Metastatic Prostate Cancer: A Case Study

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INTRODUCTION

Prostate cancer remains the second leading cause of death in men in the United States as of 2012. It is estimated that prostate cancer affected more than 241,000 new men in 2012, with 15% of these patients presenting with advanced disease.¹ As one would expect, compared to localized prostate cancer, metastatic disease remains the more challenging type to treat. In 1941 Huggins and Hodges demonstrated the dependence of prostatic tissues on androgens and from this work hormonal therapy was developed as the primary treatment for metastatic prostate cancer.² Since then, significant progress has been made in the treatment of metastatic prostate cancer, including advances in androgen deprivation therapy and in the treatment of castration-resistant prostate cancer (CRPC), with many advances yet to come. CPRC has been an exciting topic for recent research and advancement, as our understanding of how prostate cancer utilizes very low levels of androgen has evolved considerably.

CASE PRESENTATION

A 69-year-old man is referred to a urologist by his primary care physician after recent testing reveals a prostate-specific antigen (PSA) level of 4.3 ng/mL. The urologist performs a biopsy and the pathology shows Gleason 3+3 prostate cancer in 3/12 cores. After considering his options, the patient elects to undergo active surveillance. The following year, the patient undergoes a repeat biopsy, which again shows Gleason 3+3 in 3/12 cores, and his PSA remains stable. Two years after the original diagnosis, his PSA is found to be 11 ng/mL. He denies any new symptoms of bone pain or weight loss at that time. Due to the rapid PSA doubling time, a repeat prostate biopsy is again performed, which now shows Gleason 4+5 disease.

- What factors predict progression?
- How should this patient be restaged?

Initial evaluation after diagnosis of prostate cancer should include pretreatment parameters and