

# PATTERNS AND PRESENTATIONS OF ADVANCED PROSTATE CANCER IN ABA, SOUTH-EASTERN NIGERIA. AN 8 YEAR SINGLE CENTRE RETROSPECTIVE STUDY.

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## ABSTRACT

*Prostate Cancer is the most common cancer among men of African Ancestry with increasing morbidity and mortality.*

*This worsening morbidity and mortality has been attributed to a very late presentation of cases.*

*This study was a retrospective study spanning 8 years from January 2015 to December 2023. All were histopathologically confirmed. The aim was to review the pattern of clinical presentations. Out of the 202 cases, 190 (94.1%) were found to be advanced at presentation. Of these advanced diseases, the most common presentation was lower urinary tract symptoms (LUTS) with 80 cases (42.1%) followed by lower back pains with 45 cases (23.7%). Other main presentations were gross haematuria, gross weight loss, acute and chronic urinary retention.*

*In our environment, metastatic disease was the most common stage at presentation.*

**KEY WORDS** *Prostate cancer, stage at presentation, clinical presentation and Aba.*

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## INTRODUCTION:

Advanced Prostate cancer was historically defined as distant metastases. But currently, advanced prostate cancer includes:

- Widespread metastases
- Contiguous local spread
- Recurrence of PSA after failure of local or initial treatment otherwise known as resistance.

Prostate cancer is advanced when it has spread beyond the prostate or it has reoccurred after failure of initial treatment.

It is often grouped into 4 stages.

Early stage cancer includes stage 1 and 2. The tumor has not spread beyond the prostate.

**Stage 3** is locally advanced. It has gone beyond the prostate but only to nearby tissues or sites.

**Stage 4:** It is advanced with spread to lymph nodes, bones, liver and lungs. While stage 1 and stage 2 are early cancers, stage 3 and stage 4 are advanced cancer.

The TNM classification and staging adopted by the American Joint Committee on Cancer (AJCC) is the internationally accepted approach.

**State T1** – 2C is organ confined disease.

**Stage T3a** is extra-capsular extension

**Stage T3b** is invasion of seminal vesicles

**Stage T4** is tumor fixed or invading adjacent structures other than the seminal vesicle such as bladder neck, external sphincter, rectum and pelvic floor.

With nodal spread or extension, **NX** is regional lymph nodes not accessed.

**NO** is regional nodes involvement

**NI** is regional lymph nodes spread.

With distant metastatic spread,

**MO** represents no distant metastases.

**MI** represents distant metastases.

**MI** has sub-divisions.

**M1a** represents distant metastases other than regional nodes.

**M1b** represents metastases to bone

**M1c** represents metastases to other sites with or without bone involvement.

Advanced cancers can result from any combinations of haematogenous, lymphatic or contiguous local spread. The most important and established prognosticators for prostate cancers include:

- Gleason grade
- The extent of tumor volume
- And the presence of capsular penetration.

High grade cancers, particularly grade 4 and 5 are associated with adverse pathologic findings and disease progression.

The signs and symptoms of advance disease are:

- Anaemia
- Bone marrow suppression
- Weight loss
- Pathological fracture
- Spinal cord compression
- Haematuria
- Bone pains
- Ureteric obstruction
- Bladder outlet obstruction
- Urinary retention
- Chronic kidney diseases

- Urinary incontinence
- Bone and soft tissue metastases

While physical findings of adenopathy, lower extremity oedema and bone tenderness are highly suggestive of metastatic diseases, obliteration of the lateral sulcus or seminal vesicle involvement found during digital rectal examination may suggest a locally advanced disease.

## METHODOLOGY

This was a retrospective study of all histopathologically confirmed prostate cancers within an 8 year period, between January 2015 to December, 2023.

Their case files were withdrawn and all vital information gotten from them including age, presentations, histo-pathological results of biopsies done and treatment offered.

## INCLUSION CRITERIA

All patients who presented with histopathologically confirmed prostate cancer within this period were part of the study.

## EXCLUSION CRITERIA

Patients who presented with signs and symptoms of prostate cancer but with no histopathological confirmation were excluded from this study.

## RESULTS

Patients were aged between 40 to 100 years, median age was 65 and mean age was 69.5 years (variance =6.9) + or\_ 3SD.

Out of the 202 cases of histopathologically confirmed prostate cancer, 160 (79.2%) presented at metastatic stage while 30 (14.9%) presented with locally advanced disease. 12 (5.9%) had organ confined disease. The total number of patients that presented with advance disease was 190 (94.1%).

The pattern of clinical presentation of patients with advance disease showed that out of the 190 cases, 80 (42.1%) presented with lower urinary tract symptoms. (LUTS), followed by lower back and waist pains with 45 cases (23.7%).

14 (7.4%) had gross haematuria as main presentation while 10 (5.3%) had gross weight loss, 8 patients (4.2%) had presented with acute urinary retention while 6 (3.1%) presented with chronic retention of urine.

Less common modes of presentation included:

Paraparesis 4 (2.1%), paraplegia 3 (1.6%), chronic kidney disease 3 (1.6%). Others included urinary incontinence, extra-hepatic jaundice, pathological fracture and ureteric obstruction.

**TABLE 1 – SHOWING AGE GROU/CHARACTERISTICS OF THE CASES**

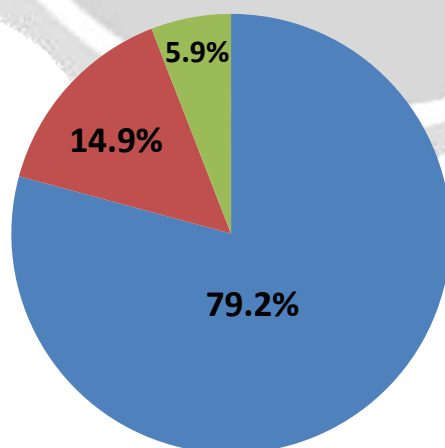
S/N	AGE GROUP	NUMBER	PERCENTAGE
1.	40 – 50 years	3	1.5%
2.	51 – 60 years	16	7.9%
3.	61 – 70 years	74	36.7%

4.	71 – 80 years	78	38.6%
5.	81 – 90 years	28	13.9%
6.	91 – 100 years	3	1.5%
7.	TOTAL	202	100%

**TABLE 2 – SHOWING CLINICAL STAGE AT PRESENTATION AND DIAGNOSIS**

S/N	CLINICAL STAGE	NUMBER	PERCENTAGE
1.	METASTATIC STAGE	160	79.2%
2.	LOCALLY ADVANCED STAGE	30	14.9%
3.	ORGAN CONFINED STAGE	12	5.9%
	TOTAL	202	100%

**FIG. 1. SHOWING THE CLINICAL STAGE AT PRESENTATION**



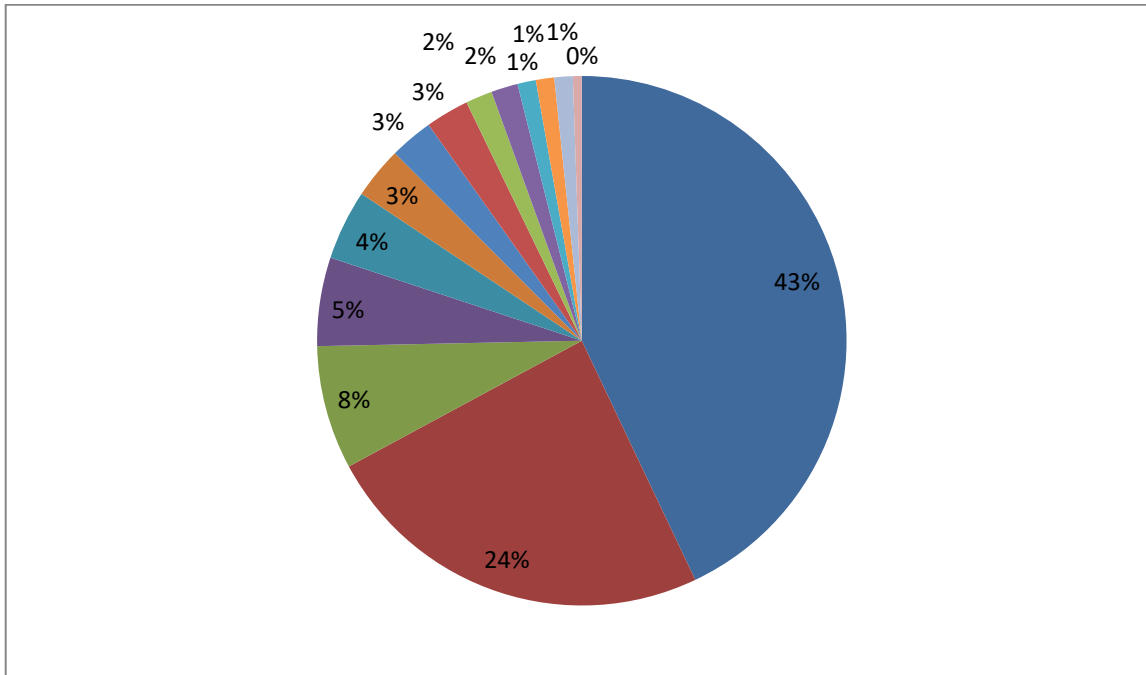
**TABLE 3 – SHOWING THE PATTERNS OF CLINICAL PRESENTATIONS**

<b>S/N</b>	<b>CLINICAL PRESENTATION</b>	<b>NUMBER</b>	<b>PERCENTAGE</b>
1.	LUTS	80	42.1%
2.	LOWER BACK PAINS	45	23.7%
3.	GROSS HAEMATURIA	14	7.4%
4.	GROSS WEIGHT LOSS	10	5.3%
5.	ACUTE RETENTION	8	4.2%
6.	CHRONIC RETENTION	6	3.1%
7.	ANAEMIA	5	2.6%
8.	CLOT RETENTION	5	2.6%
9.	PARAPARESIS	4	2.1%
10.	PARAPLEGIA	3	1.6%
11.	CHRONIC KIDNEY DISEASE	3	1.6%
12.	URINARY INCONTINENCE	2	1.1%
13.	EXTRA-HEPATIC JAUNDICE WITH PALPABLE ABDOMINAL LYMPH NODES	2	1.1%
14.	PATHOLOGICAL FRACTURE	2	1.1%
15.	UNILATERAL URETERIC OBSTRUCTION WITH HYDRO-URETERONEPHROSIS	1	0.53%
	<b>TOTAL</b>	<b>190</b>	<b>100%</b>

The table above presents the main symptoms and signs at presentation.

Most patients who presented with most differing clinical scenarios had initial LUTS before the onset of major presentations.

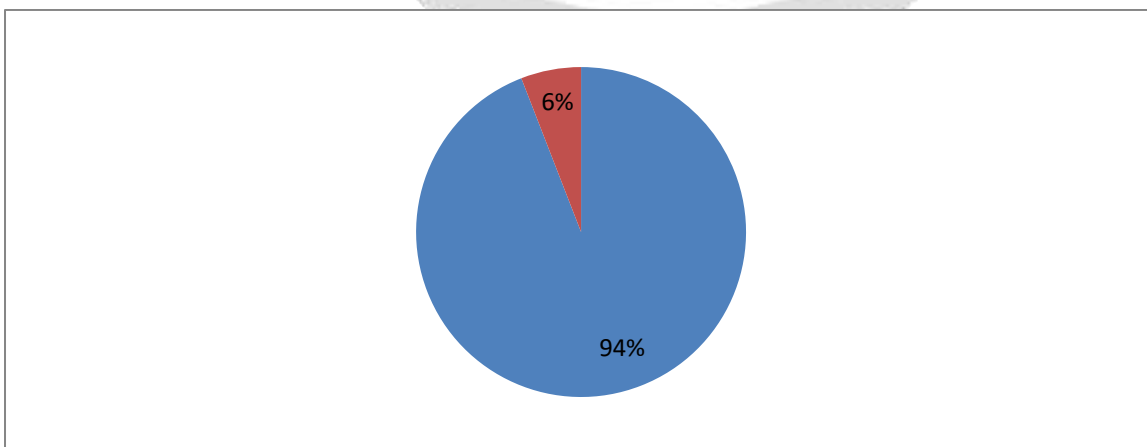
**FIG 2 – SHOWING THE PATTERN OF CLINICAL PRESENTATIONS**



**TABLE 4 – SHOWING ADVANCED DISEASE AT PRESENTATION**

S/N	CLINICAL STAGE	NUMBER	PERCENTAGE
1.	ADVANCED DISEASE - (STAGES 3 AND 4)	190	94.1%
2.	EARLY DISEASE – (STAGES 1 AND 2)	12	5.9%
	TOTAL	202	100%

**FIG 3 – SHOWING ADVANCED DISEASE AT PRESENTATION**



## DISCUSSION

The incidence of prostate cancer has been on the increase due to:

- Increased availability of diagnostic facilities
- Increasing awareness of the disease
- Increasing age of the population

But most of the patients present at an advanced stage of the disease due to:

- Ignorance
- Poverty

In our study, 94.1% of our patients presented at an advanced stage. This was similar to the work of Ekeke et al in Port-Harcourt in 2012.

Most of the patients presented with lower tract symptoms (LUTS) even before progression to worse clinical states. In our study, LUTS accounted for 42.1% of presentation followed by lower back pains with 23.7% of cases. Ahmed Elabaday et al in their work on unusual presentations of prostate cancer in 2011 concluded that prostate cancer should be considered in the differential diagnosis of elderly men presenting with supraclavicular lymph adenopathy, hydro-ureteronephrosis and constipation in the presence of normal DRE and PSA. In doubtful cases, PSA immuno-histochemical staining should be done.

According to SEER (Surveillance, Epidemiology and End Results) model, Americans have one in nine probability of developing invasive prostate cancers in their lifetime.

In its early stage, it is often Asymptomatic. Symptomatic disease usually implies worse disease with curative treatment becoming difficult.

Metastatic prostate cancer presenting with rectal involvement is rare but have been reported in literature.

Patients often present with upper and lower gastro-intestinal bleeding requiring upper and lower gastro-intestinal endoscopy. The cure of advanced prostate cancer remains elusive. Continuous advances in the management have improved the outlook and outcome.

Current therapeutic options include:

- Hormonal manipulation
- Chemotherapy
- Radiation therapy
- Surgery
- Biophosphonates
- Targeted therapy

Treatment choices are often influenced by:

- Life expectancy
- Co morbidities
- Tumor characteristics
- Patient's choice

## CONCLUSION

Prostate cancer is the most common cancer in Aba. Most of the patients present at an advanced stage of the disease. LUTS is the most common presentation. Therefore, men above 45 years of age presenting with LUTS, require comprehensive evaluation. Prompt treatment should be offered to confirmed cases so as to reduce morbidity and mortality.