HISTORY

- 76 year old male
- Mental status changes
- Right-sided vision changes
  - Double vision
  - Visual field deficit
- MRI - irregularly enhancing lesion (2 x 1 cm) in left occipital lobe
SPECIAL STAINS

- Cytokeratin cocktail +
- CAM5.2 +
- CK7 -
- CK20 -
- TTF1 -
- RCC -
- CD10 +
- CDX2 -
- Vimentin -
- GFAP -
- S100 -
ADDITIONAL HISTORY

• Prostatic adenocarcinoma, diagnosed 5 years ago
What is going on in the prostate biopsy?

Is the prostate the likely source of the brain metastasis?
INTRADUCTAL CARCINOMA OF THE PROSTATE (IDC-P)
Intraductal carcinoma of the prostate on needle biopsy: histologic features and clinical significance

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INTRADUCTAL CARCINOMA OF THE PROSTATE (IDC-P)

- Malignant cells filling large acini and prostatic ducts
- Preservation of basal cells
- Marked nuclear atypia
- Non-focal comedonecrosis
- Patterns: solid, dense cribriform, loose cribriform or micropapillary pattern
INTRADUCTAL CARCINOMA OF THE PROSTATE (IDC-P)

• 1985 by Kovi et al in a study of 139 cases of prostatic CA

• Involves entire lumen of prostatic ducts/acini with maintenance of the normal architecture
Importance of IDC-P

• IDC-P is associated with aggressive disease:
  – High Gleason score
  – Large tumor volume
  – Extra-prostatic extension of carcinoma
  – Presence of carcinoma at surgical margins
  – High incidence of associated invasive adenocarcinoma
  – Accelerated disease progression
INTRADUCTAL CARCINOMA OF THE PROSTATE (IDC-P)

Charles C Guo, Modern Pathology (2006) 19, 1528–1535
INTRADUCTAL CARCINOMA OF THE PROSTATE (IDC-P)

Charles C Guo, Modern Pathology (2006) 19, 1528–1535
Solid or Dense Cribriform Pattern
Loose Cribriform, Micropapillary

Charles C Guo, Modern Pathology (2006) 19, 1528–1535
DIFFERENTIAL DIAGNOSIS OF IDC-P

- High grade PIN
- Infiltrating cribriform acinar adenocarcinoma
- Ductal adenocarcinoma
- Intraductal spread of urothelial carcinoma
High grade PIN vs IDC-P

• **High grade PIN may show:**
  – Moderate nuclear atypia
  – Micropapillary or tufting pattern
  – Intact basal cell layer (may be partial)

• **High grade PIN does not show:**
  – Solid or dense cribriform pattern
  – Frequent comedonecrosis
  – Marked nuclear atypia, frequent mitoses
LOSS OF HETEROZYGOSITY (LOH)

Gleason grade 3  Absent
Gleason grade 4  29%
HGPIN           9%
IDC-P           60%

• IDC-P is not simple extension of dysplasia
• IDC-P does not represent invasion of Gleason grade 3 cancer into the ductal/acinar system
SUMMARY

• IDC-P represents an aggressive form of prostate carcinoma
• Frequently associated with high-grade invasive cancer and a poor prognosis
• Patients with IDC-P on biopsy must be treated aggressively
Thank you!

Dr. Raza
Dr. Cobb
Dr. Zuppan
Dr. Choo
Dr. Saukel
Dr. Wang
Brian Hutchins