Update on Clinical Parameters of Prostate Cancer at the University College Hospital, Ibadan Nigeria

Authors:

Olufemi J. Ogunbiyi,[1] Akinpelumi Adebiyi,[2] Sebastian Omenai,[1] David Mashor[1]

Author's Affiliations

Departments of Pathology[1] and Community Medicine[2]
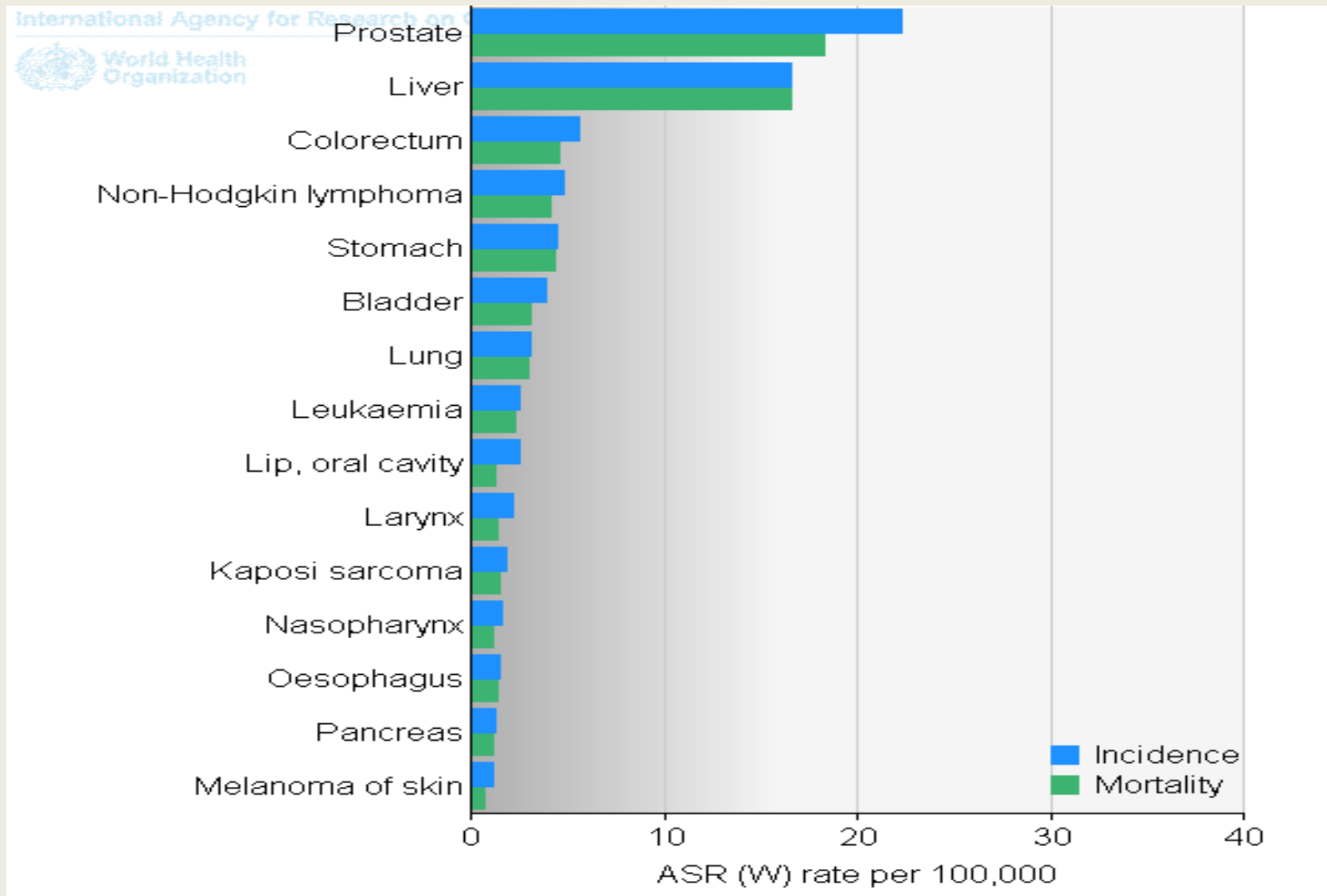
University College Hospital, Ibadan, NIGERIA

Greetings From Ibadan

Conflict of Interest
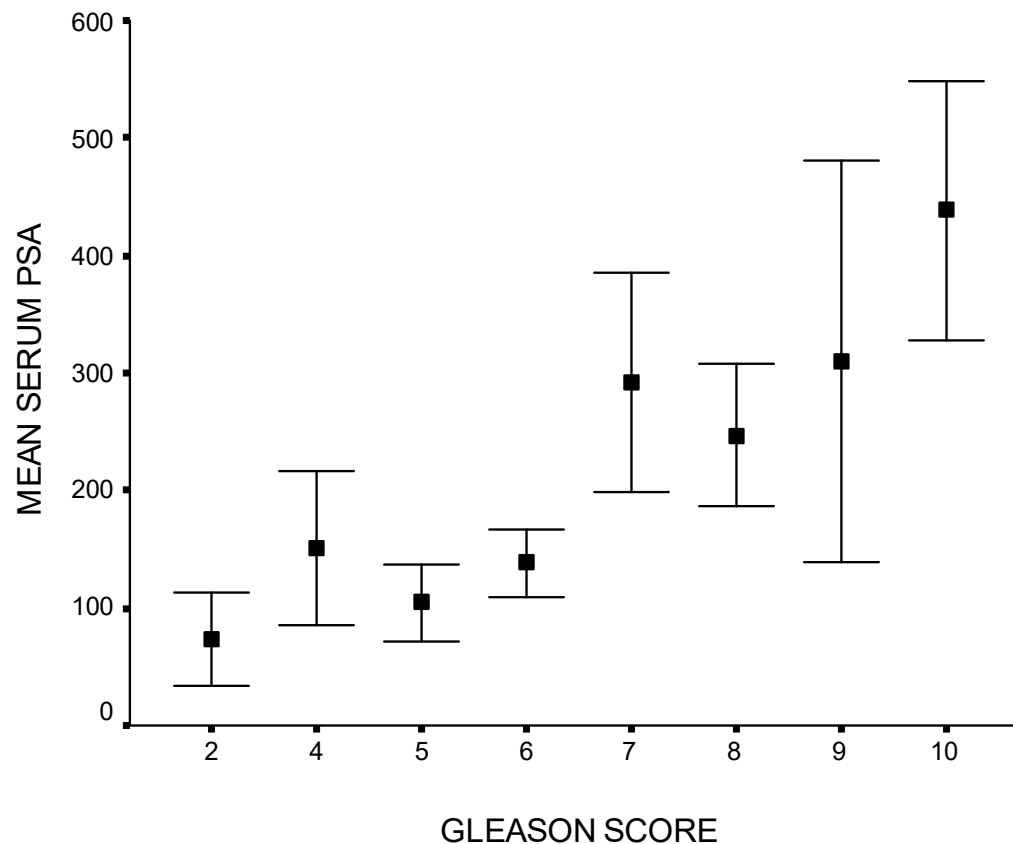
- None

What we know of prostate cancer in West Africa?

Nigerian studies from the North, Southwest, and Southeast.

Studies have shown an increasing incidence.
- In one study, there was a 7.7-fold increase over a 10-year period.
- Prostate cancer accounts for anything between 6 and 12 % of total cancers in these centres.
- The average ages from the different subpopulations is in the 7th decade.
- In all sites, patients present in late stages of disease, The histological grades were predominantly high, and the patients tended to die within 2 – 3 years

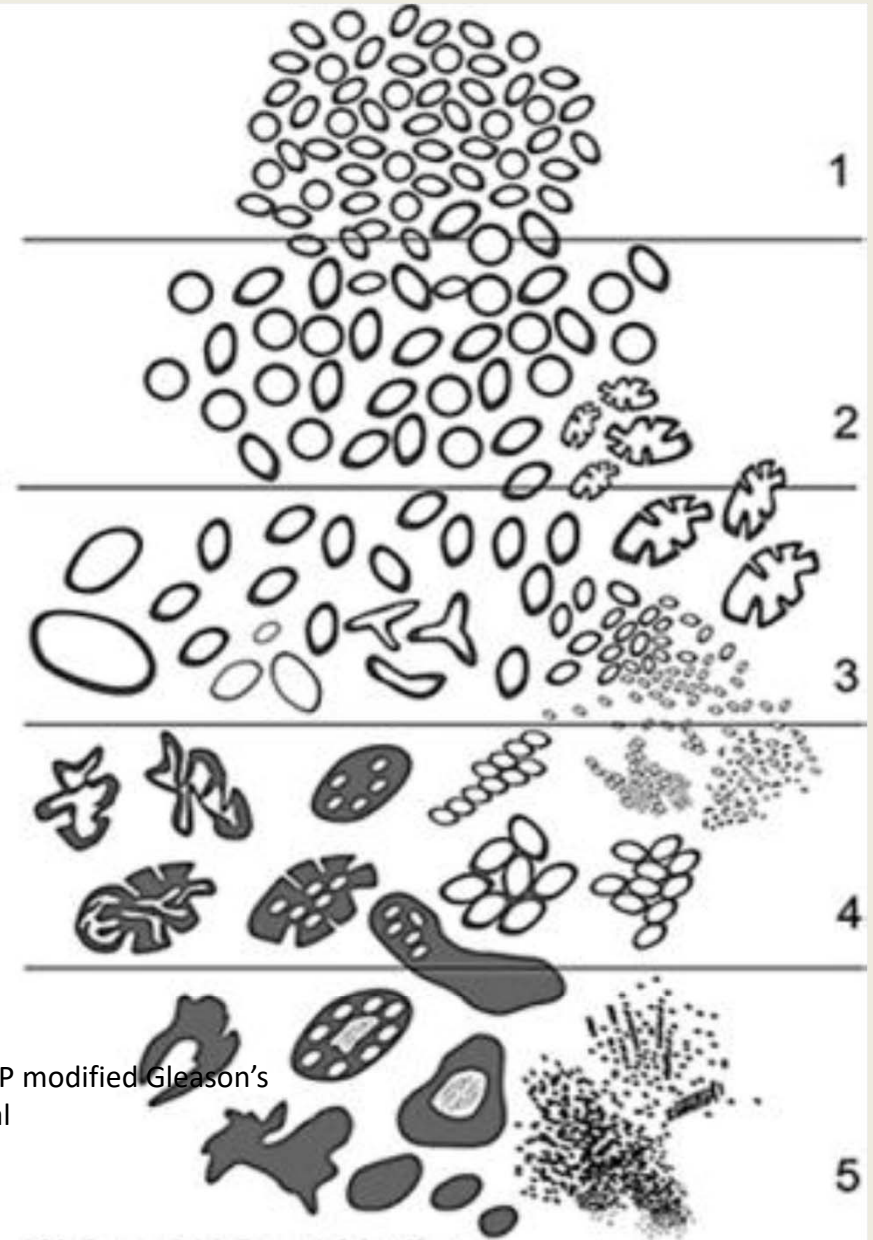# Serum PSA levels ranged from 10-940.5 mg/L, with a mean value of 207.9 ± 221.3 mg/L.

HISTOLOGIC PATTERNS OF PROSTATIC ADENOCARCINOMA

The 2014 ISUP modified Gleason's
Epstein, J et al

D.F. Gleason, MD

Original Gleason's

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1

2

3

4

5

Sample of a report incorporating both Gleason and grade group system

A. Apex, right lateral:
- Prostatic adenocarcinoma, Gleason score 3 + 3 = 6 (Grade Group 1) involving 70% of one (1) core.
- Length of cancer is 7 mm.

B. Mid, right lateral:
- Benign prostate tissue.

C. Base, right lateral:
- Prostatic adenocarcinoma, Gleason score 4 + 3 = 7 (Grade Group 3) involving 70% of one (1) core.
- Length of cancer is 3 mm.
- Percentage of pattern 4 = 70%.

D. etc

Diagnostic comment:

Gleason scores can be grouped and range from Grade Group 1 (most favorable) to Grade Group 5 (least favorable).

References: *BJU Int.* 2013;111:753–760 and *Eur Urol.* Published online ahead of print July 9, 2015.

THE NEW CONTEMPORARY GRADING SYSTEM

- Gleason scores 2 to 5 are currently no longer assigned and certain patterns that Gleason defined as a score of 6 are now graded as 7.

- This study was conducted to determine the effect of the revised International Society of urologic Pathology (ISUP) system for grading on the grade of prostatic carcinoma among Nigerians

Study Objectives

- To determine any changes in histological grades of prostate carcinomas seen in our population compared to previous studies using the IUSP grading system

- To compare the age of patients in this present study with previous studies in our population

Method

- A prospective study of prostate cancer cases seen at the University College Hospital Ibadan as part of a multicenter prospective study of prostate cancer genetics

- Grading and scoring followed the IUSP system and cases were classified in Grade groups

- Gleason grades less than 3 and scores less than 6 were not assigned

- The Prostatic Specific Antigen levels as well as the average tumour volume in the biopsy specimen were captured

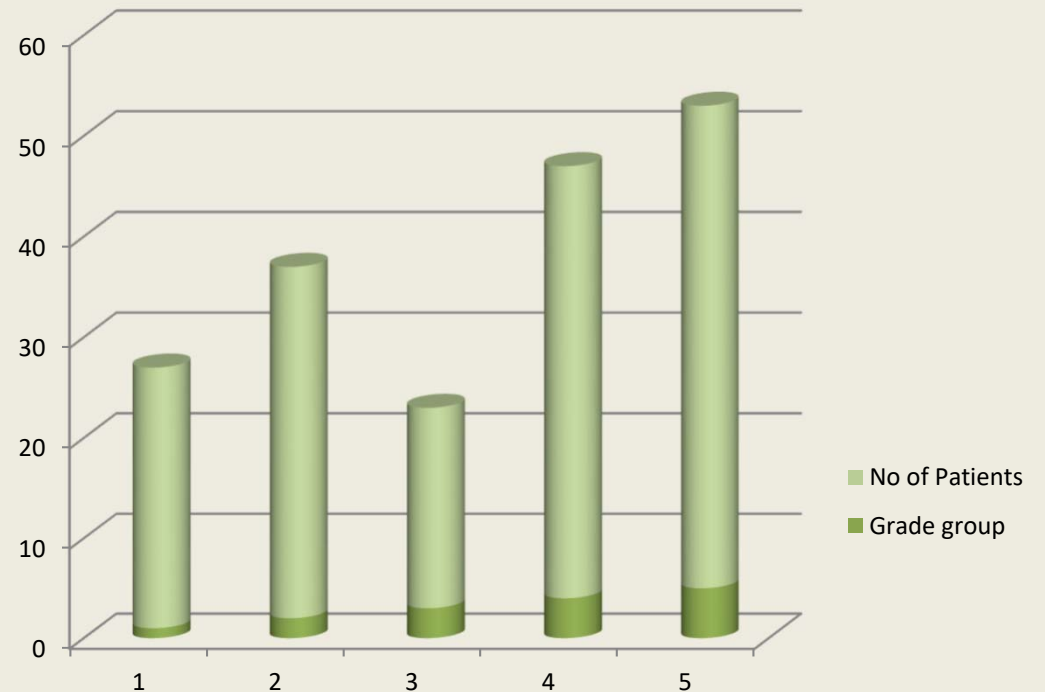- IRB approval was obtained from the UCH/UI ethical review board

Results

172 patients were seen.
Patients' ages ranged from 47 years to 86 years with peak age incidence in the 7th decade

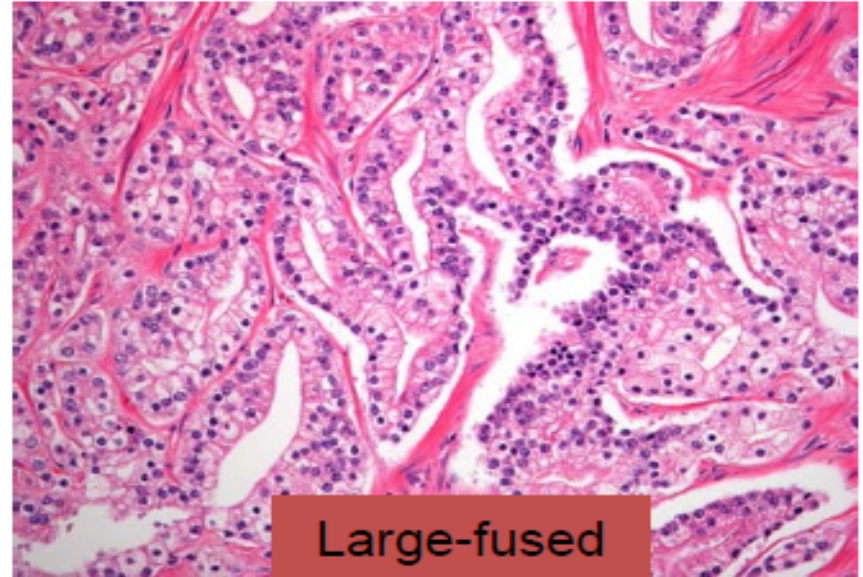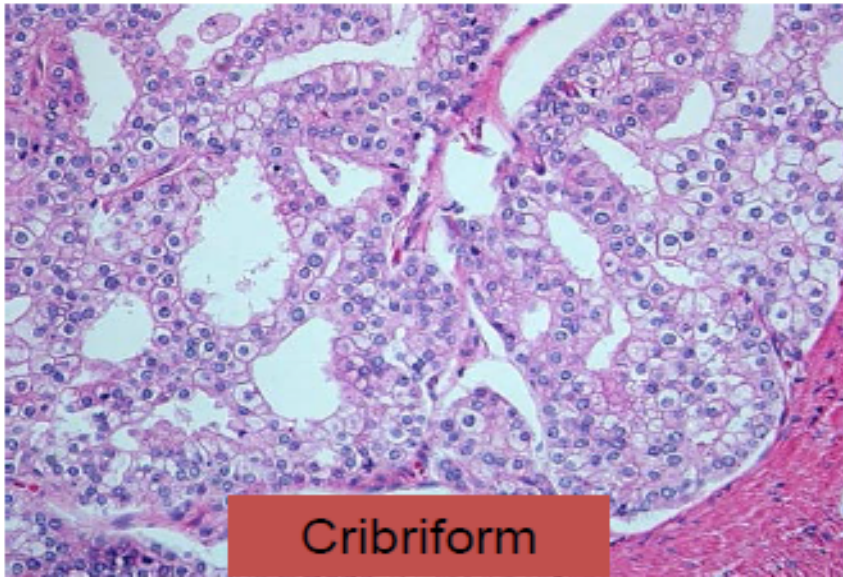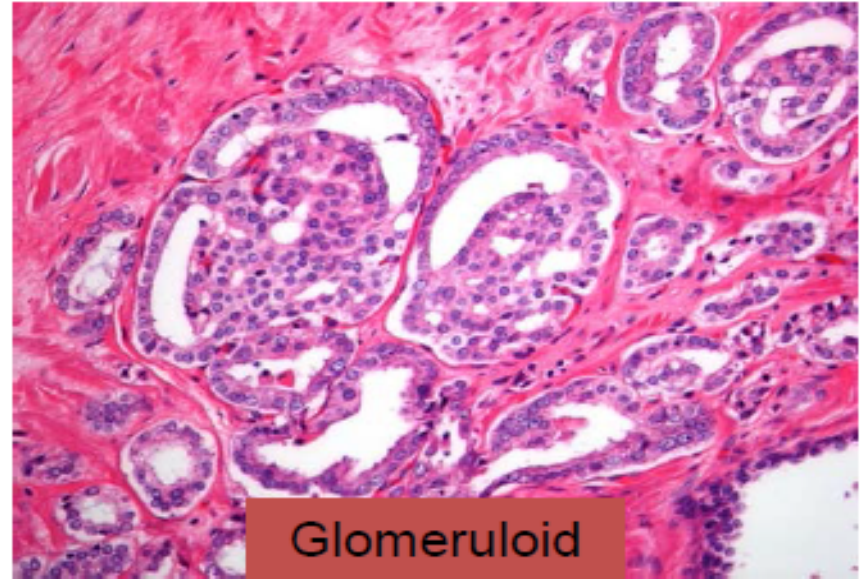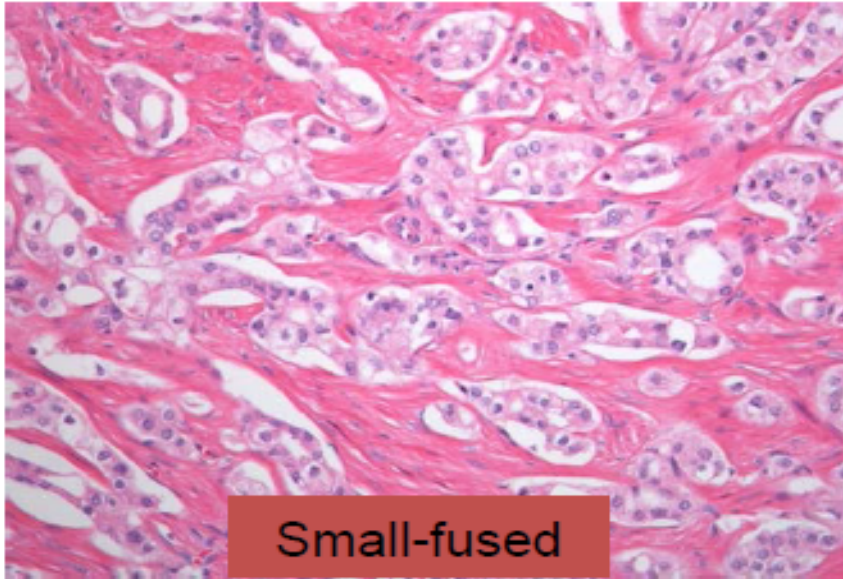| Gleason grade	N0. of Cases	Age (years)	PSA range (ng/ml)	ATV (%)
3+3	26	62-85	2.7-1111	42.47
3+4	35	55-84	14.20-20870	39.33
4+3	20	55-84	6.1-22134	44.38
3+5	4	55-84	93.24-193.26	56.50
4+4	25	52-82	29.03-9112	25.50
5+3	14	58-82	29.50-236	59.00
4+5	9	63-80	58.91-1050	42.27
5+4	26	47-86	15.01-8054	52.87
5+5	13	52-70	15.90-895.10	36.82
Total	**172**	**47-86**	**2.70-22134**	**25.50-59.00**

Results

- Most were in Grade group 5 (9-10) (28%).

- Grade group 3 (4+3=7) had the lowest number of patients

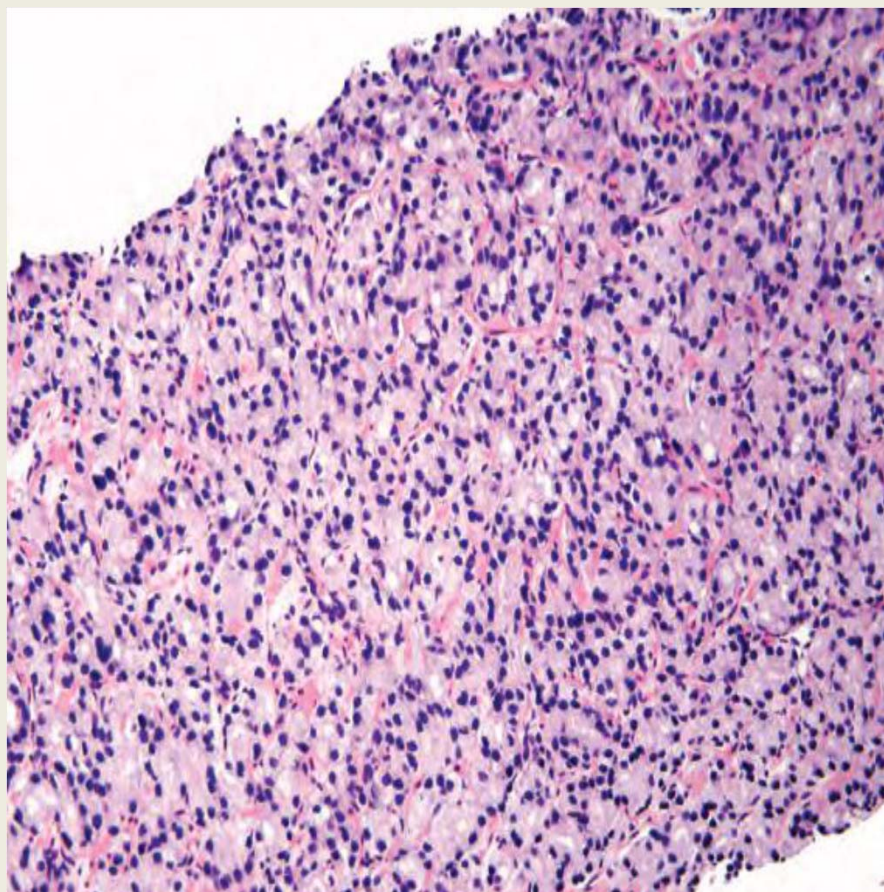**Figure 1: Number of patients according to grade groups**

GLEASON PATTERN 4

Small-fused

Glomeruloid
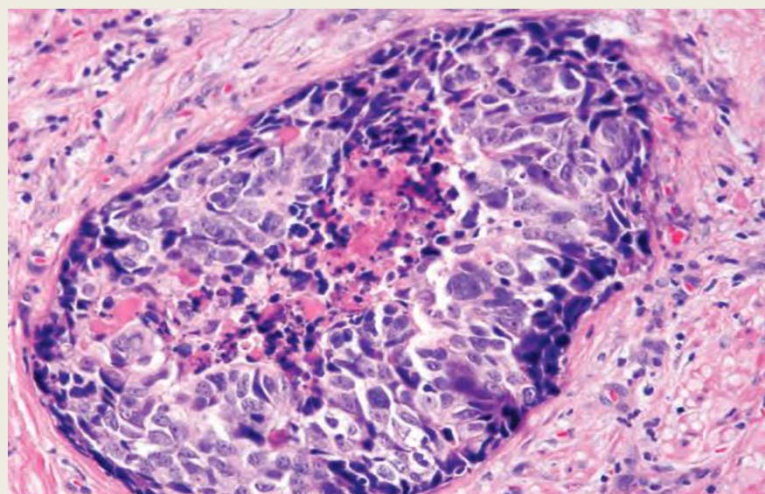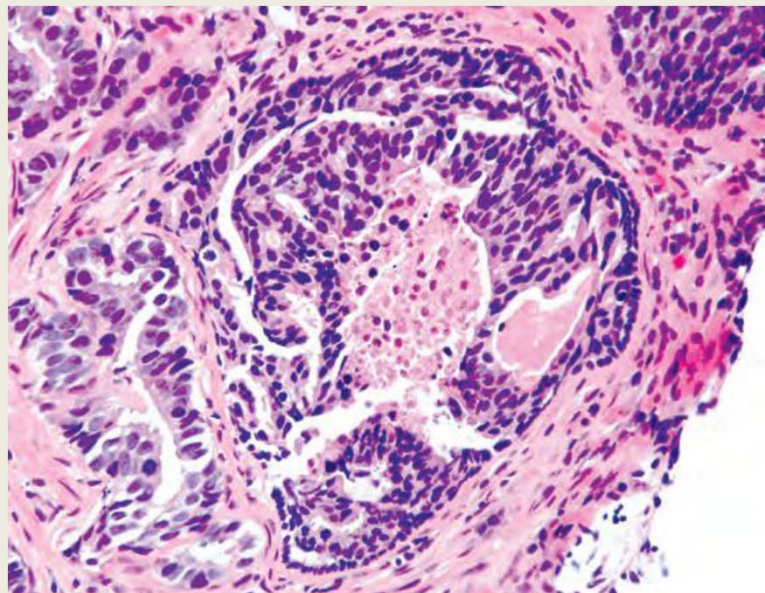
Cribriform

Large-fused

GLEASON PATTERN 5

Sheet of cells with vague attempts at gland formation

Cribriform and solid nest with comedo-necrosis

KEY POINTS

- Preponderant high grade prostatic adenocarcinomas remains among Nigerians in contrast to the findings elsewhere, especially of the CaPSURE study in the United States of America[4]. This portends a worse prognosis for our population.

- Remarkably high PSA values are recorded in our environment

- There is no difference in age of occurrence of this disease compared to previous studies[5] despite the revision of the grading system

- The lack of linear relationship between PSA level and tumour volume or grade cannot be readily explained.

UNIVERSITY COLLEGE HOSPITAL,IBADAN

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THANK

YOU

FOR

LISTENING