Prostate Cancer

Prostate cancer: risk factors

Well established risk factors

- Increasing age
- Ethnic origin
- Genetic predisposition

Classification of Prostate Cancer

The aims of classification are to :

- Help choose the most appropriate treatments
- Indicate prognosis
- Provide an objective way of comparing therapeutic regimens

PROSTATE : TNM CLASSIFICATION (2017)

T - Primary Tumour		
TX	Primary tumour cannot be assessed	
T0	No evidence of primary tumour	
T1	Clinically inapparent tumour that is not palpable	
	T1a	Tumour incidental histological finding in 5% or less of tissue resected
	T1b	Tumour incidental histological finding in more than 5% of tissue resected
	T1c	Tumour identified by needle biopsy (e.g. because of elevated prostate-specific antigen (PSA) level)
T2	Tumour that is palpable and confined within the prostate	
	T2a	Tumour involves one half of one lobe or less
	T2b	Tumour involves more than half of one lobe, but not both lobes
	T2c	Tumour involves both lobes
T3	Tumour extends through the prostatic capsule[1]	
	T3a	Extracapsular extension (unilateral or bilateral) including microscopic bladder neck involvement
	T3b	Tumour invades seminal vesicle(s)
T4	Tumour is fixed or invades adjacent structures other than seminal vesicles: external sphincter, rectum, levator muscles, and/or pelvic wall	

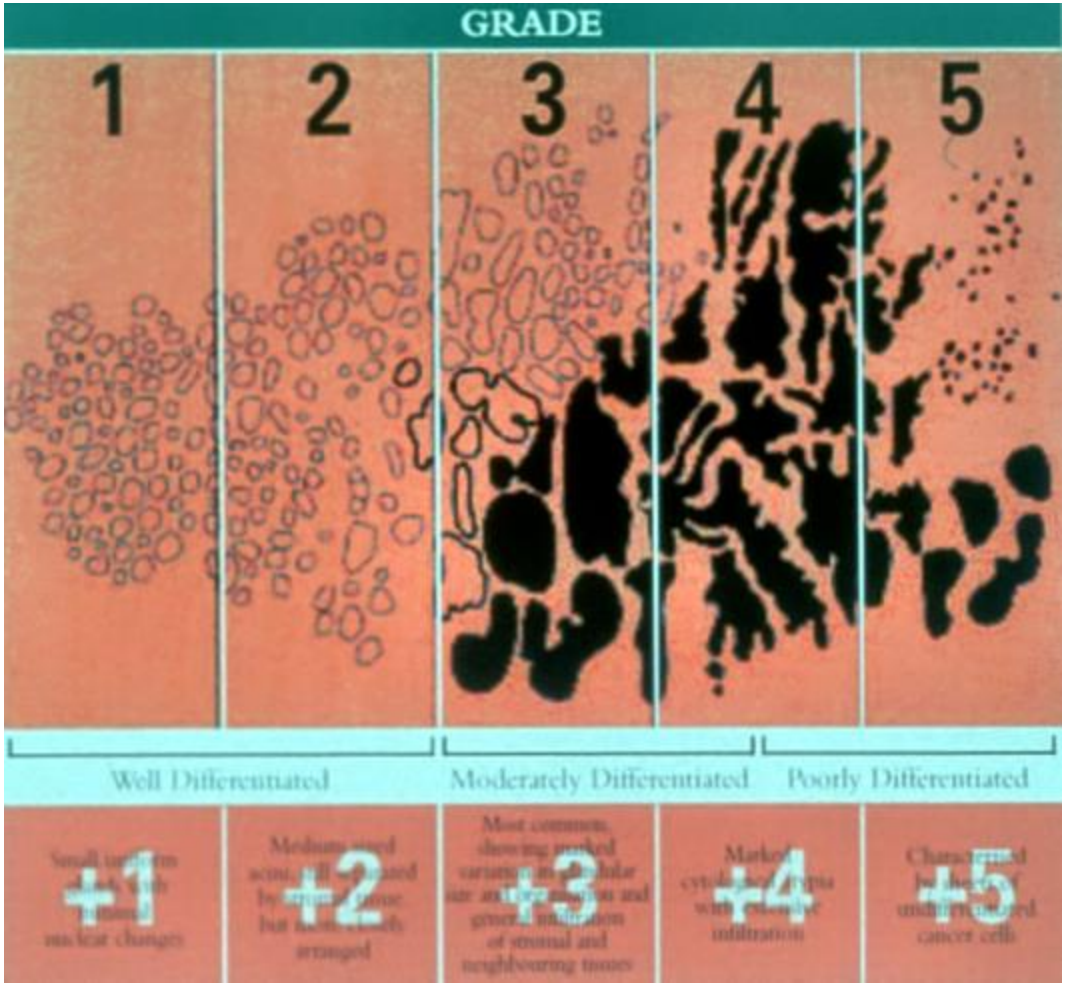
PROSTATE : TNM CLASSIFICATION (2017)

N - Regional Lymph Nodes[2]	
NX	Regional lymph nodes cannot be assessed
N0	No regional lymph node metastasis
N1	Regional lymph node metastasis

PROSTATE : TNM CLASSIFICATION (2017)

M - Distant Metastasis[3]		
M0	No distant metastasis	
M1	Distant metastasis	
	M1a	Non-regional lymph node(s)
	M1b	Bone(s)
	M1c	Other site(s)

Gleason Grading System 5



ISUP GRADES

International Society of Urological Pathology 2014 grades

Gleason score	ISUP grade
2-6	1
7 (3 + 4)	2
7 (4 + 3)	3
8 (4 + 4 or 3 + 5 or 5 + 3)	4
9-10	5

PROSTATE CANCER: RISK GROUPS

Definition			
Low-risk	**Intermediate-risk**	**High-risk**	
PSA < 10 ng/mL and GS < 7 (ISUP Grade 1) and cT1-2a	PSA 10-20 ng/mL or GS 7 (ISUP Grade 2/3) or cT2b	PSA > 20 ng/mL or GS > 7 (ISUP Grade 4/5) or cT2c	any PSA any GS cT3-4 or cN+ Any ISUP Grade
Localised			**Locally advanced**

GS=Gleason score; ISUP=International Society for Urological Pathology; PSA=prostate specific antigen.

Level of Evidence (LE)

Level	Type of Evidence
1a	Evidence obtained from meta-analysis of randomised trials
1b	Evidence obtained from at least one randomised trial
2a	Evidence obtained from one well designed controlled study without randomisation
2b	Evidence obtained from at least one other type of well designed quasi experimental study
3	Evidence obtained from well designed non-experimental studies and case reports
4	Evidence obtained from expert committee reports of opinions or clinical experience of respected authorities

Classification system modified from the Oxford Centre for Evidence-Based Medicine Levels of Evidence

Grade of recommendation (GR)

Grade	Nature of Recommendations
A	Based on clinical studies of good quality and consistency addressing the specific recommendations and including at least one randomised trial
B	Based on well conducted clinical studies, but without randomised clinical trials
	Made despite the absence of directly applicable clinical studies of good quality

Classification system modified from the Oxford Centre for Evidence-Based Medicine Levels of Evidence

PROSTATE CANCER
SCREENING & EARLY DETECTION

Recommendations	LE	GR
Do not subject men to prostate-specific antigen (PSA) testing without counselling them on the potential risks and benefits.	3	B
Offer an individualised risk-adapted strategy for early detection to a well-informed man with a good performance status and a life-expectancy of at least ten to fifteen years.	3	B
Offer early PSA testing in well-informed men at elevated risk of having PCa: men > 50 years of age; men > 40 years of age and a family history of PCa; African-Americans > 45 years of age; men with a PSA level of > 1 ng/mL at 45 years of age; men with a PSA level of > 2 ng/mL at 60 years of age.	2b	A
Offer a risk-adapted strategy (based on initial PSA level), with follow-up intervals of two years for those initially at risk: men with a PSA level of > 1 ng/mL at 40 years of age; men with a PSA level of > 2 ng/mL at 60 years of age; Postpone follow-up to eight years in those not at risk.	3	C
Decide on the age at which early diagnosis of PCa should be stopped based on life expectancy and performance status; men who have a life-expectancy of < 15-years are unlikely to benefit.	3	A

PROSTATE CANCER: GUIDELINES

Recommendations - active surveillance	**LE**	**GR**
Perform multiparametric MRI before a confirmatory biopsy.	2b	B
During confirmatory biopsy include systematic and targeted biopsies.	2a	B

LE: Level of Evidence, GR: Grade of Recommendation

PROSTATE CANCER: GUIDELINES

Recommendations	LE	GR
Offer both radical prostatectomy and radiotherapy in patients with low- and intermediate-risk disease and a life expectancy > 10 years.	1b	A
Offer active surveillance as an alternative to surgery in patients with low-risk disease and a life expectancy of > 10 years.	1b	A

PROSTATE CANCER

Summary of evidence
Prostate cancer is a major health issue in men, the incidence mainly dependent on age.
Genetic factors are associated with risk of (aggressive) PCa but ongoing trials will need to define the clinical applicability of screening for genetic susceptibility of PCa.
A variety of exogenous/environmental factors may have an impact on the risk of progression.
5-ARIs are for PCa prevention.
Selenium or vitamin-E supplements have no beneficial effect in preventing PCa.
In hypogonadal men, testosterone supplementation does not increase the risk of PCa.

Prostate cancer: quality of life

- Treating prostate cancer can affect individuals physically and mentally, as well as their close relations, work or vocation. All these have a bearing on their quality of life. Prostate cancer should not be reduced to focusing on organ in isolation.
- Consider patient wishes and preferences
- Clear evidence of unmet needs and ongoing support requirements for some men after diagnosis and treatment for prostate cancer