td>
<td>1%</td>
<td>12%</td>
<td>11%</td>
</tr>
<tr>
<td><strong>General disorder</strong></td>
<td></td>
<td></td>
<td></td>
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<td><strong>Musculo-skeletal</strong></td>
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<tr>
<td><strong>Renal</strong></td>
<td></td>
<td></td>
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</table>

- **Blood and lymphatic (febrile neutropenia)**: 1% (A), 2% (B), 12% (C), 12% (E)
- **Blood/bone marrow (neutrophils)**: 1% (A), 1% (B), 12% (C), 11% (E)
## Grade 3+ adverse events at 1 year

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Incidence</th>
<th>Rate</th>
<th>95%CI</th>
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<tr>
<td>SOC</td>
<td>71/732</td>
<td>9.7%</td>
<td>(7.6% to 11.8%)</td>
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<tr>
<td>SOC+ZA</td>
<td>40/377</td>
<td>10.6%</td>
<td>(7.5% to 13.7%)</td>
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<td>SOC+Doc</td>
<td>44/437</td>
<td>10.1%</td>
<td>(7.2% to 12.9%)</td>
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<tr>
<td>SOC+ZA+Doc</td>
<td>51/450</td>
<td>11.3%</td>
<td>(8.4% to 14.3%)</td>
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</table>

Early peak in toxicity during chemotherapy seems to settle by 1 year.
Time to first treatment for failure-free survival event

- treatment for progression given at the investigator’s discretion
Time to first “life-prolonging therapy” for progression

![Graph showing time to any life-prolonging therapy by trial arm and number of patients reporting progression.]

<table>
<thead>
<tr>
<th>Group</th>
<th>At risk (events)</th>
<th>Time from progression (Months)</th>
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<tbody>
<tr>
<td>SOC</td>
<td>750</td>
<td>0.00</td>
</tr>
<tr>
<td>SOC+ZA</td>
<td>371</td>
<td>0.00</td>
</tr>
<tr>
<td>SOC+Doc</td>
<td>311</td>
<td>0.00</td>
</tr>
<tr>
<td>SOC+ZA+Doc</td>
<td>314</td>
<td>0.00</td>
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Use of “life-prolonging therapy” for progression

<table>
<thead>
<tr>
<th></th>
<th>A SOC</th>
<th>B SOC+ZA</th>
<th>C SOC+Doc</th>
<th>E SOC+ZA+Doc</th>
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<tbody>
<tr>
<td>Pts with FFS event (n)</td>
<td>750</td>
<td>371</td>
<td>311</td>
<td>314</td>
</tr>
<tr>
<td>Life-prolonging therapy reported ever (n)</td>
<td>372</td>
<td>168</td>
<td>135</td>
<td>130</td>
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<tr>
<td>Docetaxel (%)</td>
<td>41%</td>
<td>36%</td>
<td>14%</td>
<td>15%</td>
</tr>
<tr>
<td>Abiraterone (%)</td>
<td>23%</td>
<td>19%</td>
<td>28%</td>
<td>27%</td>
</tr>
<tr>
<td>Enzalutamide (%)</td>
<td>7%</td>
<td>4%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Cabazitaxel (%)</td>
<td>3%</td>
<td>3%</td>
<td>6%</td>
<td>9%</td>
</tr>
<tr>
<td>Radium-223 (%)</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
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Use of “life-prolonging therapy” for progression

<table>
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<td>372</td>
<td>168</td>
<td>135</td>
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</table>

- **Docetaxel (%)**
  - A: 41%
  - B: 36%
  - C: 14%
  - E: 15%

- **Abiraterone (%)**
  - A: 23%
  - B: 19%
  - C: 28%
  - E: 27%

- **Enzalutamide (%)**
  - A: 7%
  - B: 4%
  - C: 7%
  - E: 7%

- **Cabazitaxel (%)**
  - A: 3%
  - B: 3%
  - C: 6%
  - E: 9%

- **Radium-223 (%)**
  - A: 0%
  - B: 0%
  - C: 1%
  - E: 1%
Conclusions

- Docetaxel improves survival for hormone-naive prostate cancer
- Zoledronic acid does not improve survival
- Adding both improves survival but offers no obvious benefit over adding just docetaxel
- Multi-arm, multi-stage trials are practicable and efficient
- Docetaxel should be:
  - Considered for routine practice in suitable men with newly-diagnosed metastatic disease
  - Considered for selected men with high-risk non-metastatic disease in view of substantial prolongation of failure-free survival
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## STAMPEDE investigators

### UNITED KINGDOM

<table>
<thead>
<tr>
<th>Location</th>
<th>Investigators</th>
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<tbody>
<tr>
<td>Cheltenham, Cheltenham General Hospital</td>
<td>(10; J Bowen, P Jenkins)</td>
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<td>Chester, Countess of Chester Hospital</td>
<td>(66; A Ibrahim)</td>
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<td>Colchester, Essex County Hospital</td>
<td>(7; B Sizer, M Kumar)</td>
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<td>Coventry, University Hospital Coventry and Warwickshire</td>
<td>(24; A Stockdale, J Worlding)</td>
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<td>Crewe, Leighton Hospital</td>
<td>(41; J Wylie)</td>
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<tr>
<td>Darlington, Darlington Memorial Hospital</td>
<td>(27; J Hardman, C Peedell, M Kagzi, T Mukhopadhyay)</td>
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<td>Derby, London Road Community Hospital</td>
<td>(16; P Chakraborti, D Muthukumar)</td>
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<td>Dudley, Russells Hall Hospital</td>
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<td>Durham, University Hospital of North Durham</td>
<td>(17; R McMenemin)</td>
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<td>Eastbourne, Eastbourne District General Hospital</td>
<td>(52; F McKinna)</td>
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<td>(10; N Gupta, L Melcher)</td>
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</table>
UNITED KINGDOM
• Larbert, Forth Valley Royal Hospital (22; N Sidek)
• Leeds, St James University Hospital (Leeds) (26; W Cross, S Prescott, D Bottomley, S Jain, C Loughrey, A Paul, A Henry, P Whelan)
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• Liverpool, Royal Liverpool University Hospital (37; Z Malik, C Eswar, P Robson)
• Liverpool, Triemlispital (1; D Siciliano)
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• London, Hammersmith Hospital (0; A Falconer, S Mangar)
• London, Queen Elizabeth Hospital (Woolwich) (18; S Hughes)
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• Nottingham, Nottingham University Hospitals, City Campus (59; S Sundar, J Mills, E Chadwick)
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- Redditch, Alexandra Hospital (13; J Hamilton)
- Romford, Queen's Hospital (Romford) (74; S Gibbs, R Subramaniam)
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- Southampton, Southampton General Hospital (48; C Heath, S Crabb, M Wheater)
- Southport, Southport and Formby District General Hospital (29; N Bhalla, C Eswar, A Sivapalasuntharam)
- St Leonards-on-Sea, Conquest Hospital (5; F McKinna, K Lees, S Beesley)
- Stevenage, Lister Hospital (27; R Hughes)
- Stockport, Stepping Hill Hospital (90; J Logue, A Adeyoju)
- Stockton-on-Tees, University Hospital of North Tees (10; D Shakespeare)
- Stoke-on-Trent, Royal Stoke Hospital (56; F Adab, R Bhana)
- Sunderland, Sunderland Royal Hospital (22; A Azzabi, I Pedley)
- Sutton, Royal Marsden Hospital (Sutton) (104; D Earmaley, C Parker, R Huddart, V Khoo)
- Sutton Coldfield, Good Hope Hospital (15; D Ford)
- Sutton-in-Ashfield, King's Mill Hospital (35; D Saunders, G Walker)
- Swansea, Singleton Hospital (122; J Wagstaff, G Bertelli, D Pudney, M Phan)
- Swindon, Great Western Hospital (40; D Cole, E Hill)
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- Westcliff on Sea, Southend University Hospital (51; D Tsang, I Ahmed, O Chan, N Sarwar)
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- Aarau, Hirslanden Medical Centre (3; R Popescu)
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- St Gallen, Kantonsspital St Gallen (5; D Engeler, S Prensser)
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Industry partners
Sanofi-Aventis
Novartis
Pfizer
Astellas
Janssen
Acknowledgements

And the 7000 men who have joined the trial to date

www.stampedetrial.org
Docetaxel and/or zoledronic acid for hormone-naïve prostate cancer: First survival results from STAMPEDE

Nicholas James
University of Warwick and Queen Elizabeth Hospital Birmingham

on behalf of

Matthew Sydes, Malcolm Mason, Noel Clarke, David Dearnaley, Melissa Spears, Robin Millman, Chris Parker, Alastair Ritchie, J. Martin Russell, John Staffurth, Robert Jones, Shaun Tolan, John Wagstaff, Andrew Protheroe, Rajaguru Srinivasan, Alison Birtle, Joe O'Sullivan, Richard Cathomas, Mahesh Parmar and the STAMPEDE Investigators