

**Abstract Form**

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| <b>Hospital Affiliation:</b>                 | Kern Medical Center   |                                     |                          |                          |                            |                          |                                     |
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| <b>Project Title:</b>                        | The Case of an Isolated Scapular Fracture   |                                     |                          |                          |                            |                          |                                     |
| <b>Research Category (please check one):</b> |   |                                     |                          |                          |                            |                          |                                     |
| <input type="checkbox"/>                     | <b>Original Research</b>  | <input checked="" type="checkbox"/> | <b>Clinical Vignette</b> | <input type="checkbox"/> | <b>Quality Improvement</b> | <input type="checkbox"/> | <b>Medical Education Innovation</b> |

**Abstract**

**Introduction:** Historically, prostate cancer diagnosis was steadily increasing before the previous decade, with the introduction of prostate-specific antigen (PSA) screening, diagnosis has additionally increased. On the other hand, before introduction of PSA screening, men were more likely to present with widespread prostate cancer metastasis in the axial skeleton: skull, spine, ribs, sacrum, and coccyx.

**Case Report:** 63-year-old Hispanic male, presented to the internal medicine outpatient clinic with right upper back pain and deformity. Pain started about two months prior to presenting to our clinic. He recalled a forceful mechanical movement as the inciting factor. Initially, he visited an outside network emergency department where x-ray showed scapular fracture; laboratory work, including PSA and Alkaline phosphatase levels were all within normal limits as well. Over time, pain and deformity over the scapula deteriorated, he suffered restrictive right shoulder motion. By the time he presented to our clinic, he reported mild knee and hip pain as well. Patient was closely followed up. Follow-up CT of the chest showed enhancing destructive soft tissue masses eroding posterior arch of left sixth and seventh rib, bilateral hilar lymphadenopathy, spread lung densities and nodularity with no masses, and destructive mass centered in the right scapula measuring 12.4 x 9.3 x 12.3 cm. X-rays of the hip and knee were normal. Repeated PSA level again was normal. AIP level was slightly above normal. Within 4 weeks, the patient's medical status abruptly deteriorated, manifested by urinary frequency, bowel and urine incontinence, and lower extremities weakness. He was admitted to hospital with a diagnosis of acute spinal cord compression. During hospital admission, right scapular biopsy showed positive CD99, CD10, vimentin, NKX 3.1 cytokeratin 81/83 leading to diagnosis of prostate cancer metastasis. Spine MRI showed enhancement through T11-S1, pathological compression fractures at L2, L3, and enhancement in sacrum and iliac wings. Patient was started on Bicalutamide, zoledronic acid, and followed by cGy radiation fraction. Additionally, the patient suffered a left femur fracture with corresponding biopsy pointing to prostate cancer metastasis as well. After stabilization, the patient was discharged with urology follow-up for prostate biopsy, and oncology for continuation of chemotherapy.

**Discussion:** Prostate cancer has multiple spectrum of disease at detection time. The majority of patients report a previous history of urinary obstruction, UTIs, hematuria, etc as part of the lower urinary tract symptoms (LUTS). After the development of PSA screening, the majority of patients diagnosed with prostate cancer present with localized cancer, and a minority of patients present with distant axial pain indicating an already state of metastasis. In the case of prostate cancer metastases, pain involved in the axial skeleton is, in most cases, already associated with hematuria or any LUTS. This patient's presentation, with an isolated scapular pain and mass, no LUTS, and no past medical history, including smoking, is an example of a multiple and rare spectrum of metastatic prostate cancer presentation that needs to be taken into consideration when proposing prostate cancer diagnosis