An unusual case of metastatic prostate cancer

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- 60 year old male of African descent.

- Oncologic History:
  - Diagnosed with prostate cancer in 2007: T3N1M0, Gleason 5+4
  - Feb 2008 - Goserelin
  - Sept 2008 - Radical radiotherapy to the prostate and pelvis.
  - June 2009 - Rising PSA, commenced maximal androgen blockade.
  - Feb 2010 - Rising PSA, bicalutamide withdrawn, but no response.
  - Aug 2010 - Docetaxel for 10 cycles.
  - Sept 2014 - PSA rising, referred to RMH.
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- When seen at RMH:
  - ECOG 1, mild pelvic pain.
  - Physical examination - Obese (BMI 46), mild pedal edema. Otherwise unremarkable.
  - Labs - Hb 95, otherwise unremarkable
  - PSA
    - 132 (Jan 2015),
    - 97 (Dec 2014),
    - 54 (Oct 2014),
    - 10 (Sept 2014)
- Imaging:
  - CT CAP: Small right sided pleural effusion, small volume ascites in surrounding liver and spleen, and also in the pelvis. Extensive peritoneal and omental infiltration with individual nodules measuring up to 2.5cm.
  - Bone Scan: Malignant superscan
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- Ascitic fluid aspirate:
  - cytology: smear shows mesothelial cells and groups of atypical cells in keeping with carcinoma.

- Cell block and immunohistochemistry:
  - Strong expression: AMACR, CAM5.2, EMA, CK19, Ca19.9
  - Focal expression: CEA, CK20, PSA, PSAP, and synaptophysin.
  - No expression of p63, CK903, ERG, CD56, NSE, Chromogranin or CK7.

- Conclusion: Morphology and IHC are consistent with metastatic poorly differentiated prostatic adenocarcinoma.
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- Prostate cancer with peritoneal metastases and ascites.
  - A rare site of metastases in prostate cancer
  - 16 case reports of malignant ascites in prostate cancer [Ani 2013]
  - Approximately 10% of ascites is due to malignancy, with ovarian and breast being the most common, followed by GI malignancies [Ayantunde 2007]
Pezaro et al 2013 - cohort of 356 CRPC patients treated at RMH:

- Liver 19.8%, Lung 13.1%, Peritoneum 3.6%, Adrenal 3%, brain/dura 3%
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- Conclusions and discussion:
  - Important to recognize rare presentations metastatic disease, and highlights the importance of consultation with expert pathologist to obtain the correct diagnosis.
  - Patient currently being treated with cabazitaxel.
  - Has had >30% PSA response after cycle 1.
  - Does the clinical phenotype suggest underlying molecular aberrations?
Thank you!

• References:


