

## Metastatic Prostate Cancer Masquerading as a Primary Sinus Tumor

Jue Wang\*

University of Arizona Cancer Center at Dignity Health, St. Joseph's Hospital and Medical Center, Phoenix, USA

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### Case Blog

Advanced prostate cancer commonly manifest with obstructive uropathy, regional lymphatic and axial skeleton metastases. Cranial metastases to the paranasal sinuses are extremely rare [1,2]. A 63-year-old male presented with a three-month history of progressive blurred vision and headache.

A Magnetic resonance imaging (MRI) of head revealed a mass invading the left ethmoid sinus. The patient underwent left endoscopic partial ethmoidectomy and the histopathological examination suggested metastatic adenocarcinoma, with positive staining to prostatic specific antigen (PSA), and prostatic acid phosphatase (PSAP); and negative for CK7, CK20, S100, P63, Ck20, NSE, synaptophysin, neurofilament, TTF-1, GCDPF-15, CD 117, ER and Sox10. A CT scan chest abdomen and pelvis, bone scan showed enlarged prostate with diffuse metastatic lesions to the appendicular and axial skeleton. A total serum prostate

specific antigen (PSA) value was 5000 ng/ml. He subsequently reported a history of rising PSA, biopsy was recommended but patient declined. Molecular profiling of tumor showed CDK12, TP53 mutation, MYC amplification, and FH (fumarate hydratase) mutation. He was treated with radiotherapy for total dose of 5040 cGy over 28 fractions and androgen deprivation with dramatic response. One year after diagnosis, the patient is alive with good quality of life.

The current case highlights that prostate cancer should be considered within the differential diagnosis of sinus lesion in elderly patients, even if no urological symptoms are reported. The molecular implication of FH mutation identified in this tumor deserve further investigation (Figure 1).

### References

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**Figure 1:** Magnetic resonance imaging (MRI) revealed a 4.5 × 4.5 × 3 cm mass invading the left ethmoid sinus.

**\*Corresponding author:** Jue Wang, University of Arizona Cancer Center at Dignity Health, St. Joseph's Hospital and Medical Center 625 N. 6th St, Phoenix, AZ 85004, USA, Tel: 602-406-8120; E-mail: [Jue.Wang@DignityHealth.org](mailto:Jue.Wang@DignityHealth.org)

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