INTRODUCTION

- Ductal adenocarcinoma (DAC) is relatively rare but is the second most common subtype of prostate cancer (Pca), first described in 1967, after acinar adenocarcinoma (AAC) which accounts for over 90% of all primary PCas.
- DAC is also known as 'endometrioid' or 'papillary' carcinoma.
- We systematically interrogated the literature in order to clarify the epidemiology, diagnosis, management, progression and prognosis of DAC. (PROSPERO registration CRD42019122205)

METHODS

- We conducted a literature search of the following databases: Pubmed, Scopus, Web of Science, Ovid Embase and Cochrane Library.
- Search terms (stem): ductal adenocarcinoma OR prostate endometrioid carcinoma and variations of each.
- Followed PRISMA criteria.
- Included: all reports of cases of DAC.
- Excluded: review or meta-analysis, editorial comment, letter, book chapter or cancer biology.
- 106 studies eligible for inclusion:
  - 2,426,877 cases of Pca, of which 5,269 are DAC.
  - 50 case series and 56 case reports.

RESULTS

- Incidence of DAC is 0.19% on meta-analysis (range 0.08-13.4%).
- Mean PSA at presentation is 10.1 mcg/L on meta-analysis (16.2 mcg/L for AAC - Packiam, 2015).
- 15% of DAC presents as T3 stage on meta-analysis (9% of AAC).

- DAC has a poor prognosis compared to AAC on meta-analysis:
  - DAC CSS @ 5yrs = 80%, AAC CSS @ 5yrs = 96%.

- First treatments for localised DAC are typically radical prostatectomy (RP) and radiotherapy (RT).

<table>
<thead>
<tr>
<th>Study</th>
<th>Outcome measure</th>
<th>Endpoint (yr)</th>
<th>Total cases</th>
<th>RP (%)</th>
<th>RT (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Khan et al., 2017</td>
<td>BCR</td>
<td>5-6, BT-14</td>
<td>8 (59.0)</td>
<td>5 (81.0)</td>
<td></td>
</tr>
<tr>
<td>Igleslam et al., 2018</td>
<td>CSS</td>
<td>5-6, BT-14</td>
<td>8 (81.0)</td>
<td>5 (77.0)</td>
<td></td>
</tr>
<tr>
<td>Latchevski et al., 2010</td>
<td>CSS</td>
<td>5-6, BT-14</td>
<td>8 (81.0)</td>
<td>5 (77.0)</td>
<td></td>
</tr>
<tr>
<td>Khan et al., 2017</td>
<td>OS</td>
<td>5-6, BT-14</td>
<td>8 (81.0)</td>
<td>5 (77.0)</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Relative risk of biochemical relapse (BCR), cancer specific survival (CSS) and overall survival (OS) with ductal adenocarcinoma (DAC) vs acinar adenocarcinoma (AAC). Better outcomes in GREEN, worse outcomes in RED.

RESULTS continued

- DAC presents with a lower PSA and at a more advanced stage, compared to AAC.
- DAC has a worse prognosis, compared to AAC.
- There is currently no clinical consensus regarding the optimal treatment modality for DAC, although potential for peritoneal dissemination may caution against radical prostatectomy.
- Further research into the genetic composition, evolution, diagnosis and treatment of DAC is warranted.

CONCLUSIONS

- There is currently only low-level evidence (case studies) documenting DAC.
- DAC presents with a lower PSA and at a more advanced stage, compared to AAC.
- DAC has a worse prognosis, compared to AAC.
- There is currently no clinical consensus regarding the optimal treatment modality for DAC, although potential for peritoneal dissemination may caution against radical prostatectomy.
- Further research into the genetic composition, evolution, diagnosis and treatment of DAC is warranted.

REFERENCES