SJIF Impact Factor: 5.464

WORLD JOURNAL OF ADVANCE HEALTHCARE RESEARCH

ISSN: 2457-0400
Volume: 6.
Issue: 6
Page N. 163-166
Year: 2022

Original Article www.wjahr.com

ASSOCIATION BETWEEN AGE AND GLEASON SCORE IN PROSTATIC ADENOCARCINOMA

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Received date: 20 April 2022 **Revised date:** 10 May 2022 **Accepted date:** 30 May 2022

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ABSTRACT

Introduction: Carcinoma of prostate (PCa) is the most public non-cutaneous tumor for males. It is probable that till the year 2030 the incidence of PCa will upsurge by 55%, 71% of males with the illness will be 65 years' age. The aim of the study is to assess the impact of age at the time of surgery on the prognostic stratification using Gleason score in prostatic adenocarcinoma. **Method:** cross sectional study of 70 FFPE blocks/prostatic adenocarcinoma collected from surgical specialties hospital, medical city, Baghdad from January 2019 to December 2021, age of patients 50-90 years, Specimen-surgical specimen, Histopathology assessment-different Gleason score used as a template to assess architectural features based on reports from different consultants. **Results:** mean age of them are (68.5 ± 7.5) years old, 35 (50%) of patients at age group ≥70 years, 30 (42.9%) of patients at age group 60-69 years. 18 (25.71%) of patients have Gleason score 3+4, 15 (21.43%) of patients have Gleason score 4+3, 12 (17.14%) of patients have Gleason score 3+3, 4+4. There is no significant relationship between age groups and Gleason score. **Conclusion:** old age highly associate with risk of prostatic carcinoma and increase Gleason score, so must do early screening for all elderly individuals for prostatic cancer. Most prevalence of prostatic carcinoma occurs in male with age group more than 60 years old, and most Gleason score 3+ 4.

KEYWORDS: Association, age, Gleason score, prostatic adenocarcinoma.

INTRODUCTION

Carcinoma of prostate (PCa) is the most public non-cutaneous tumor for males. It is probable that till the year 2030 the incidence of PCa will upsurge by 55%, 71% of males with the illness will be 65 years age.[1,2] Younger age foreshadows to additional promising tumor regulator consequences.[3] The consequence of age has not been explained. Approximately recommend that the underuse of possibly healing treatment in older persons may be the purpose for variances in persistence relation to their younger complements.[4,5] In future that operation in older males identified with PCa might not product in a general survival advantage relation to active observation.[6] Exactly, given a definite age, a significant quantity of males is at advanced danger of dead from other reasons than the cancer this one.[7–10] Up to date, the influence of age at identification on tumor exact mortality in PCa patients is under discussed. Furthermost of the obtainable studies are grounded on official sequence that trusted on past information.[11,12] and lone one article trusted on a great cohort of patients preserved with operation.[2,13] Old age considered on of risk factors of prostatic carcinoma, and lead to increase Gleason score (GS) at time of evaluation and diagnosis.[14–16] Previous journals though have chiefly been based on information from prevalence-screened males rather than from consequences based on recurrent screening.[17] Increases the danger of unclear consequences from occurrence screening with real incidence over period. It is also uncertain whether the relationship between age and GS may be occur due to biological alterations or a collection in the investigative procedure, for example, a advanced verge for biopsy in older males, subsequent in lengthier period to diagnosis and more progressive cancers.[16,18] The aim of study is to assess the impact of age at the time of surgery on the prognostic stratification using Gleason score in prostatic adenocarcinoma.

METHOD

The cross sectional study of 70 FFPE blocks/prostatic adenocarcinoma collected from surgical specialties hospital, medical city, Baghdad from January 2019 to

December 2021, age of patients 50-90 years, Specimen-surgical specimen, Histopathology assessment-different Gleason score used as a template to assess architectural features based on reports from different consultants. Statistical analysis bone by SPSS version 23, Chi square done for analysis of categorical data, P-value ≤0.05 mean significant.

RESULTS

Cross sectional study of 70 patients with prostatic Ca., mean age of them are (68.5 ± 7.5) years old, 35 (50%) of patients at age group ≥70 years, 30 (42.9%) of patients at age group 60-69 years.

Table (1): age groups distribution of patients include in current study.

variables		frequency	percentage
Age groups (years)	***50-59***	5	7.1
	60-69	30	42.9
	≥70	35	50.0

According to fig. (1): 18 (25.71%) of patients have Gleason score 3+4, 15 (21.43%) of patients have Gleason score 4+3, 12 (17.14%) of patients have Gleason score 3+3, 4+4.

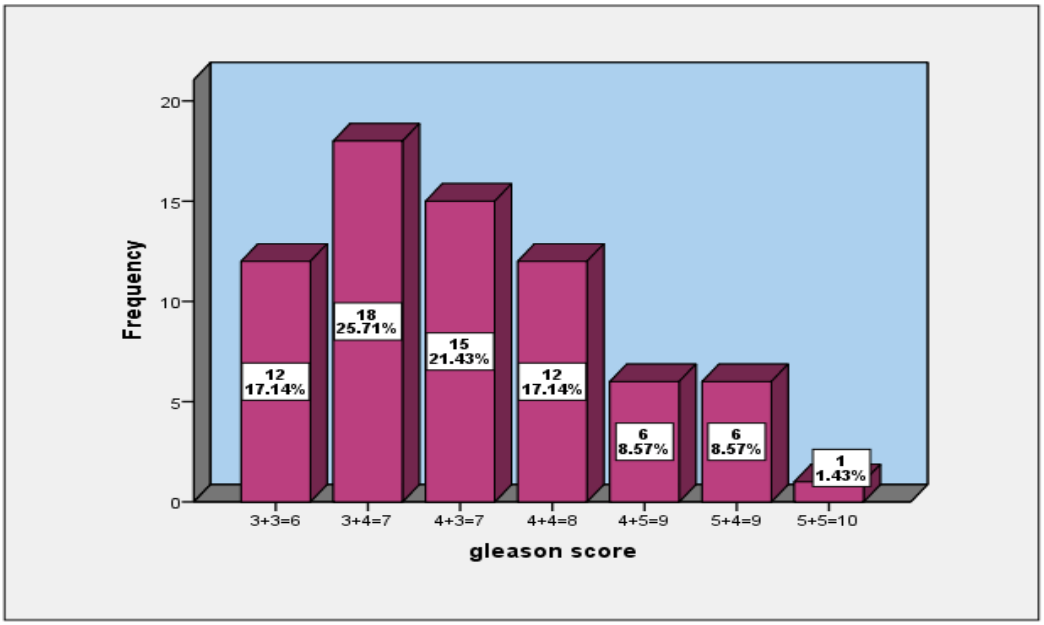

Fig (1): distribution of patients according to Gleason score.

There is no significant association between age groups and Gleason score.

Table 2: association between age groups and Gleason score.

Age groups (years)			Gleason score					P-value
			6	**7**	**8**	**9**	**10**	
	50-59		2	1	2	0	0	
			16.7%	3.0%	16.7%	0.0%	0.0%	
	60-69		7	13	5	5	0	
			58.3%	39.4%	41.7%	41.7%	0.0%	0.37
	≥70		3	19	5	7	1	
			25.0%	57.6%	41.7%	58.3%	100.0%	
Total			12	33	12	12	1	
			100.0%	100.0%	100.0%	100.0%	100.0%	

P-value ≤ 0.05 (not significant).

DISCUSSION

In current study, a intermittent screening record concerning PSA analysis every two years, age is important factor for the danger of existence identified with GS more than 7, overhead and beyond the consequence of screening and among those diagnosed patients with PC. Although not adequate for data, as designated by the CIs, consequences designate some

indication of a relationship between age and a GS more than 7 for identification. Still, no relationship between age and danger of a Gleason <7.[16] Numerous earlier studies have explored the relationship between age and PC danger and GS, and these upkeep our results.[19,20] The increasing danger of being identified with PC after 4 screens at the age of 60 years 8%, 15% at 65 years and 21% at 70 years. PSA tests and digital rectal examination is important after 40 years while men more than 70 years have advance clinical stage, biopsy grade, and PSA velocity.[21] Prevalence screening will perhaps notice a great reservoir of unimportant tumors, which is decrease with recurrent screening, there is no association between age and GS <7 in recurrent screening, this relationship is preserved for advanced grade tumors. Age could be fluctuations in the androgen equilibrium with advance age is explain the causes of considered the age as risk factor for Ca. of prostate.[22] The bulk of non-significant cancers (GS <7) began as little grade cancers and to a excessive degree break over the years.[14] Numerous strategies praise in contradiction of PSA screening in males with age more than 70 years due to age is a risk factor.[23] With time, the arrangement of the study populace different as males became elder and had recurrent screens. Additionally, the Gleason grading was updated in 2005 and the biopsy approach was different from "sextant biopsies to a ten-core biopsy" in 2009. The number of studies after 2009 was actual lesser. The age effect looked comparatively healthy and the collinearity did not affect the difficult of whether age was related with the danger of no tumor, "GS <7, and GS ≥7 (GS <7/GS 3 + 4/GS ≥4 + 3)".[24]

CONCLUSION

Old age highly associate with risk of prostatic carcinoma and increase Gleason score, so must do early screening for all elderly individuals for prostatic cancer. Most prevalence of prostatic carcinoma occurs in male with age group more than 60 years old, and most Gleason score 3+ 4.

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