Metastatic Castration Resistant Prostate Cancer with Complete Response After 6 Cycles of Immunotherapy
NOTHING TO DISCLOSE
General Information

- C.V.
- 81 years old
- Male
- (+) HTN, BPH
- 45 pack years of smoking
- No family history of cancer
- ECOG 1
Course of Disease

- Gradually increasing trend of PSA (1.92 – 2.69 – 2.9 – 3.5 – 4.3)
- TRUS with biopsy:
  - Atypical small acinar proliferation and benign prostatic tissues
  - IHC: adenocarcinoma

2009
Course of Disease

- s/p radical prostatectomy with lymph node dissection
- Histopathology report:
  - Moderately to poorly differentiated adenocarcinoma involving right apex, left apex, right midgland, left midgland Gleason score 9 with vascular invasion and extension to margin of resection
  - Right and left pelvic nodes (-)
  - Stage IIB (pT2N0M0)
Course of Disease

- **s/p radical prostatectomy with lymph node biopsy**
- **Histopathology report:**
  - Moderately to poorly differentiated adenocarcinoma
- **Post procedure PSA: 0.02ng/ml**

November 2009
Course of Disease

- Serial monitoring of PSA: 7.08ng/ml
- MRI of the pelvis: no residual or recurrent tumor on the surgical beds, focal bone lesion at L5 vertebra
- Started on Leuprolelin injection

2010
Complained of shooting pain, right lower extremity
Repeat MRI of the pelvis: L5 vertebra compression
s/p laminectomy
biopsy: metastatic adenocarcinoma, consistent with a prostate primary
Referred to medical oncology

2014
Course of Disease

- Seen by medical oncology
- Metastatic workup:
  - UTZ of liver: normal
  - CXR: PTB
  - Bone scan: (+) 9th right rib, posterior 11th left rib, L5 vertebra
- PSA: 34.89
- Docetaxel + Prednisone + Zoledronic acid – completed for 9 cycles

July 2014
Course of Disease

- PSA trend: 34.89 → 24.55 → 6.46 → 7.78
- Re – evaluation:
  - Bone scan: stable disease
  - UTZ of liver: normal
  - CXR: PTB
- Monitor PSA
Course of Disease

- PSA: 31.46 ng/ml
- Abiraterone acetate + Prednisone + Zoledronic acid
- Repeat PSA (August 2015): 69.05

Jan 2015

August 2015
Course of Disease

- Shifted to Enzalutamide + ZA
- PSA (Sept 2015): 61.63ng/ml
Course of Disease

- PSA: 93.98ng/ml
- Enzalutamide discontinued
- Started on Cabazitaxel + ZA – received 12 cycles
- PSA: 93.98 → 25 → 14.92 → 6.77
- Re – evaluation: Bone scan: new osteoblastic lesion in posterior 12\(^{th}\) R rib, proximal L femur

Nov 2015 - July 2016
Course of Disease

- PSA: 52 ng/ml → 63.84 ng/ml

- PET scan: metastatic bone disease R 10th rib, 11th L rib, R ilium/acetabular region, increase metabolic uptake L5, multiple non calcified nodules with mildly increased metabolic activity in both upper lobes
Course of Disease

- PSA: 89.3 ng/ml
- Carboplatin + ZA – received 9 cycles
- PSA trend: 89.3 → 27.1 → 21.09 → 46.21
- Re-evaluation: stable disease

Sept 2016 – Mar 2017
Course of Disease

- Started on cyclophosphamide – received 4 cycles
- PSA: 46.21 → 47.4 → 54

Mar 2017 - May 2017
Course of Disease

- Shifted to Pembrolizumab 200mg/IV
- PSA: 96.63 \(\rightarrow\) 0.02 \(\rightarrow\) 0.00 ng/ml
- PET scan: Regression of hypermetabolism in stable sclerotic osseous metastases in right ilium and right acetabulum; resolution of hypermetabolism along L5 and sacral area, no new FCh avid bone lesions, stable non specific pulmonary nodules, most likely inflammatory

June 2017 – Nov 2017
PET SCAN

August 25, 2016   December 15, 2017
2009 Prostate CA stage IIB

2014 Prostate cancer stage IV Leuprorelin injection

July 2014 – January 2015
9 cycles Docetaxel + ZA

April – July 2015
Abiraterone acetate + ZA

Enzalutamide + ZA

12 cycles of Cabazitaxel + ZA

Sept 2016 – March 2017
3 cycles of Carboplatin + ZA

Mar – May 2017
4 cycles of Cyclophosphamide + ZA

July 2017 – present
Pembrolizumab
Questions

- Duration of treatment?
- Option if patient progressed?
- Test for MSI or dMMR prior to starting IO?
Thank you for your attention!