

·
(1933-)

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(1935-2009)

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(

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, 2014.

	2
1.	4
1.1.	4
1.2.	5
1.2.1.	PIN	7
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2.	42
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3.3.	44
3.4.	44
3.5.	45
3.6.	46
3.6.1.	47
3.6.2.	47
3.7.	49
4.	50
5.	–	76
6.	92
7.	101
8.	102

1.

1.1.

()

– ductuli ejaculatorii

1

2

30%

(PAP).³

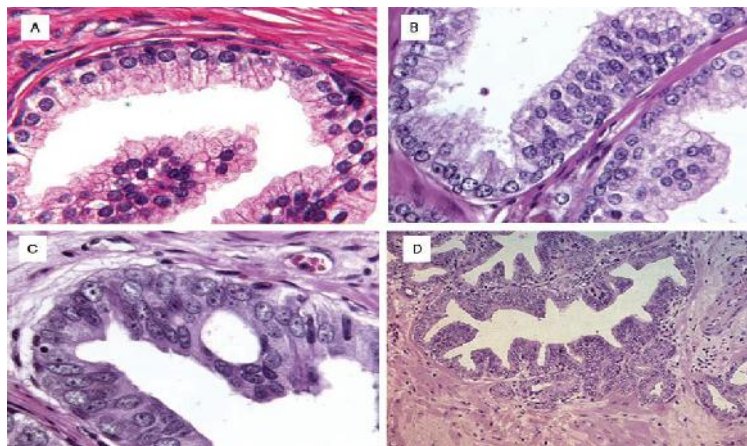
(PSA)

1.2.

(HGPIN) – PIN2 3

1 3

4



1.1. , low grade PIN, high grade PIN, mikroinvazija

115.000
 1.300.000 217.730)⁵ PIN 9% (4-16%)
 4,4 25% PIN ((

⁶ PIN (9%) (22%)
 10 ⁷ PIN 50 60 PIN 5
 HGPIN PIN ⁸ PIN .
 (73%)⁹

(32%). PIN

, PIN .7

PIN

10

HGPIN- (tufting), ,

(flat)¹¹ : *signet ring cell, small cell*

(), (foamy gland)¹², (hobnail)¹³ PIN

14.

4

HGPIN (

70%), , 7,11 11 Low grade PIN – LGPIN

(1) ,

PIN	
1.	,
2.	
3.	, ; SA
4. p	
5.	
6.	, ; ; 34 12
7.	

8. Gleason	3 –	, () ,
9.		-

T 1.1. PIN-a

	LGPIN	HGPIN
		LGPIN
:		
		,
	(10%)	
(53)		

Табела 1.2. PIN

1.2.1.

PIN

HMWCK

p63. HMWCK

PIN

56% HGPIN-

PIN-

PIN

(AAH),

(PAH),

PIN-

¹⁵

PSA PAP.

Racemase (alpha – methylacyl - CoA)

90% HGPIN

¹⁶

AMACR

AMACR

¹⁷

PIN

c-erbB-2, bcl-2 onkoprotein,

. C-myc,

PIN-

Glesoon

PIN-

PIN

PIN-

ASAP- (

3 6

PSA

¹⁰

PIN

ASAP- (

16%

)

33 – 60%

^{18,19,20}

PIN-

PIN-
(PIN-).²¹

1.2.2.

()
PIN- , PIN
RIA (PAH).²²
/ :
23 , PIN
43% 2 ,²⁴
(SK5, GSTP1, p53, Ki67, Bcl-2)
()
,²⁵ ,²⁶

27

(myc protein, spermine oxidase i TMPRSS2-ERG gen).^{28,29}

1.3.

-

-

,

:

Gleason

3 – lower grade

higher grade

e

-

.

-

:

-

-

,

(adenosis)

-

-

-

-

-

-

:

-

ductusa ejakulatoriusa

-

-

-

- COWPER ()

-

-

Gleason

3, 4 5,

.

-

-

-

-

-

Gleason

4 5, foamy

:

-

-

- signet ring – like

-

xantom.

,

30

31

,

.

-

,

.

,

.

.

.

,

(p63 HMWCK - 34 12),

AMACR

1.3.1.

1.

2.

3.

4.

5.

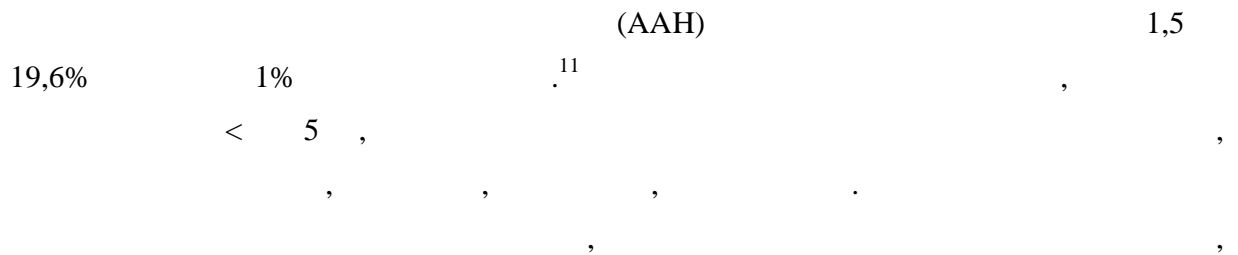
6.

7.

AMACR

1.3.2.

(AAH, adenosis)



” “ . AAH
 . Gleason
1 2. AAH
, ,
,
90% AAH AMACR
18%.³²

1.3.3.

() ,
, , ,
2% ,
, 10%
³³
p63, HMWCK (), 100

1.3.4.

()
,
³⁴

1.3.5.

,
, , ,

1.3.6.

36

1.3.7.

PSA PAP

37

38

1.3.8.

PAX2 i PAX8

39

1.3.9.

1.3.10. COWPER ()

COWPER ()

,

,

,

(foamy)

.⁴⁰

1.4.

(8%). (70%), (24%) (75%),

1		
2		
3		
4	(1 4) (foamy adenocarcinoma,)	HGPIN- , , HBC-a
5		A
6		-
7	Gleason (1,5,6) 10% 6 HGPIN 12% 6% (1,5,6)	-
8	34% (5)	13% HGPIN
9		
10		
11	(1) ,	Corpora amylacea (10)
12	PIN	-
13	(1,7,9)	(1,7,9) AAH.

T 1.3.

1.4.1.

1. —

41

2. — -

42

3. ,

4.

PAP PSA,

5.

6.

43

7. - Methylacyl – CoA racemase (AMACR)

, 80%

HGPIN,

44,45

46

AMACR

„Cruch artefact“

”

HGPIN- PINATYP.⁴⁷

HGPIN- , PIN)

AMACR

HGPIN- PIN ,

1.5. GLEASON-

Donald Gleason . 1966

1974 ,

(*International Society of Urological Pathology - ISUP*) 2005 . Gleason-

1 5.

:

1. Gleason

1 –

2. Gleason

2 -

1.

3. Gleason

3 -

70%

4. Gleason

4 -

(

),

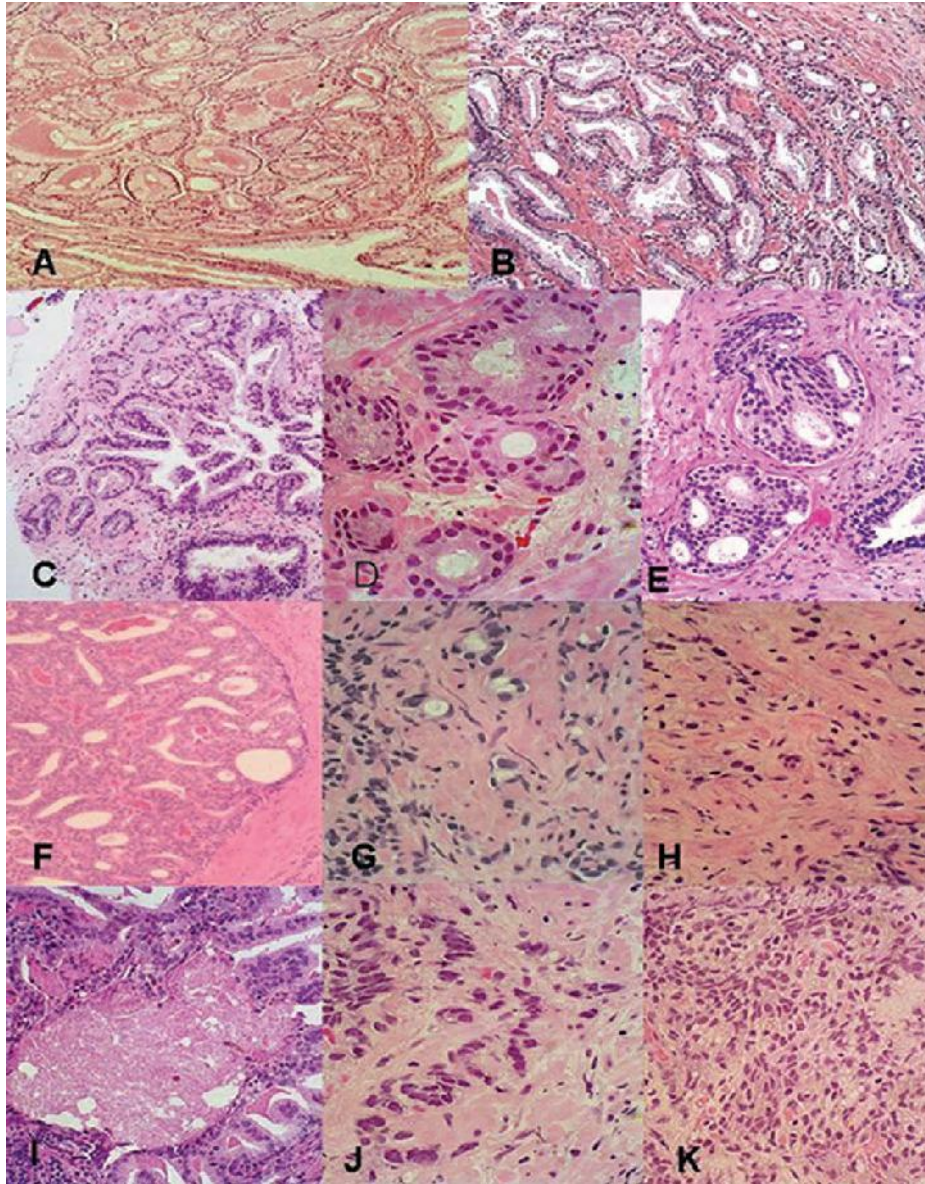
5. Gleason

5 -

(

„comedo“

),



5.1. Gleason-ovi oblici: 1-A, 2-B, 3-C,D,E, 4-F,G,H i 5-I,J,K

Gleason 1 2 ,

1 5

Gleason ,

Gleason

Gleason . Gleason
2 10. Gleason

- Gleason score 2 4-
- Gleason score 5 7-
- Gleason score 8 10-

Gleason

48,49

PSA

„core”

Gleason .

Gleason , 2005

ISUP- .⁵⁰

1 2

Gleason score 1+1=2

hypernephroma – like ,

4

Gleason

(MGK).^{51,52}

5%

5%

5%

⁵³,

5%

^{54,55}

46%

MGK

Gleason

7 32%

53%

68%

⁵⁶,

⁵⁷

PSA

MGK.

^{58,59,60}

MGK ISUP-a

2005

1.6.

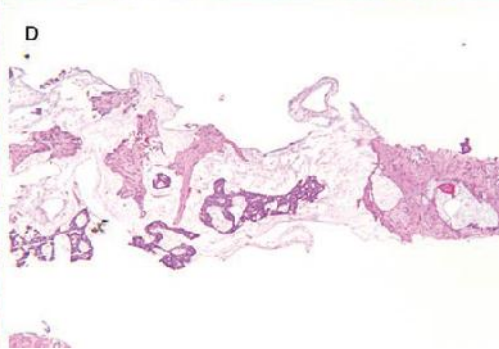
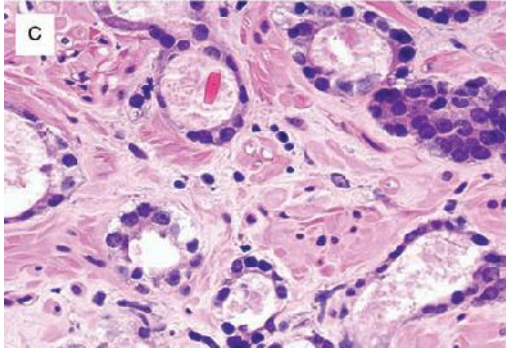
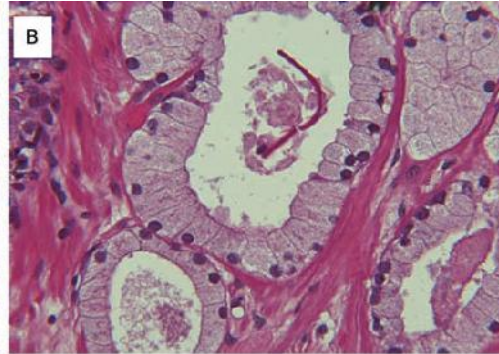
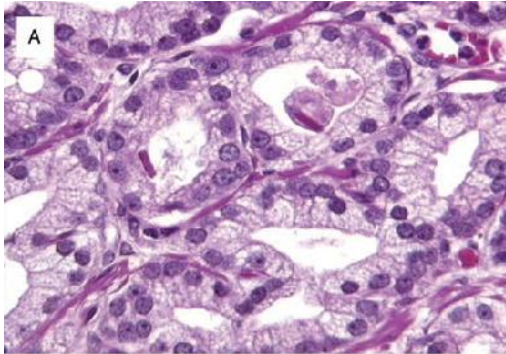
61,62,63

WHO 2004

:⁶²

1. ,
2. ,
3. – foamy,
4. (),
5. signet ring,
- 6.
7. lymphoepithelioma – like

6.1.) ,) ,) ,)



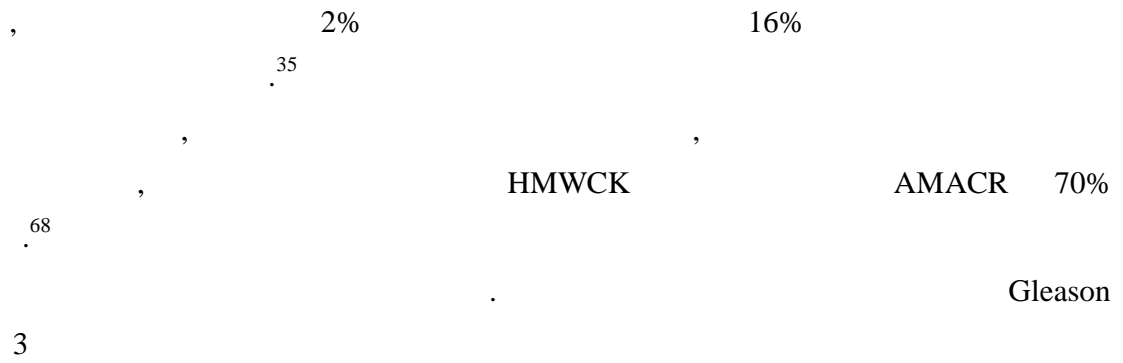
- ^{61,63} WHO 2004 ⁶² 5 10% :

- 1.
- 2.
- 3.
- 4.
5. small cell carcinoma
6. basal cell carcinoma
7. clear cell adenocarcinoma

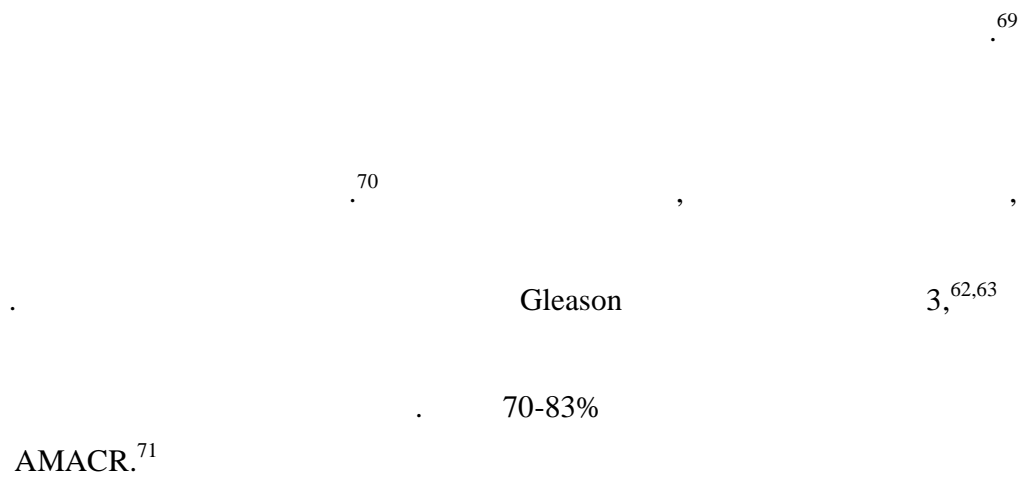
2004 WHO
^{64,65} large-cell , PIN
⁶⁷ 66 -

1.6.1.

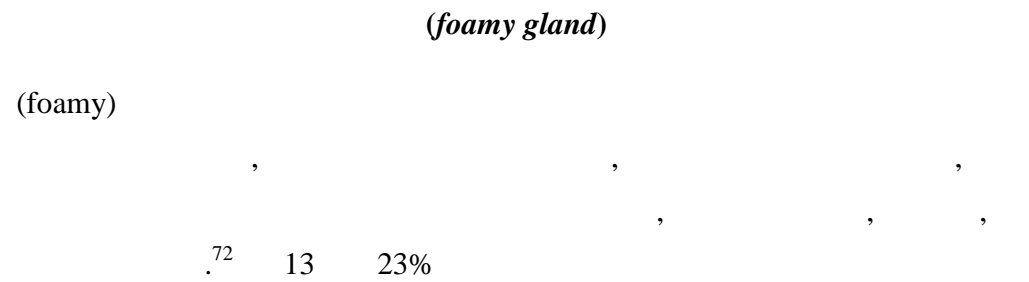
1.6.1.1.



1.6.1.2.



1.6.1.3.



„foamy gland“ HPIN.⁷³

NMWCK p63

. AMACR

68%.⁷¹

Gleason

7,

1.6.1.4. ()

()

0.3%

.^{74,75}

25%

25%

„signet ring“

Gleason

6 – 8.⁷⁵

PSA, PSAP,

HMWCK

CK7

CK20

.^{74,75}

1.6.1.5. „Signet ring“

„Signet ring“

.^{63,76}

Gleasonovom

5.⁵⁶

„signet ring“ ,

,

.

.76

1.6.1.6.

1.6.1.7. *Limphoepithelioma – like*

Limphoepithelioma-like

Epstein- Barr ⁷⁷

, PSAP AMACR

10 90%

1.6.2.

1.6.2.1.

()

^{78,79,80}

Gleason 7 10.

CK, PSA, PAP ().

1.6.2.2.

() - , 3% .⁸¹

„comedo carcinoma“

PIN – like

, Paneth cell – like .⁸²
Gleason 6-7, 5 100%.⁸³

Gleason 3

Gleason skor 7

10% .⁸³

Gleason 3 5

PSA, PAP, HMWCK (), AMACR

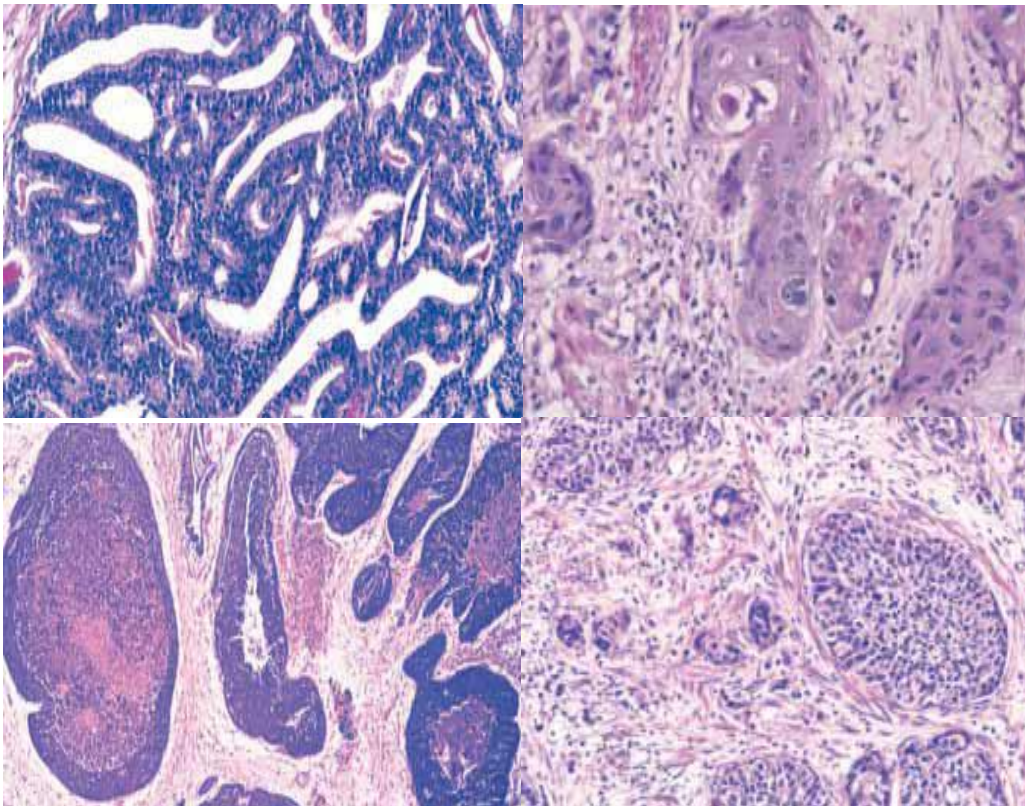
.^{84,85}

1.6.2.3.

1%

86

. Gleason



6.2.) ,) ,) ,)

1.6.2.4.

0,2%.⁶¹

87

„in situ“

88

PSA, PSAP

CK7, CK20

HMWCK

1.6.2.5.

0,3 1%

89

PSA

90

Cushing

PSA

Gleason 4.

PSAP

, TTF-1 CD44

. PSA,

91,92

1.6.2.6.

adenoid basal cell tumor)

(adenoid cystic like,

bcl-2 i Ki67

93

1.6.2.7.

94

95

Milerov

96

1.6.3.

WHO

2004

1.6.3.1.

3. 11%, Gleason
, 96%
AMACR.

1.6.3.2.

PIN-u

PIN-

PIN

(PIN – like duktalni adenokarcinom).^{64,65}

PIN – , p63

HMWCK

AMACR

. Gleason 3,

Gleason scora 6.

1.6.3.3.

,
. 66

, o , CD56, 57 AMACR.

1.6.3.4.

Gleason skor 9.^{67,97}
PSA.

1.7.

()

2011 , 33.720 , 240.890⁹⁸

(TNM)

1992

(American Joint Committee on Cancer-AJCC)

*(International Union Against Cancer-UICC).*⁹⁹

AJCC 2010 .¹⁰⁰

(),

()

36%

pT2

2010

101,102

()

TNM

p 2

101

	TNM		TNM
X		x	-
0		p 0	
1		p 1	1
1	5%	p 1	-
1b	> 5%	p 1b	-
1c		p 1c	-
2		p 2	
2		p 2	- 5
2b	o	p 2b	-> 5 16
2c		p 2	16
3		p 3	
3		p 3	
3b		p 3b	
3c	-	p 3c	-
4	:	p 4	, .
4	-	p 4	-
4b	-	p 4b	-
	(NX)		(NX)
NX		NX	
N		N0	
N1		N1	
		N1	2
		N1b	> 2
N2	-	N2	2
N3	-	N3	-

	-	X	-
0		0	
1		1	
1b		1b	
1c		1c	

7.1. TNM 2010 (AJCC)

1.7.1.

(p 3)

, , ,
, Gleason .
, *AJCC i UICC* TNM
1992 3 .⁹⁹
p 3
.
:
1.
,
2. ,
,
3. ,
4. 103
,
,
,

104

:

”

“

103,105

. TNM

2010

p 3 .

3

”

“

„ Epstein

(L3)

3

TNM

63

(L3F),

(L3E).

p 3

(<0.75 0.75)

106

TNM

p 4

p 3

.

107,108

109

T3b

,
p 3 .

p 3 .

(1),

: duktusa ejakulatorijusa

(2)

(3)

,
110

1.7.2. 4

4
musculus levator ani /
100

1.7.3. p 0

Gross et al.

0 ,4%,
62 111.112 1 , PSA 15 / ,
„core“ , Gleason <7, 60
HGPI- ASAP-

10
113 1000
113

p 0
TNM

1.7.4. (N)

114,115

() , pN1 . ,

TNM

pN1

.¹⁰⁰

() 1 . ,

Gleason s

7

,¹¹⁶

.¹¹⁴

30.¹¹⁷

.¹¹⁸

2
2 N1b.

(N1a),

N2

N1a

100%.

.¹¹⁹

5 ,^{115,117,120}

.
0,2 2 , 3 ,

0,2

.¹²¹

.¹²²

Gleason s

Gleason

a

Gleason,

Gleason s

imidžing

pTN

AJCC/UICC

2010

1.8.

(VEGF)

VEGF

Folkmanove

¹²³

VEGF,aFGF,bFGF,TGF,EGF,TNF,

VEGF

VEGF

VEGF

¹²⁴ VEGF

(VEGF -1, VEGF -2)

VEGF

(VEGF -3).

(VEGF -3).

VEGF

^{125,126}

VEGF-

¹²⁷

VEGF-

. VEGF

.¹²⁷

VEGF VEGF -2

,

.¹²⁸ VEGF

bcl, bcl-2, A1, XIAP4 i survivina.¹²⁹

VEGF

. VEGF

(VRF)

,

-

,

.¹³⁰

VEGF-

-

.¹³¹

,

.

VEGF-

VEGF -3

.¹³²

,

,

.

1.9.

,

,

.

1.9.1.

Tottena 1953.

:
133
(), „ “ ()
134

1.9.2.

135,136
(34b12, CK5/6), p53 i p63.

137 p63

Epstein-u

0,3 %

43,139

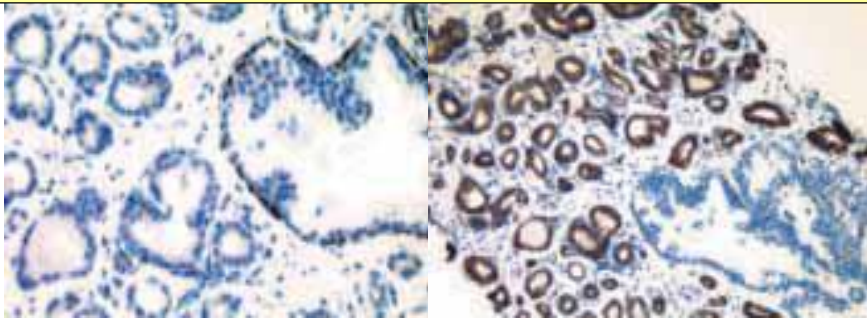
p63

cadherin, D2-40, CD109 ili BCL-2.

: P-

9.1.

: p63-, AMACR+



1.9.3.

1) *Alpha-methylacyl-CoA racemase*: Alpha-methylacyl-CoA racemase (AMACR)

¹⁴⁰ AMACR

¹⁴¹

(

)

^{142,143}

AMACR (<95%)

AMACR

PIN.

2) *GOLM1 (GOLPH2,GP73): GOLM1*

144,145
 92,5 % . GOLM1
 84%,
 GOLM1 mRNA
 146,147
 GOLM1
 AMACR

3) *Fattyacidsynthase (FASN) – sintetaza masnih kiselina: FASN*

148
 FASN
 149,150,151 FASN
 AMACR

4) *ERG :*

152,153 50%
 ERG
 154,155
 FISH-a i PCR-a.
 ERG
 TMPRSS2-ERG

(somatic cytochrome C - CYCS),
 (intestinal cell kinase - ICK)
 nuclear factor kB kinase subunit - IKBKB).¹⁵⁶
 (Inhibitor of

AMACR

1.9.4.

157
AMACR

1.9.5.

1) (*Prostatic-specific antigen – PSA*) je 33-kD

(¹⁵⁸),
PSA,
¹⁵⁹

2) (*Prostatic-specific membrane antigen – PSMA*)

^{160,161}

3) Prostein (kodiran genom SLC45a3),

¹⁶²

p63

4) ERG

50%

ERG

163
ERG-

164

- 5) (AR) NKX3.1 -
NKX3.1 -

1.9.6.

1) : TMPRSS2—ERG:

2) mikroRNA.

: GST-pi, RARbeta2, APC, PITX2 i HOXD3.

3) microRNA

RNA

microRNA

miR-191,

miR-145, miR-191 i miR-100.¹⁶⁵

2.

VEGF-
(CD105),

1. VEGF-

2.

3.

4.

(PSA,

)

5.

Gleason

(

.)

6.

3.

30.06. 2012. , , , 30.06.2007.
.

3.1.

172 , , - .
 , , .
 , , , .
 VEGF- . ,
 ,
 - . ;
 () ,
 , , .
 1. 24 ,
 72 (61 , 87)
 2. 148 ,
 75 104 (66 83) , 62
 44 (50 73) .

3.2.

,
 PSA ,
 ,

Purified Anti-CD105	Mouse human	Dako, Glostrup, Danmark		SN6h	1:20
Purified Anti-human VEGF	Mouse VEGF	BD Pharmingen	554169	PAb1801	1:2000

3.2.

3.6.

24 4% - 3-4 μ , SuperFrost® 56°C 1 VEGF- (LSAB+/HRP, DAKO, Denmark), 3,3- LSAB+/HRP.

, pH 6,0, 800W, 21 .
 , 3% H2O2 10 ,
 1h ,
 DAKO LSAB+ kit, (HRP)
 , -
 ,
 8 .
 , 20
 (PAP) , . ABC
 SAB .
 LSAB+/HRP ,
 ,
 - (H2O2 i 3-amino-9-etil-
 karbazol u N,N,-dimetilformamidu;AEC+ Substrate-Chromogen kit ,Cat. No. K3469, DAKO-
 Denmark), 5 .
 0,1
 pH 7,4. y - .

3.6.1.

(UK National External Quality Assessment for Immunocytochemistry).

3.6.2.

169,170
(quick Allred score)¹⁷¹
50%.^{172,173}
VEGF- , Allred score,
() 2 0 8.

%		
0 =		0 =
1 =	>1%	1 =
2 =	1-10%	2 =
3 =	11-33%	3 =
4 =	34-66%	
5 =	67-100%	

Табела 3.2. Allred score метод очитавања VEGF маркера

(CD105),

(: microvessel density).

(“ ” : hot spot areas).

Weidner

174,175,176

(x4).

(x20)

0,739².

3

3

3.7.

(verzija 15.0, R Inc.,Chicago,IL).

), (,), () .
Kolmogorov-Smirnov- , Kruskal-Wallis-ov i Mann-Whitney -jev .
Fisher-
Pirson-ovog i Spearman -ovog .
ROC , , *cut-off*,
Kaplan-Meier-a, a Log-
(*curve*) - <0,05 .

4.

172 ,
 ,
 ,
 VEGF-
 ;
 (),
 ,
 1. 24 ,
 72 (61 , 87)
 2. 148 ,
 75 104 (66 83), 62
 44 (50 73).

(15.0, Inc.,Chicago,IL).
(=104) 74,46±4,23 83 66.
94 , 52,62±25,74.
165 17. PSA

(=104).

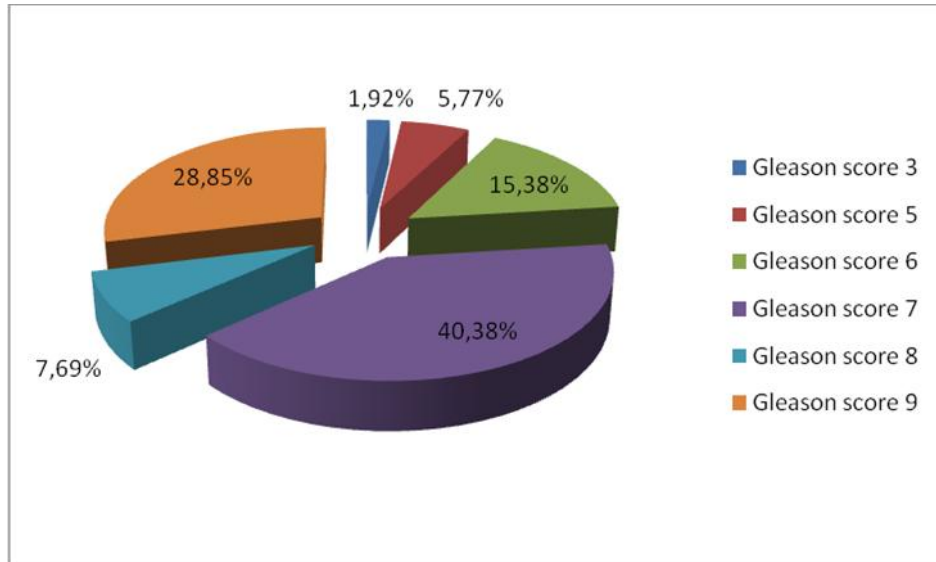
79.46±91,33

490

7,62.

Gleason score-u

:



4.1.

Gleason skorova

Gleason

5,

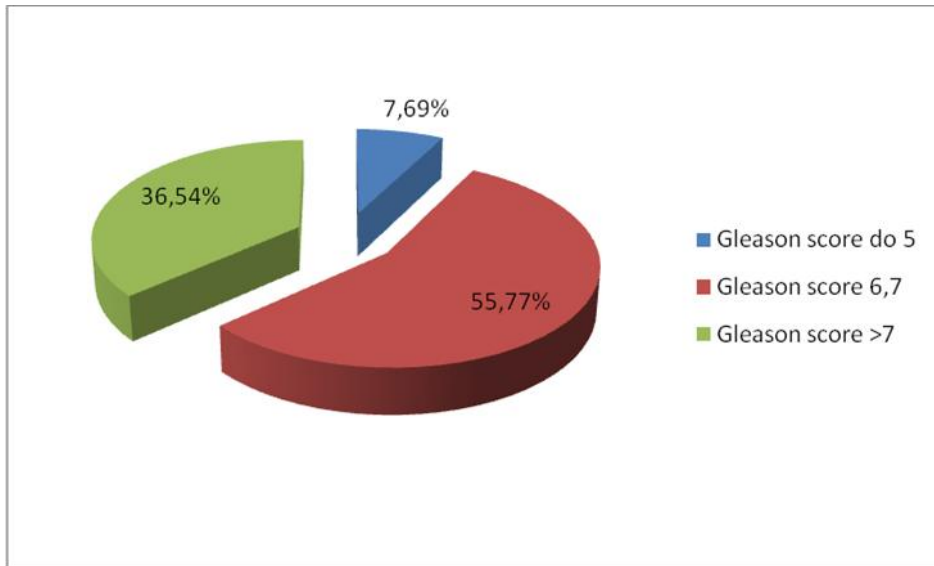
Gleason

(6 7)

7.

50%

52

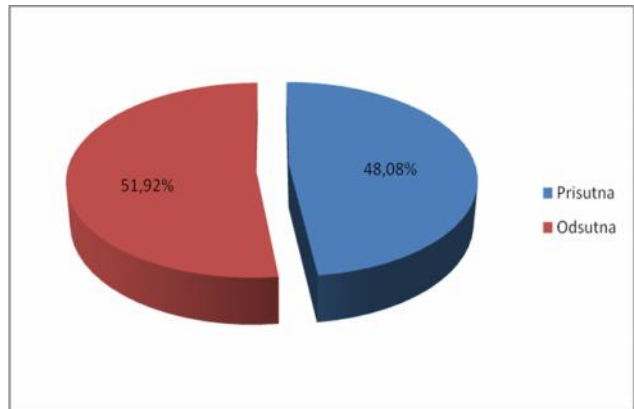
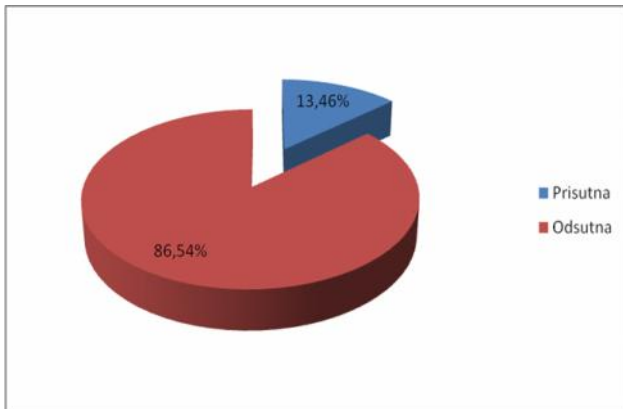


4.2. Gleasona 3

14

(13,46%).

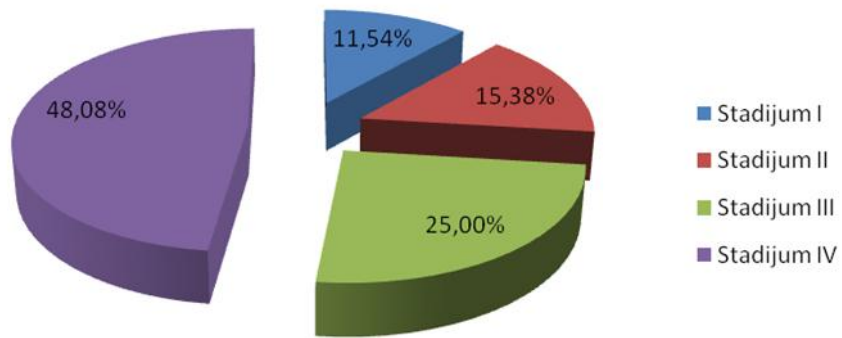
48,08%



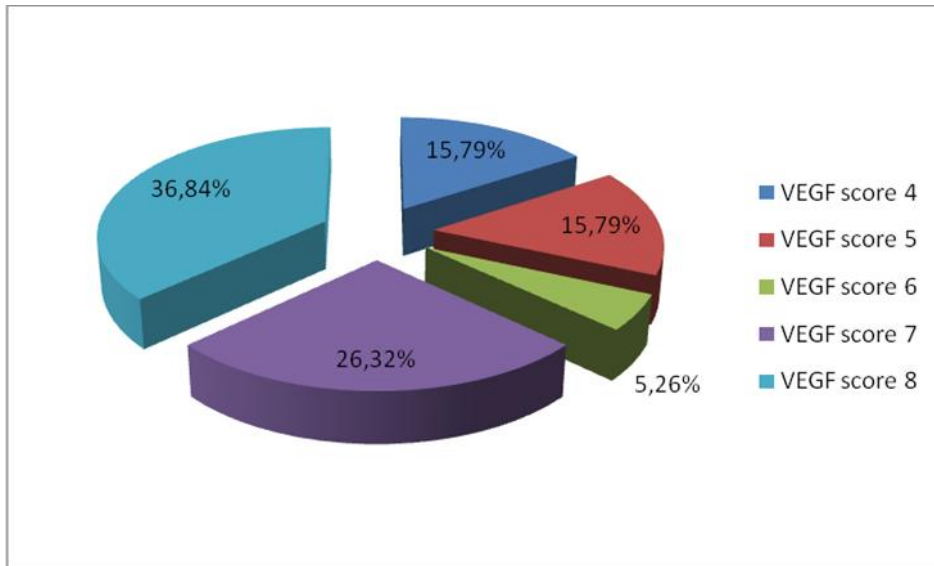
4.3.

:

4.4.



.			(CD105)	76
3	MVG	31,69±22,38.		
.	70.	VEGF-		76
20	90.	VEGF-	63,68±26,57.	
:			VEGF-	



4.5. „score“

MVG

Kolmogorov Smirnov

21 (12,33; 57)

21,50 (11,67; 57).

Mann Whitney

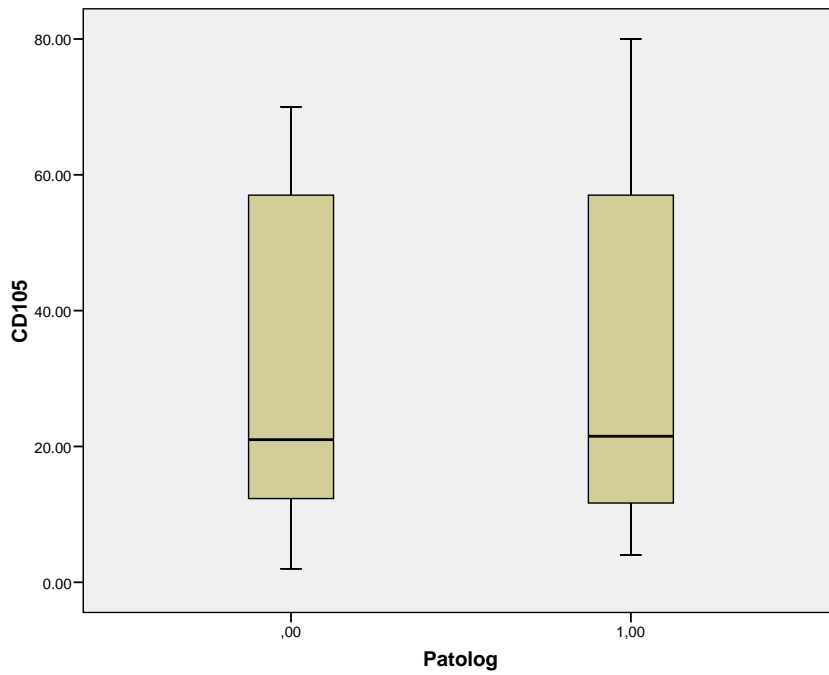
(p=0,889).

0,5%.

Test Statistics()

	CD105
Mann-Whitney U	2850,000
Wilcoxon W	5776,000
Z	-,140
Asymp. Sig. (2-tailed)	,889

a Grouping variable:



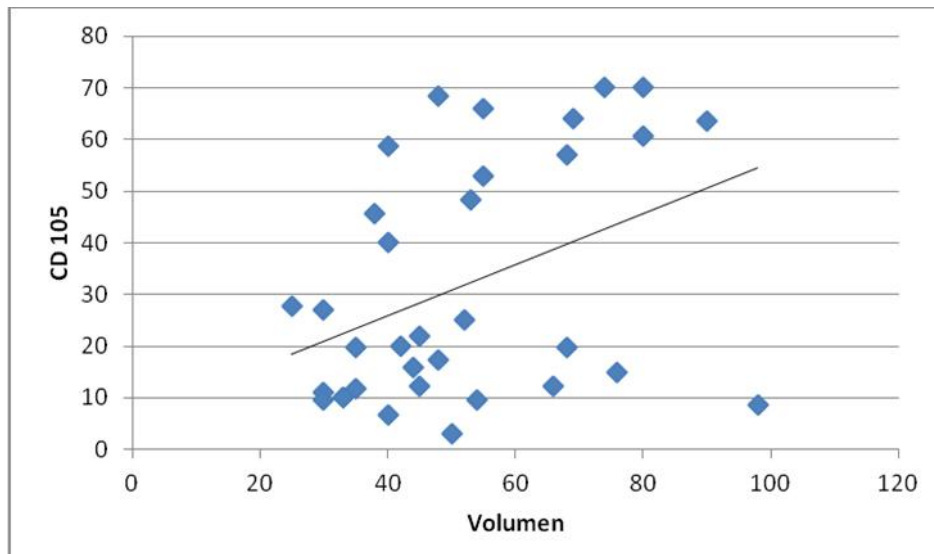
4.6. MVG

(Kolmogorov Smirnov)

MVG

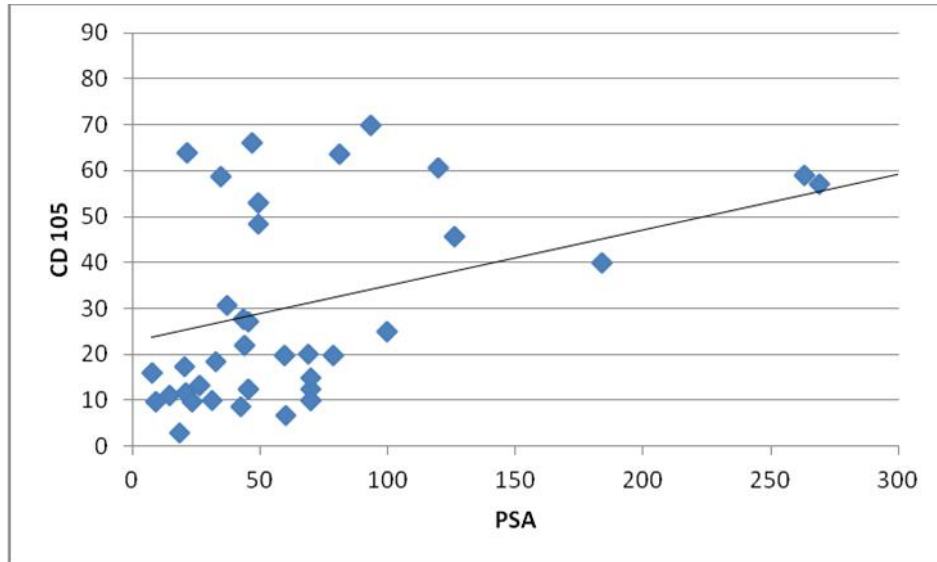
Spearman-

($p < 0,01$, $r = 0,376$).



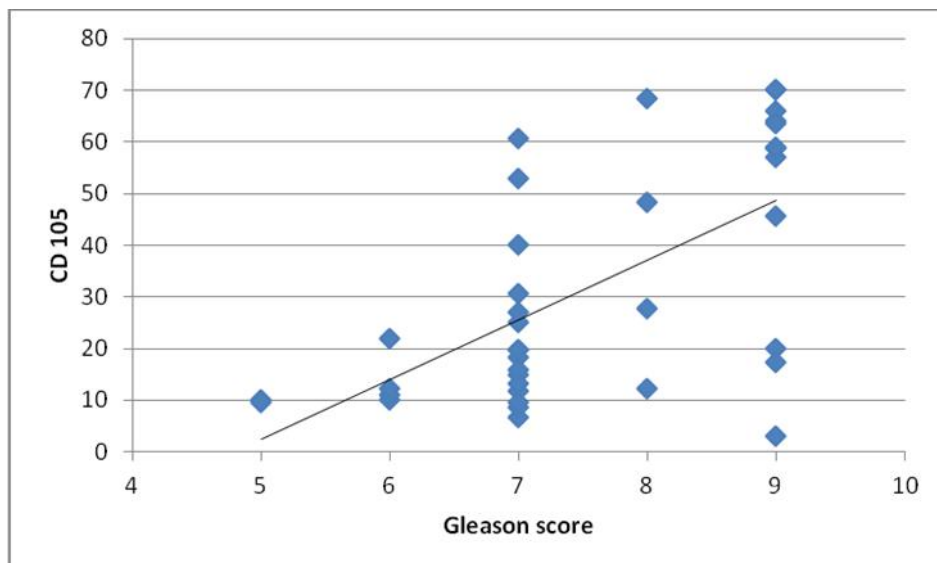
4.7. MVG

Smirnov-
Sperman-
MVG PSA (p<0,01, r=0,569).



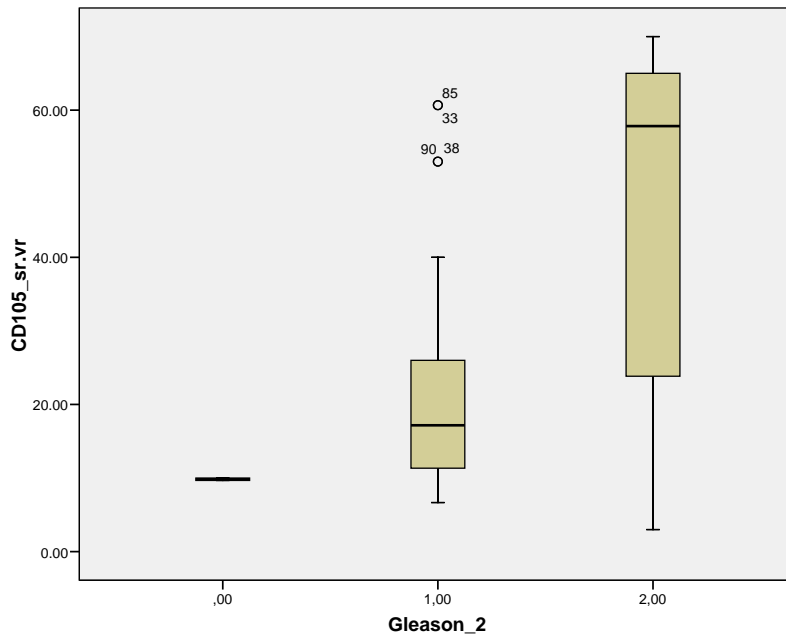
4.8. MVG PSA

MVG Gleason-
Kolmogorov Smirnov-
Spermanov
MVG
Gleason- (p<0,01, r=0,596).



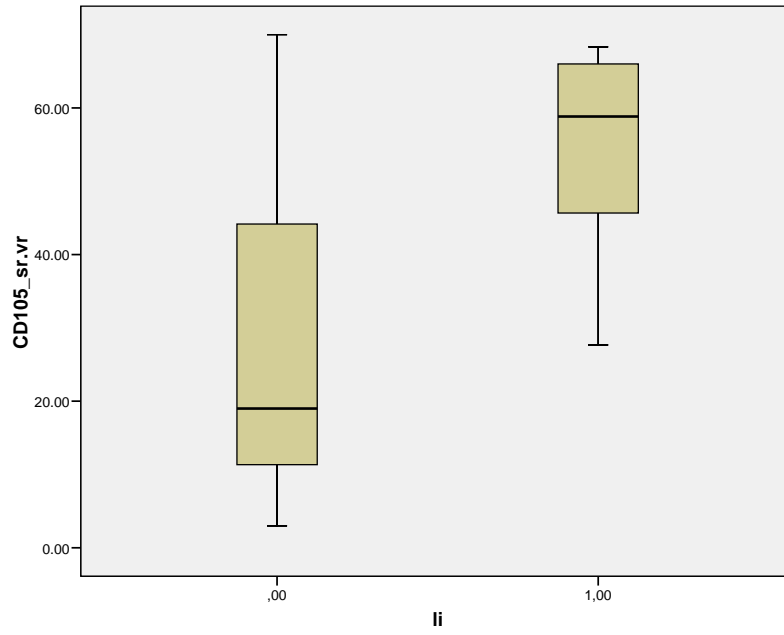
4.9. MVG i Gleason-ovog skora

MVG Gleason-
 Gleason 6 7, Gleason- 5, 7.
 Shapiro-Wilk
 Kruskal Wallis-
 Gleason score- MVG.(p<0,0005).



4.10. MVG Gleason skoru

MVG
 Shapiro-Wilk
 Mann-Whitney-
 MVG
 (p=0,755).
 MVG
 (Kolmogorov-Smirnov-
 , Mann-Whitney , p<0.0005).



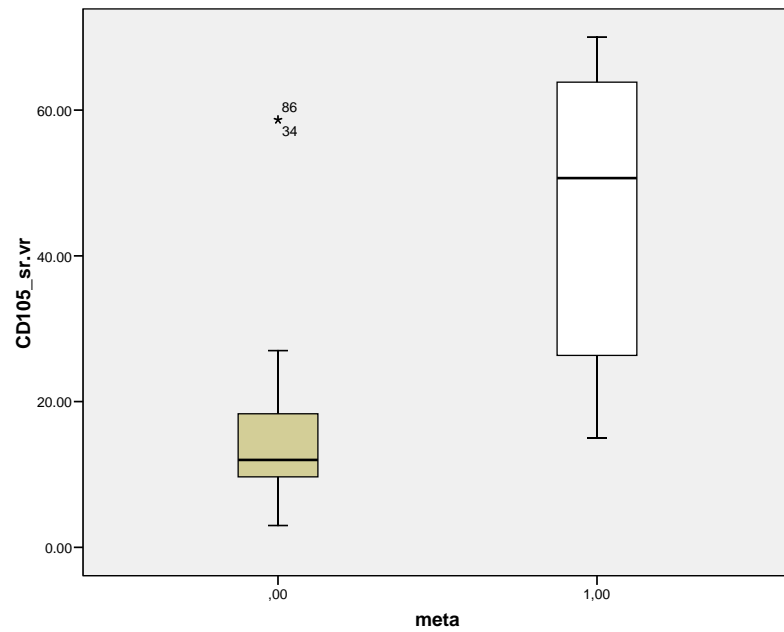
4.11. MVG

MVG

(Shapiro-Wilk),

Mann-Whitney

($p < 0,0005$).



4.12. MVG

Wilk
Wallis-

MVG. Shapiro-
Kruskal
MVG

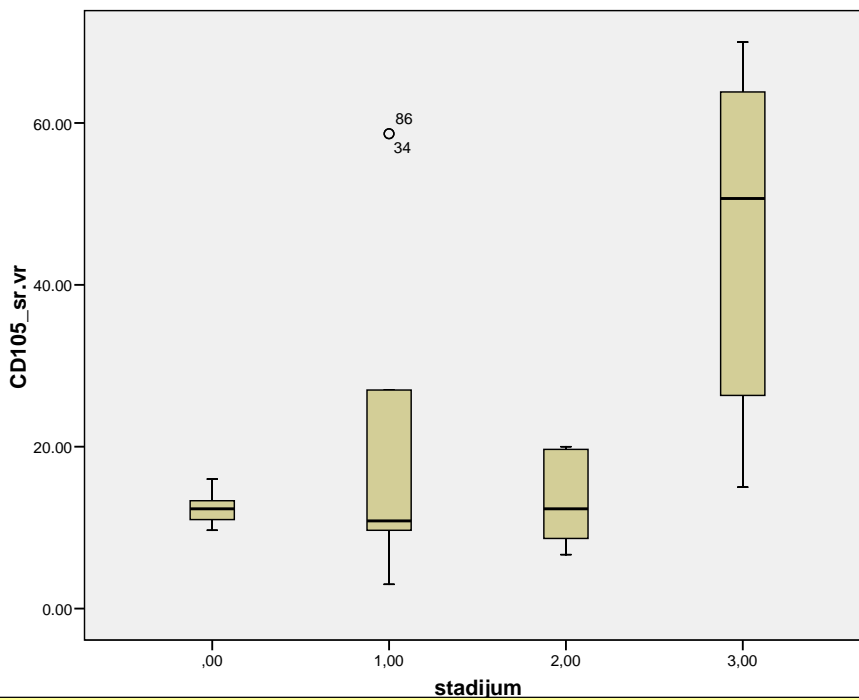
($p < 0,0005$).

Test Statistics^{a,b}

	CD105_sr.vr
Chi-Square	41,643
df	3
Asymp. Sig.	,000

a. Kruskal Wallis Test

b. Grouping Variable: stadijum



4.13.

MVG

MVG

(Kolmogorov Smirnov).

($p < 0,0005$; $r = 0,731$).

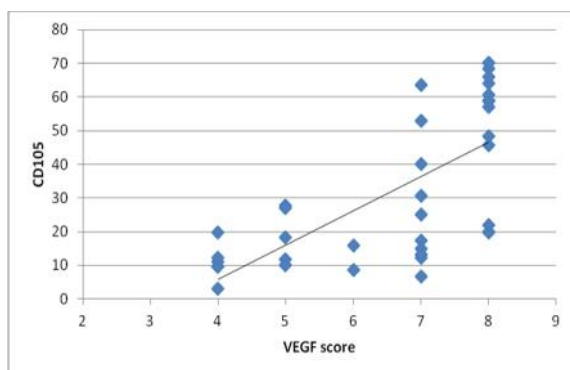
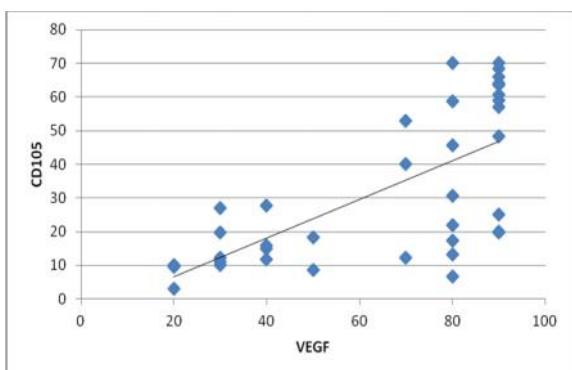
VEGF-

VEGF-

Spearman-

,

($p < 0,0005$; $r = 0,745$).



4.14. i 4.15. MVG VEGF-a(izr ž ne % i skorom)

VEGF-

-

Kolmogorov-Smirnov

VEGF-

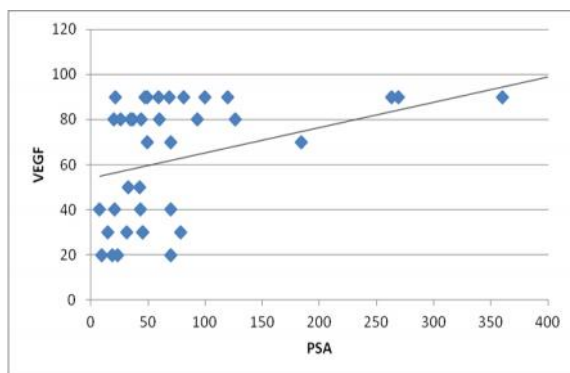
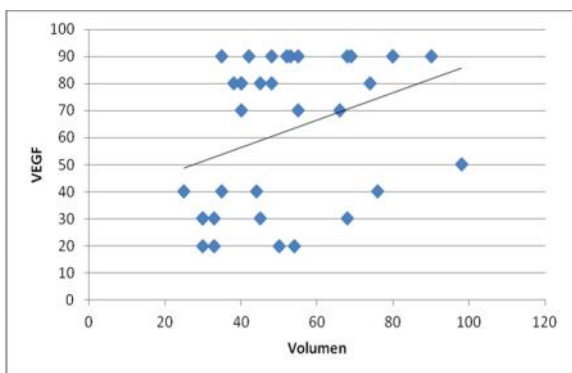
. Sperman-

,

(<0,0005; =0,426). Sperman-

VEGF

PSA (p<0,0005; r=0.531).



4.16. i 4.17. VEGF-a PSA

Gleason-

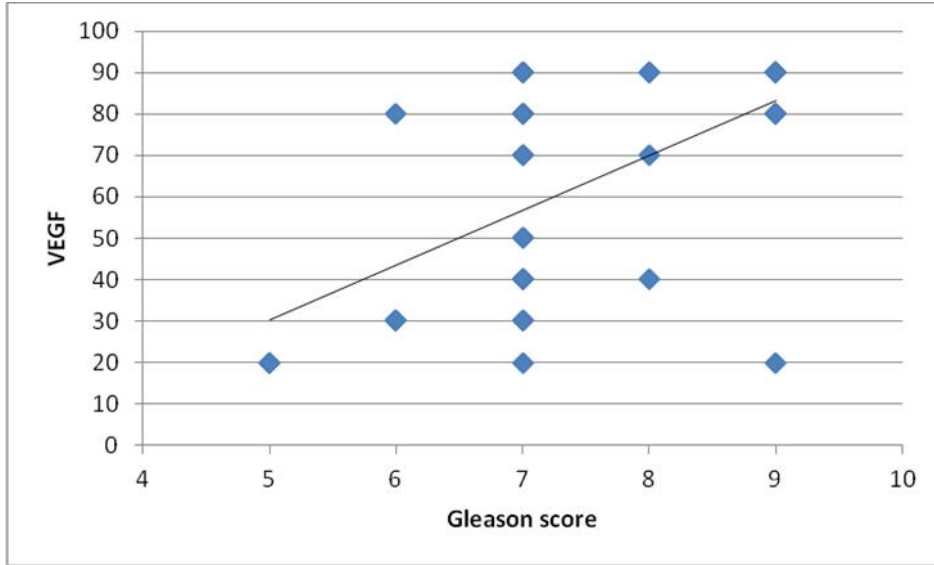
,

. Sperman-

,

VEGF- Gleason-

(p<0,0005; r=0.591).



T 4.18. VEGF-a i Gleason skora

Shapiro Wilk

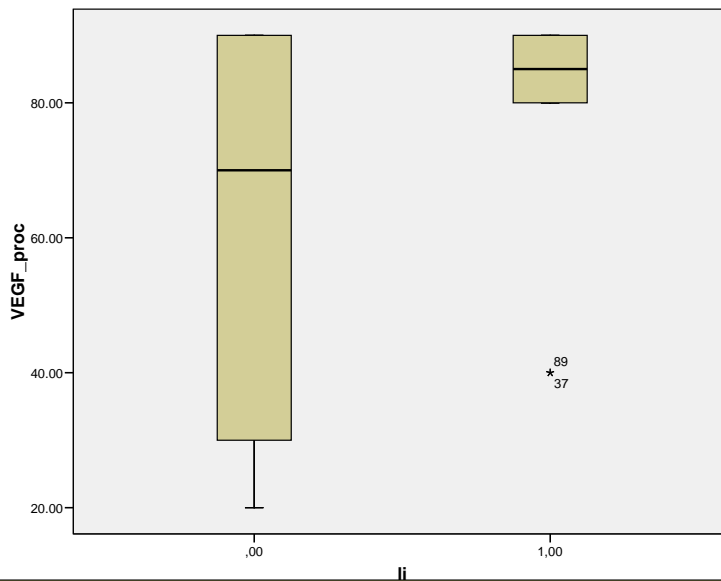
Mann Whitney-

VEGF-

(p=0,848).

, Mann Whitney-

VEGF-



4.19. VEGF-a

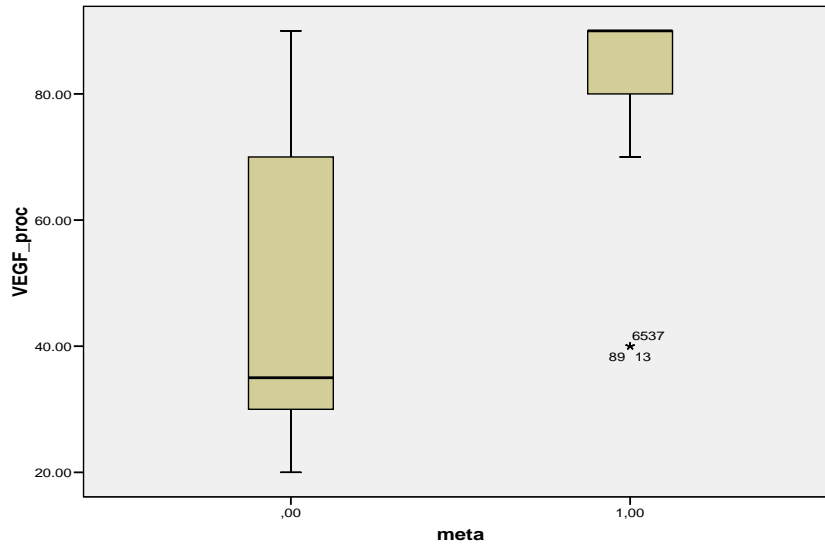
Shapiro Wilk

VEGF-

. Mann Whitney

VEGF-

(p<0.0005).



T 4.20. VEGF-a

Kruskal Wallis-

VEGF-

VEGF- (p<0.0005).

(Shapiro Wilk).

Test Statistics^{a,b}

	VEGF_proc
Chi-Square	37,130
df	3
Asymp. Sig.	,000

a. Kruskal Wallis Test

b. Grouping Variable: stadijum

36

60%.

36

Log rank

MVG (

(p<0,0005).

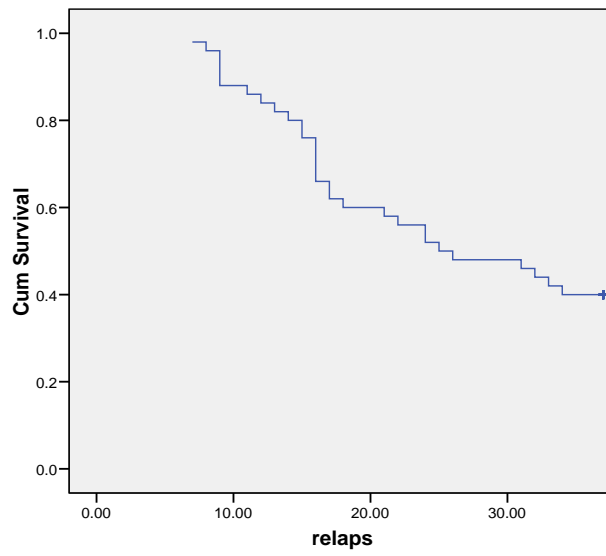
100

60

38,89% (14/36),

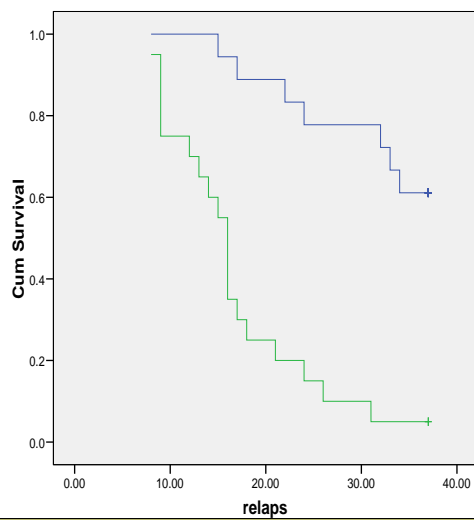
90% (36/40)

Survival Function



T 4.21. MVG

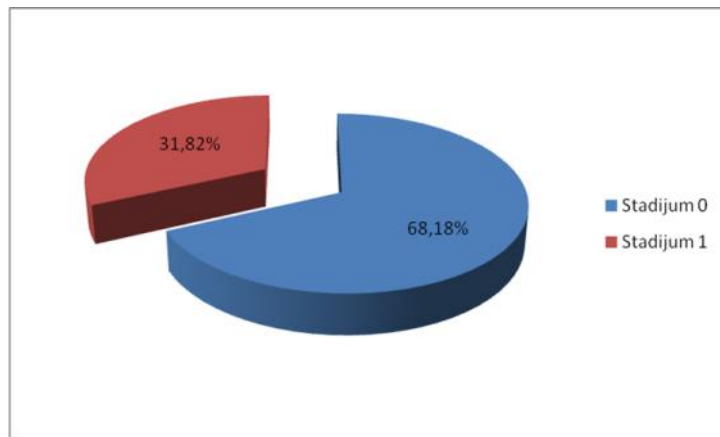
Survival Functions



T 4.22. MVG

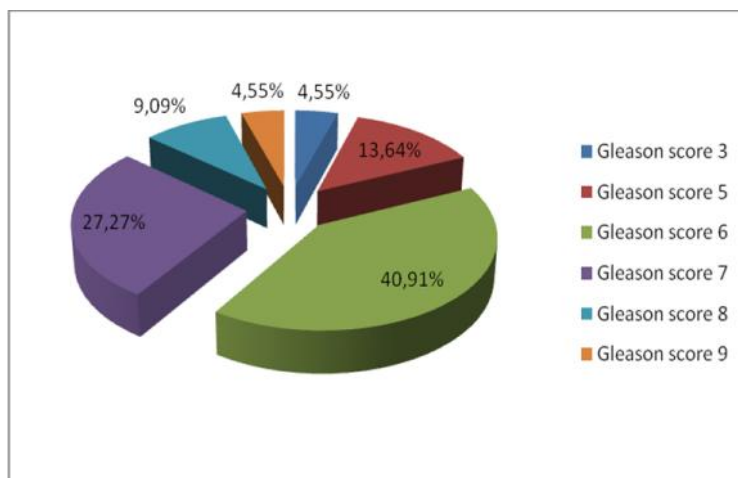
50 . (N=44) 73
 62,23±5,31. (±)
 PSA 5,68±2,99. N

13,10 2,10. I 30
 . 68,2% II 14 .31,8%.



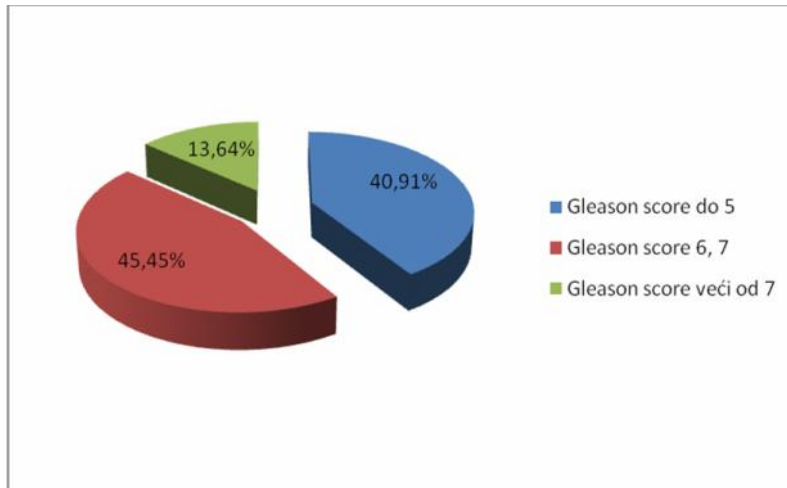
T 4.23.

17±8,64 (43
 8). Gleason
 :



T 4.24. Gleason

Gleason s



T	4.25.	Gleasona	3
---	-------	----------	---

MVG (

CD105),

24±12,57.

VEGF

44,09±27,73.

MVG

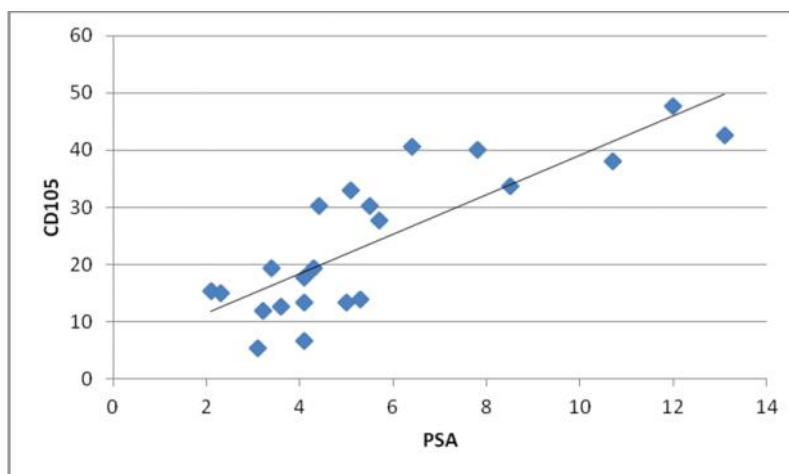
PSA

Spearman-

Shapiro Wilk

. Spearman-

(p = 0,807, r = 0,000)



T	4.26.	MVG	PSA
---	-------	-----	-----

Wilk

MVG

Mann Whitney-

14

(p<0,0005).

MVG

1

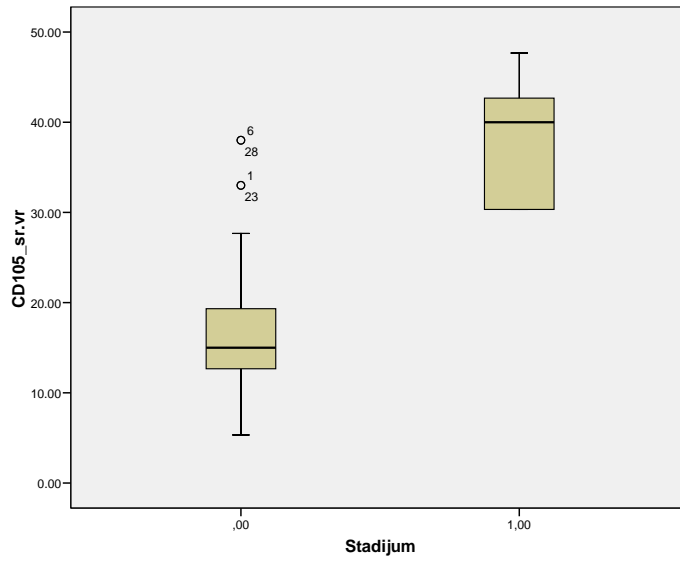
I

Mann Whitney-

CD105

Shapiro

30, II



T 4.27. MVG i

MVG

(p<0,0005, r=0,828)

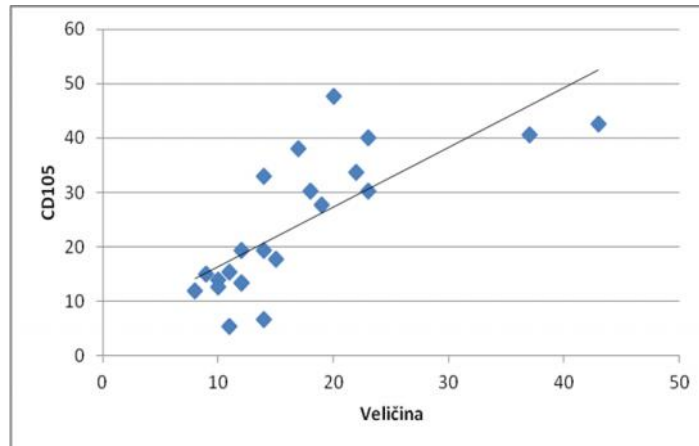
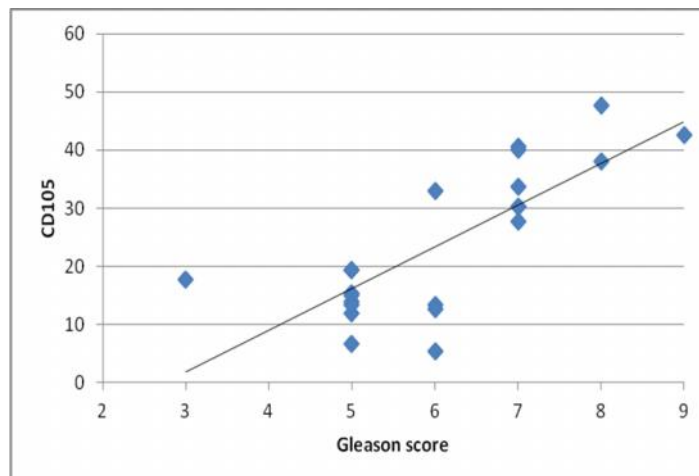


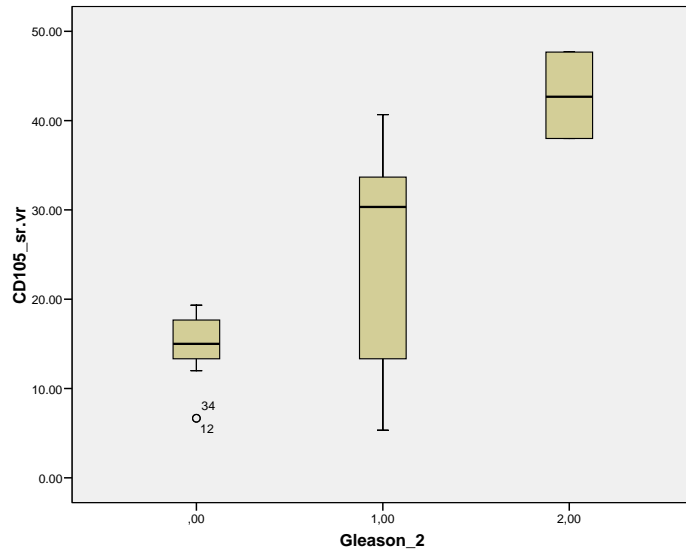
Tabela 4.28. Korelacija između u MVG i veličine tumora

, Spearman-
Gleason- MVG.
($p < 0,0005$, $r = 0,729$).



T 4.29. MVG i Gleason skora

Gleason
MVG
Shapiro Wilk,
Kruskal Wallis-
MVG ($p < 0,0005$).

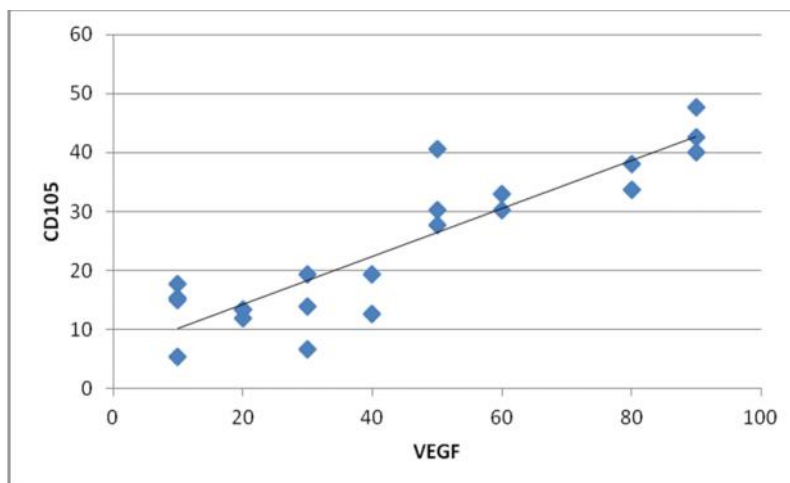


T 4.30. MVG i Gleason

MVG

VEGF-
Spearman-

($p < 0,0005$, $r = 0,826$).



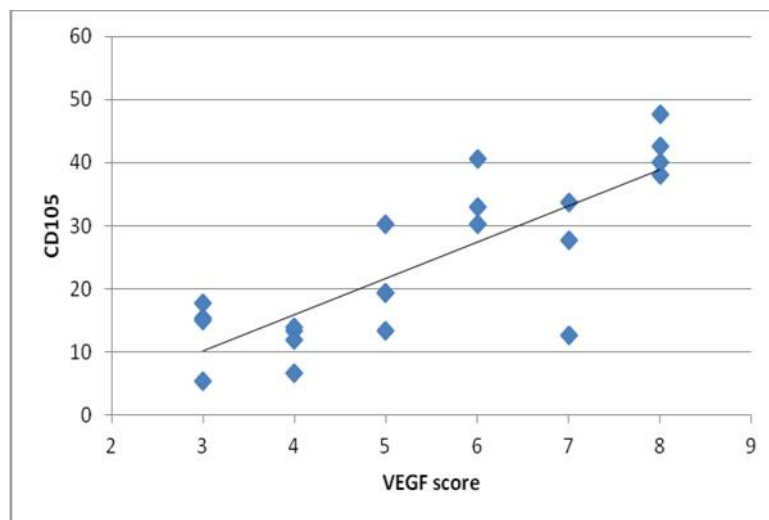
T 4.31. MVG i VEGF-a (%)

MVG

VEGF-

Spearman-

($p < 0,0005$, $r = 0,746$).



T	4.32.	MVG	VEGF-a (score)
----------	--------------	------------	-----------------------

MVG

Mann Whitney-

Test Statistics(a)

	CD105_ocitano
Mann-Whitney U	956,000
Wilcoxon W	1946,000
Z	-,100
Asymp. Sig. (2-tailed)	,920

a Grouping Variable: patolog

N

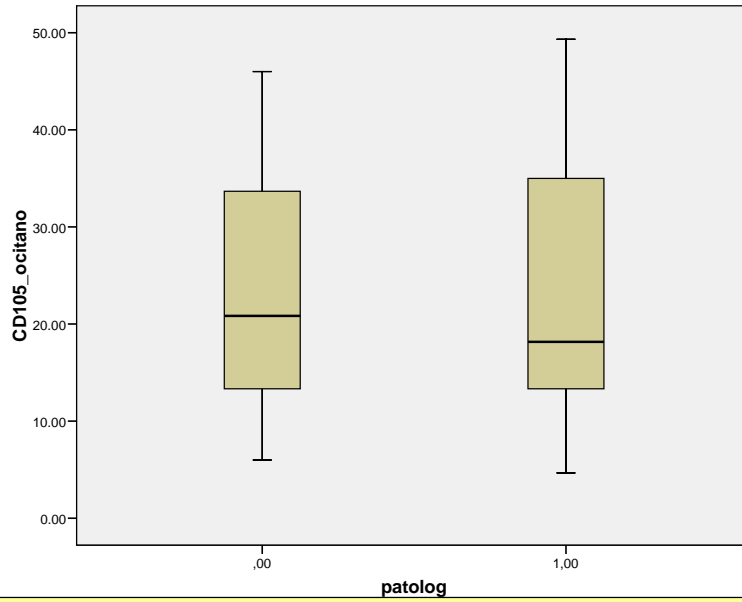
($p > 0,05$)

()

20,83% (13,33; 33,67)

17,65% (13,33; 35)

3%.



T 4.33.

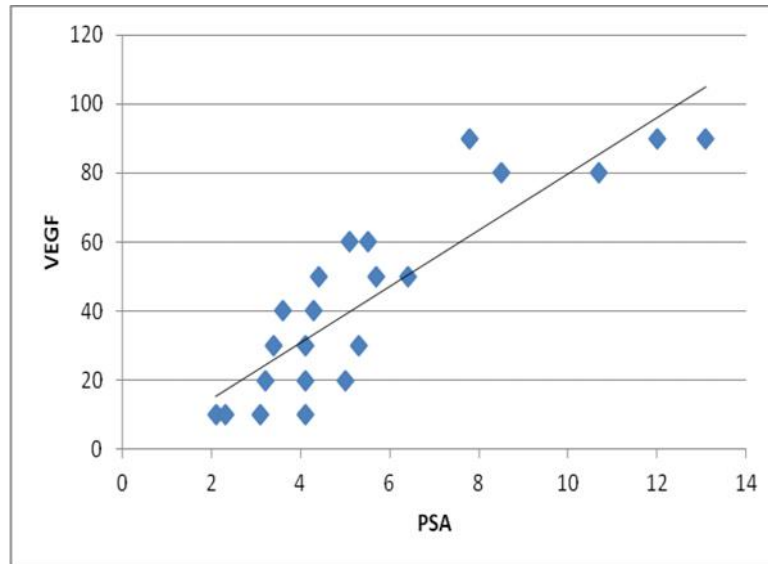
PSA

VEGF-

(Shapiro Wilk),

Spermanov

($p < 0,0005$; $r = 0,886$).



T 4.34.

VEGF-a

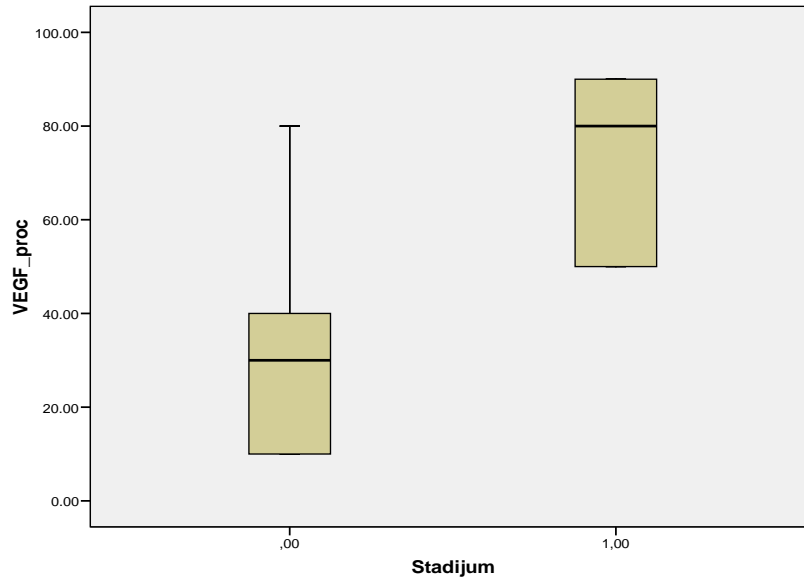
PSA

(, Gleason-

. Mann Whitney-

VEGF-

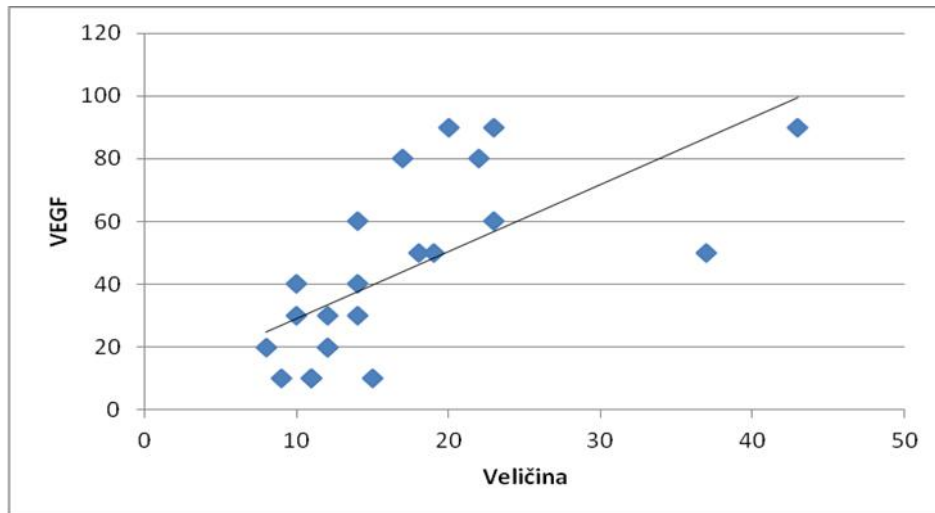
($p < 0,0005$).



T 4.35. VEGF-a i

Spearman-

($p < 0,0005$; $r = 0,775$).



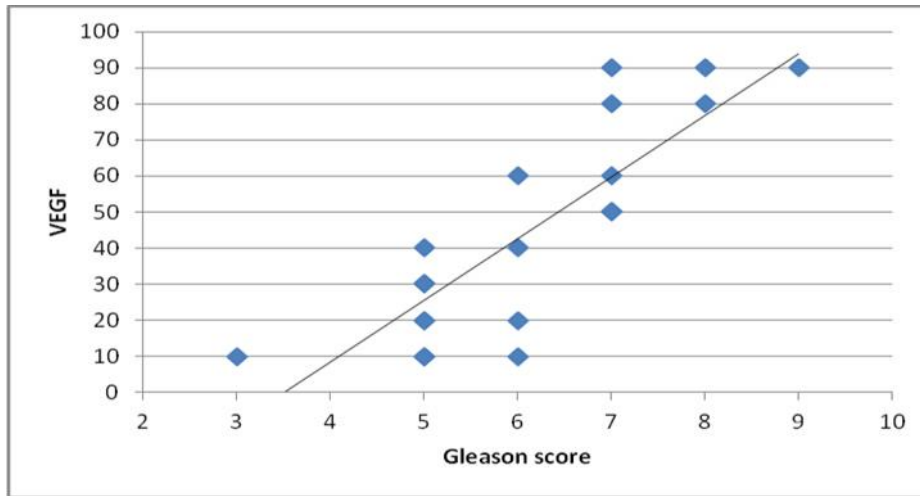
T 4.36. VEGF-a

Spearmanovim

VEGF-

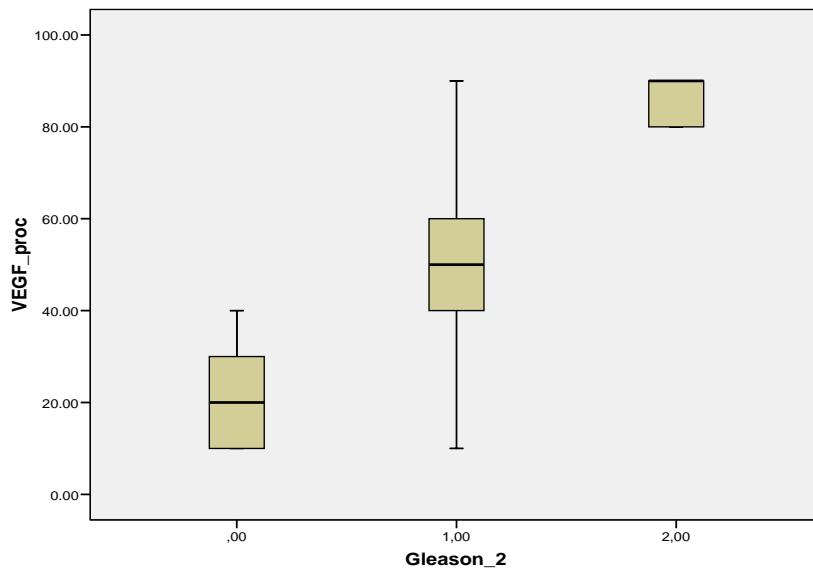
Gleason-

($p < 0,0005$; $r = 0,836$).



T 4.37. VEGF-a i Gleason skora

Kruskal Wallis-
VEGF-
Gleason score- ($p < 0,0005$).



T 4.38. VEGF-a Gleason skoru

MVG

19.835.

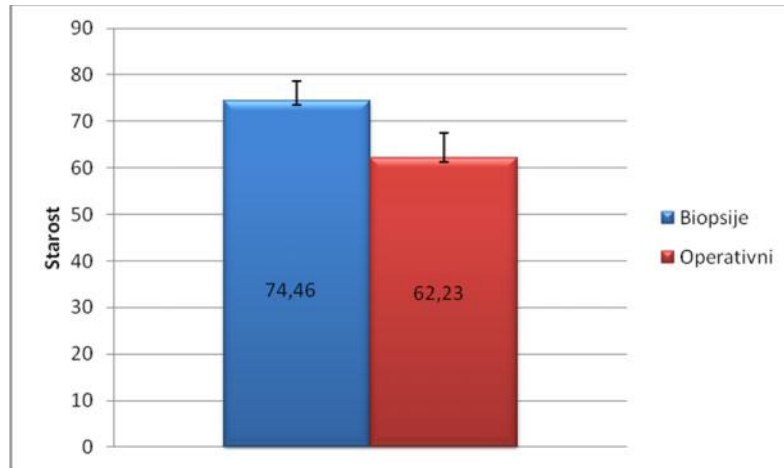
Shapiro Wilk

Studentov t .

o

74,46±4,23

62,23±5,31.



T 4.39.

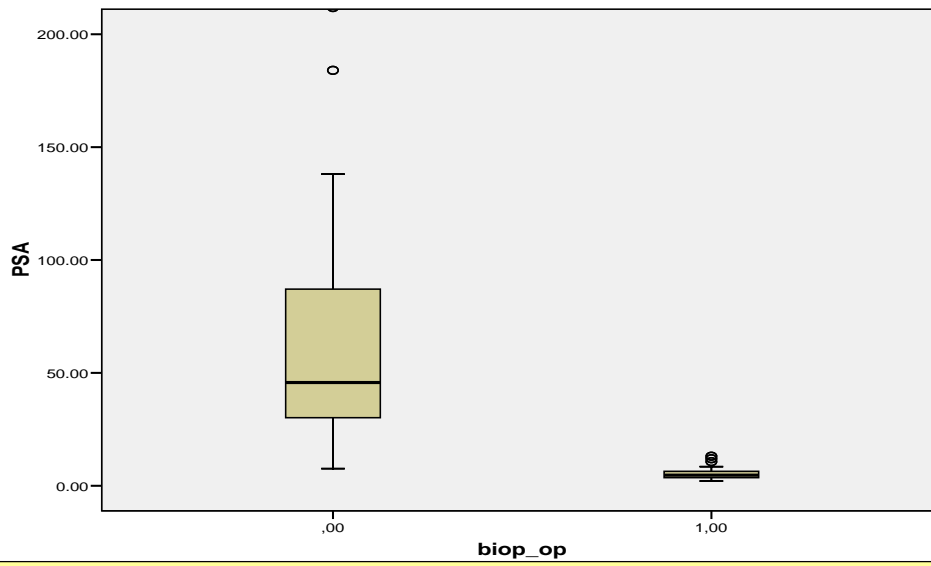
PSA Gleason-

(Shapiro Wilk).

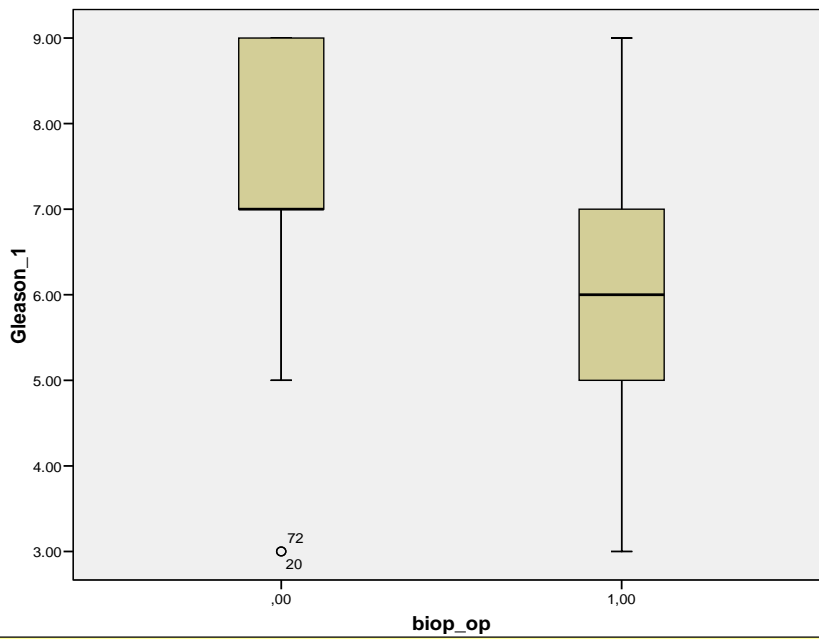
Mann Whitney-

PSA,

Gleason-



T 4.40. PSA

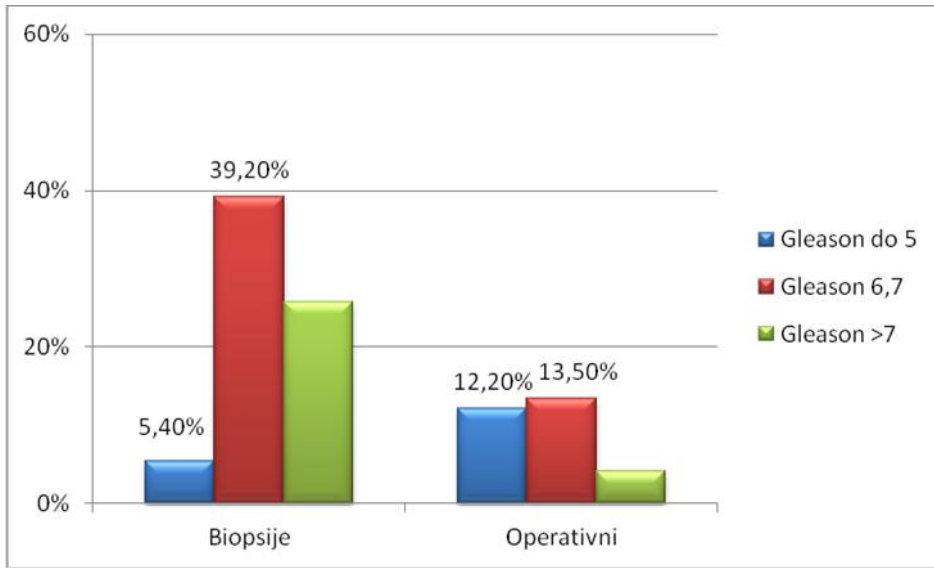


T 4.41. Gleason

Gleason-

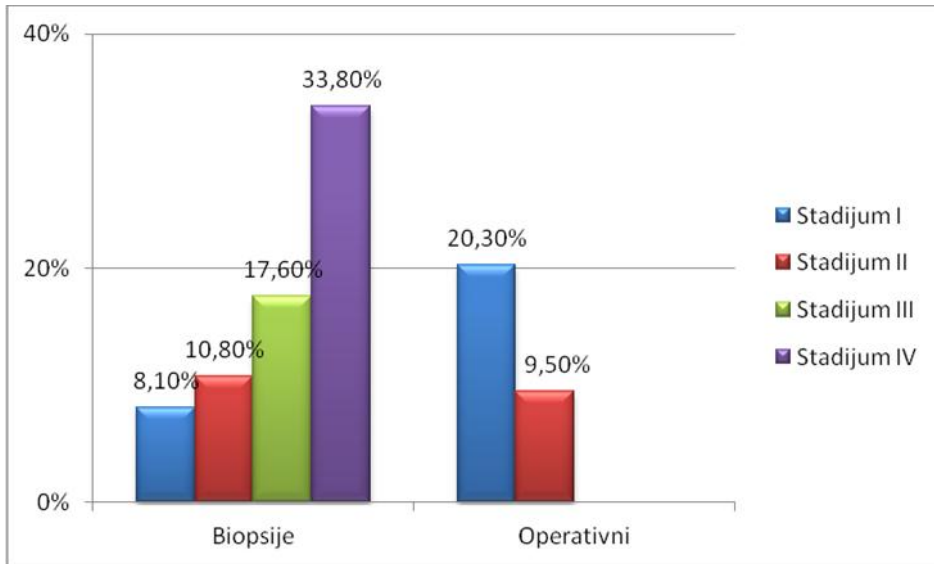
Pearson-ovog ²

(p<0.0005).



T 4.42. Gleason

Pearson-ovog ²
($p < 0.0005$).



T 4.43.

MVG

(Shapiro-Wilk).

Mann

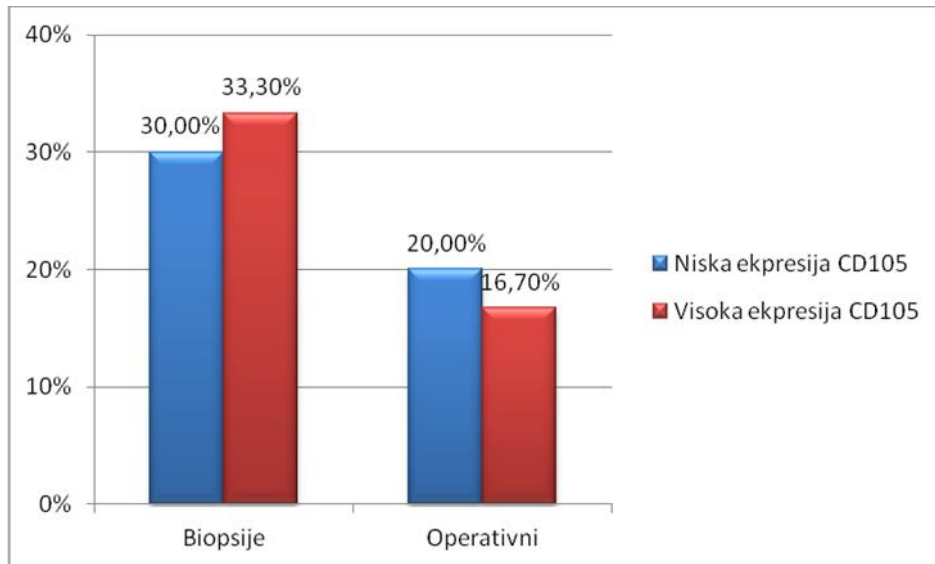
Whitney-

(p=0.076).

MVG

, MVG

(p=0.0036).



T 4.44. MVG

VEGF-

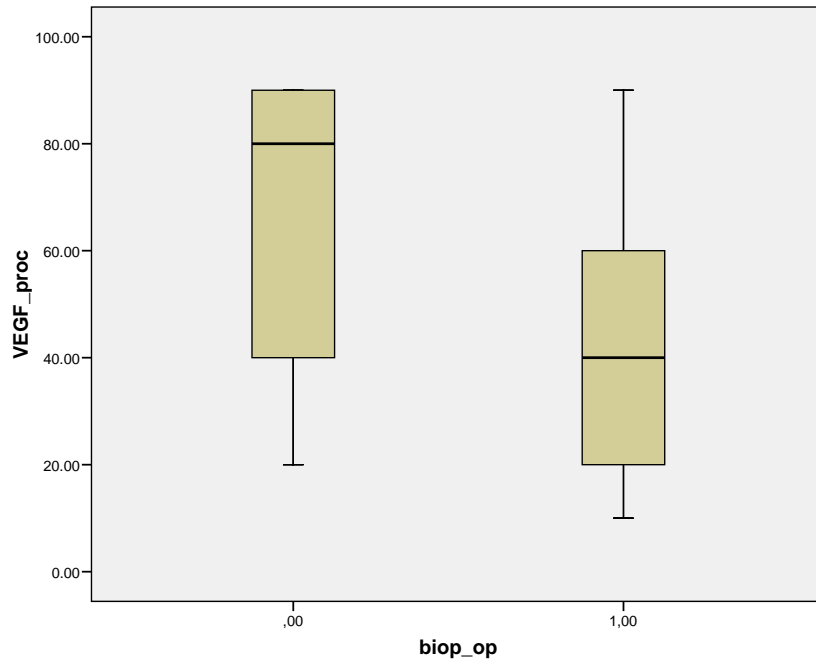
Shapiro-Wilk

Test Statistics^a

	VEGF_proc
Mann-Whitney U	1038,000
Wilcoxon W	2028,000
Z	-3,499
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: biop_op

Mann Whitney-
VEGF-

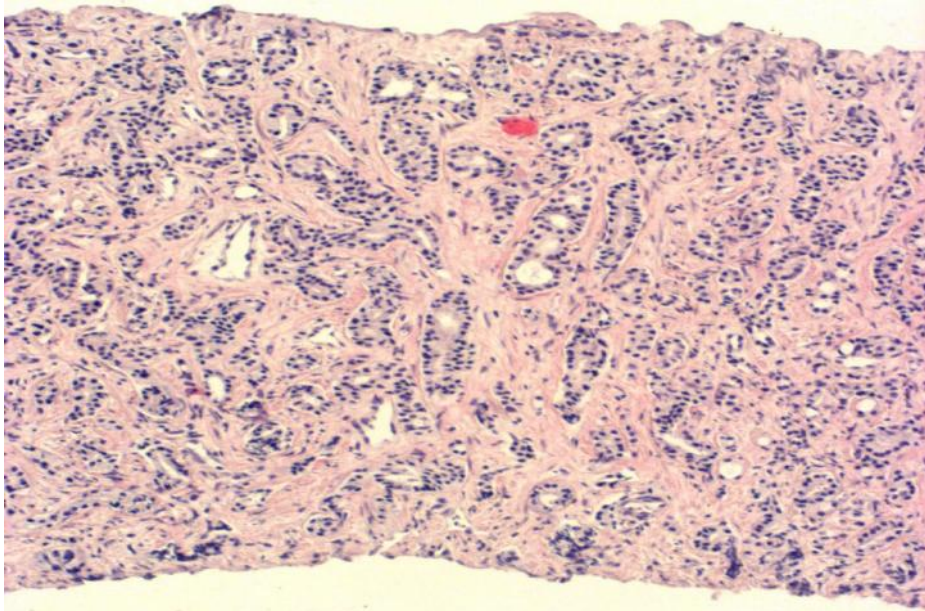


T	4.45.	VEGF-a
----------	--------------	---------------

VEGF-

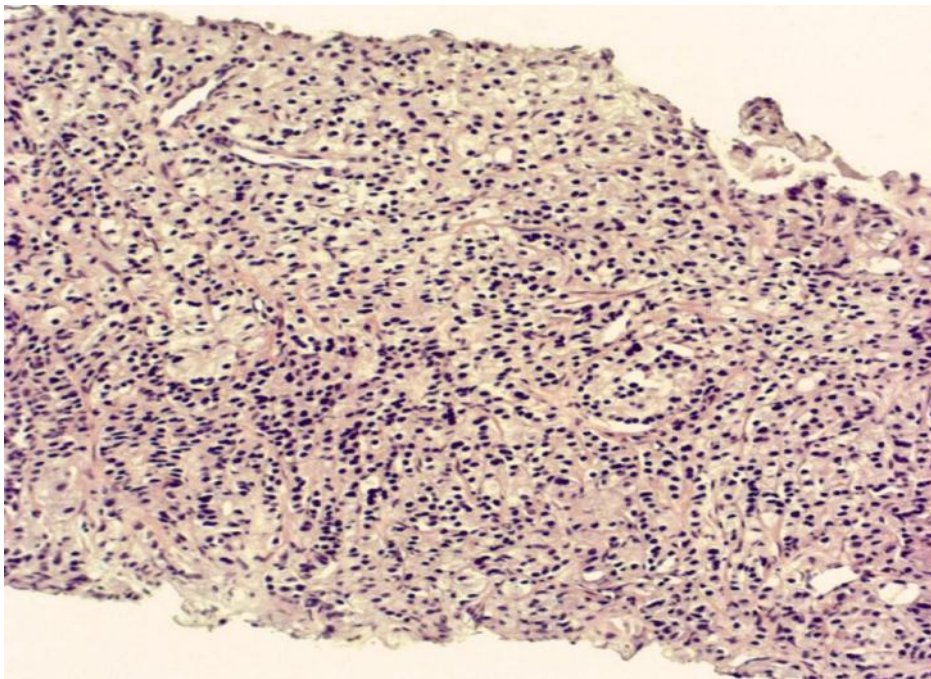
5.

—



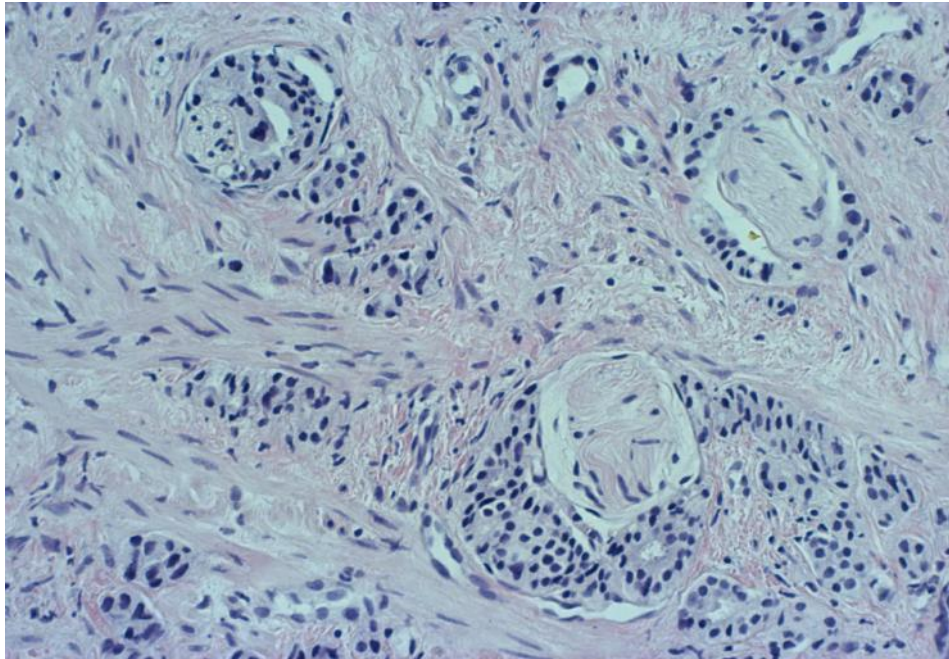
5.1.

, Gleason 5 (HE,x10)

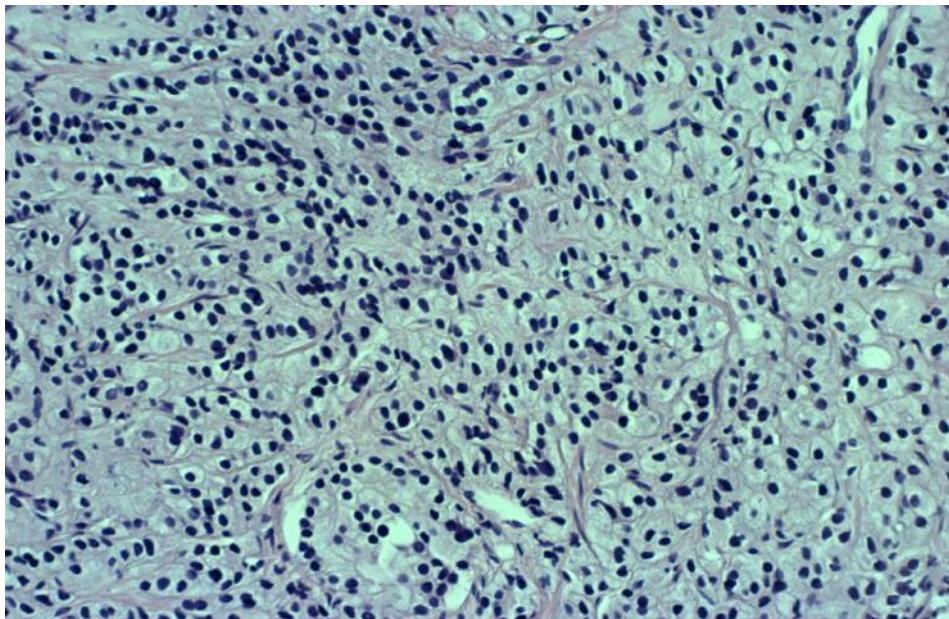


5.2.

, Gleason 8 (HE,x10)

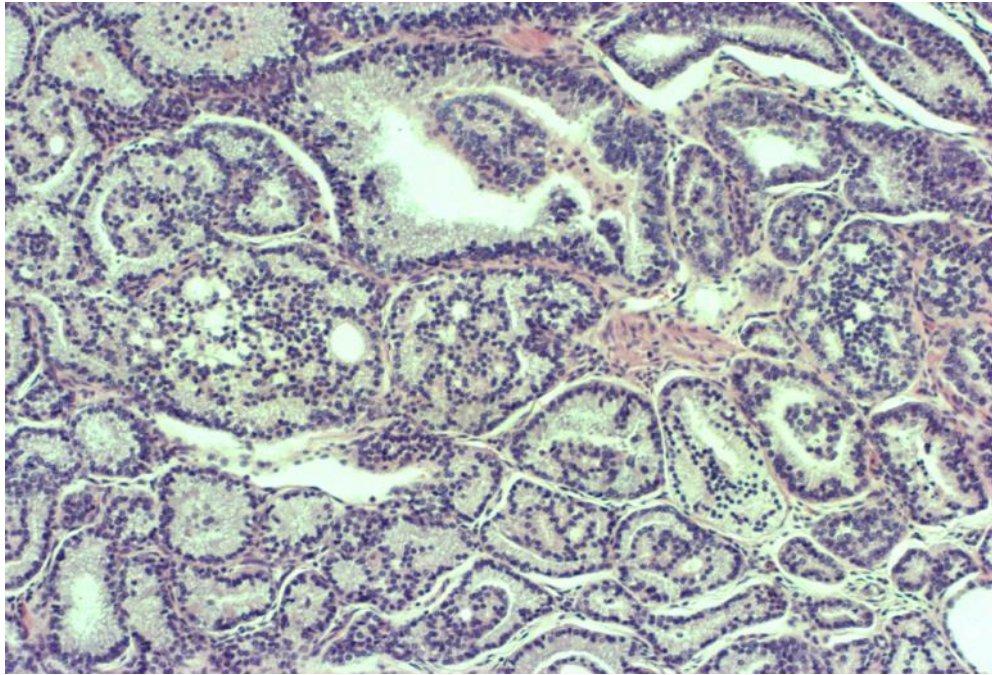


5.3.



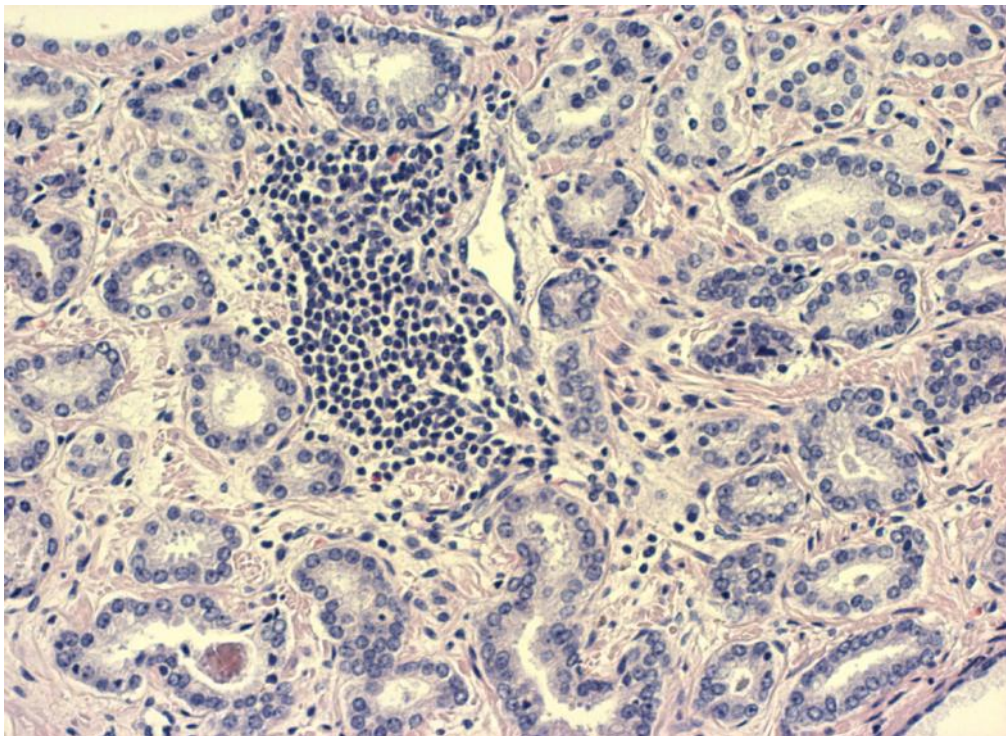
5.4.

, Gleason skor 8 (HE, x40)



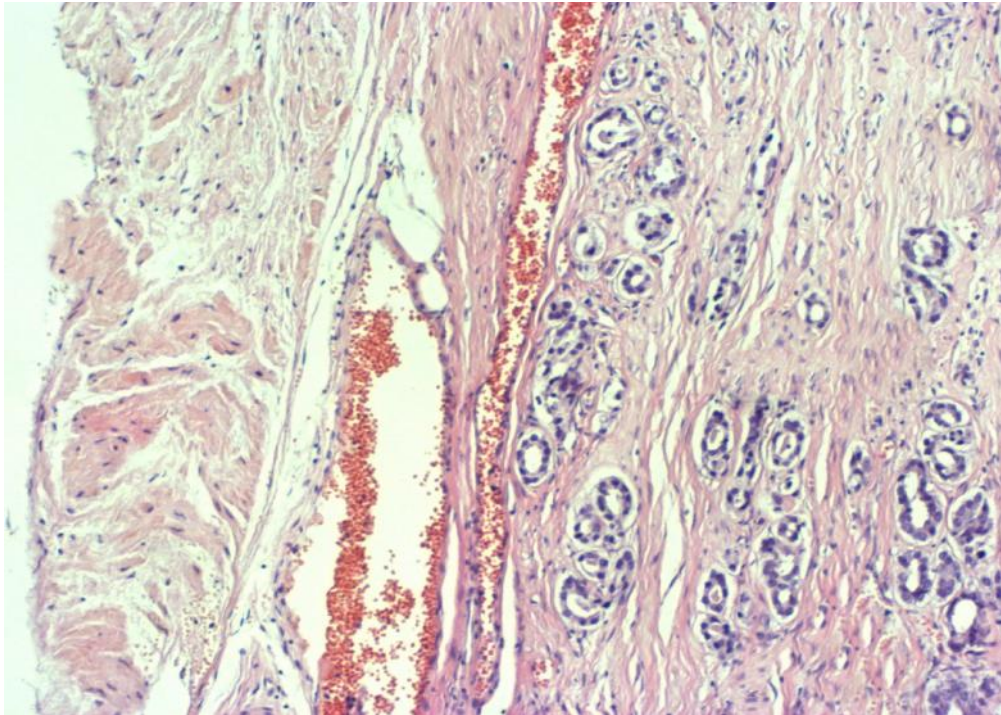
5.5.

, Gleason skor 8 (HE,x20)

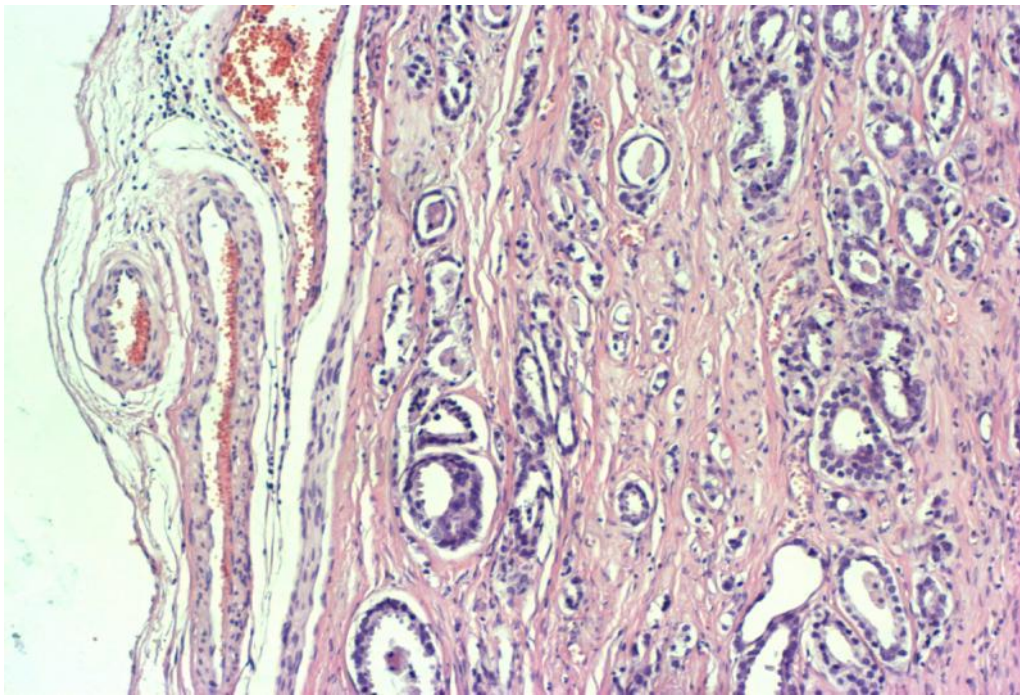


5.6.

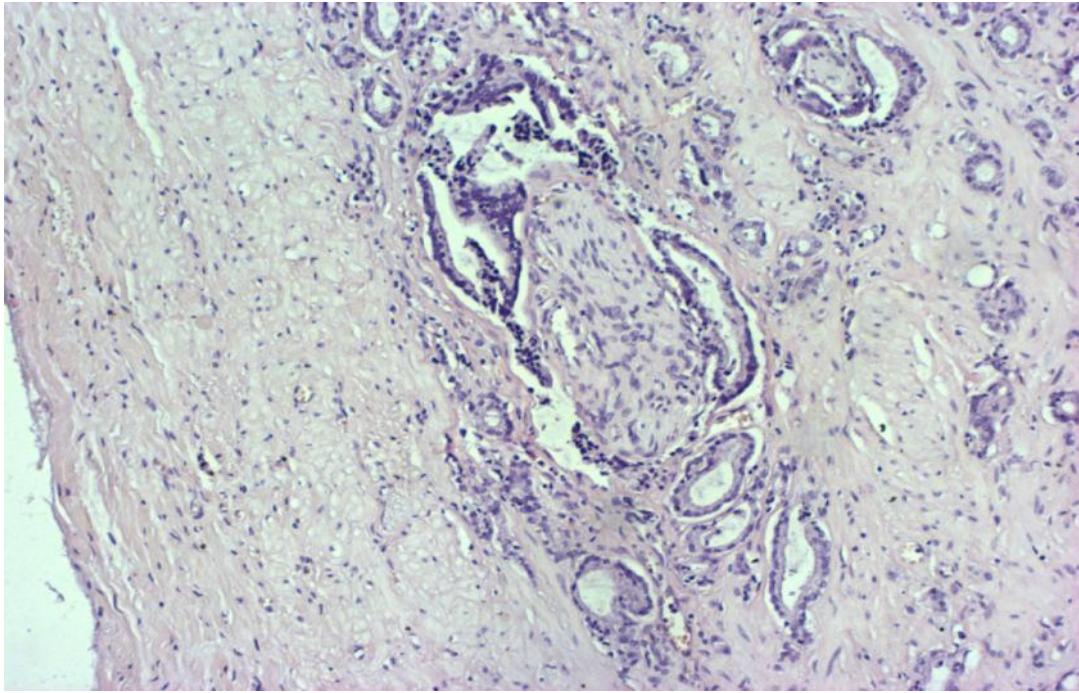
, Gleason skor 4 (HE,x20)



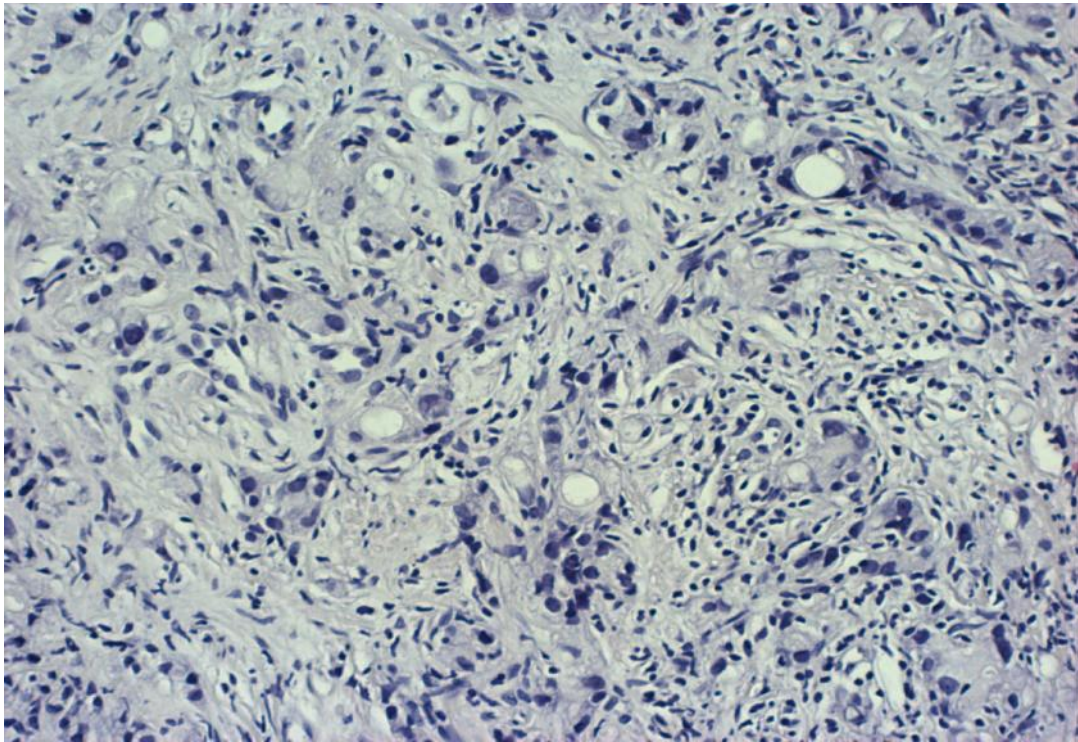
5.7. , (HE,x20)



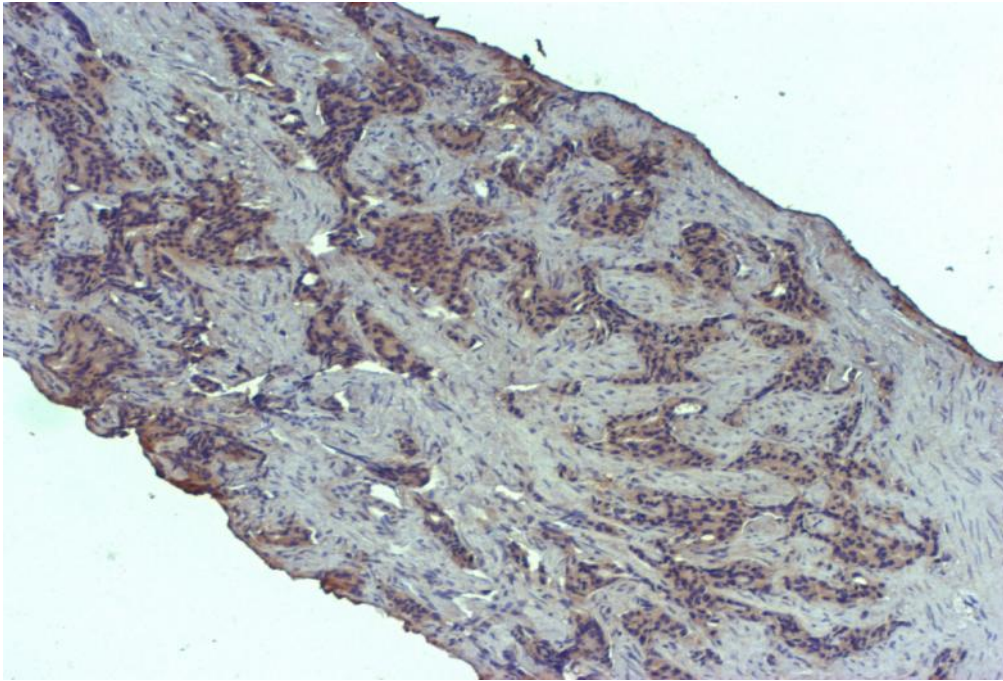
5.8. , (HE,



5.9.



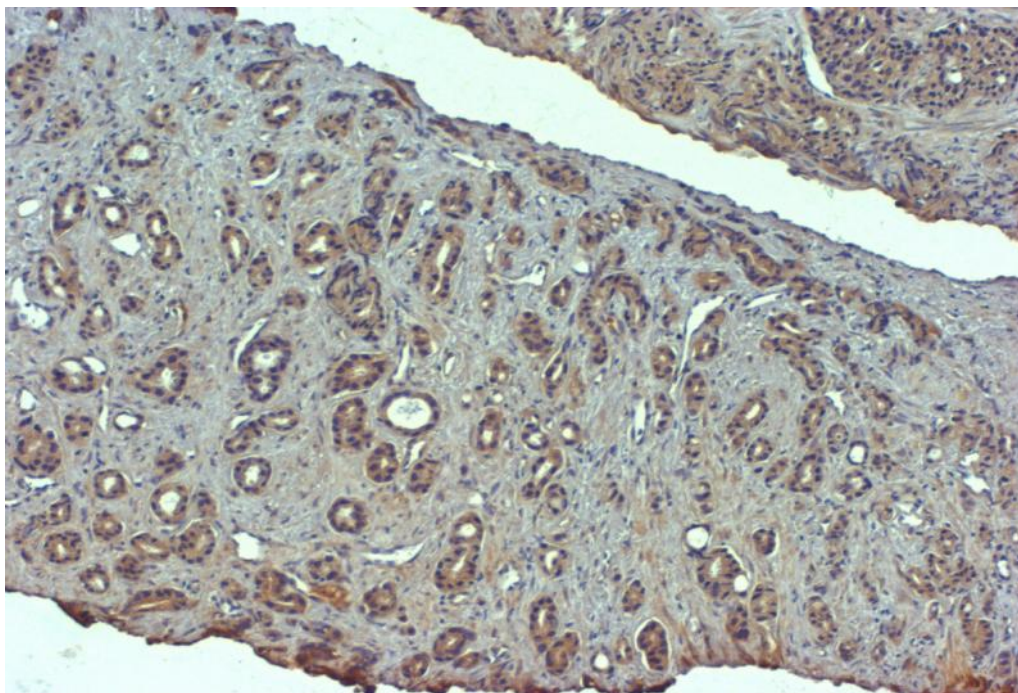
5.10.



5.11.

VEGF-a

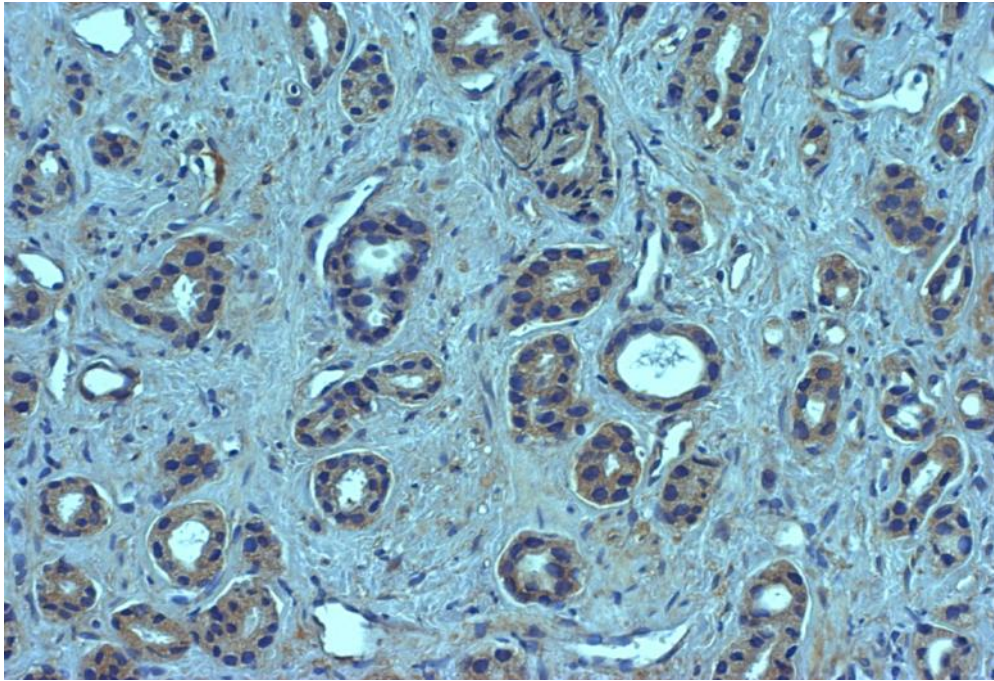
(IHH, VEGF, x10)



5.12.

VEGF-

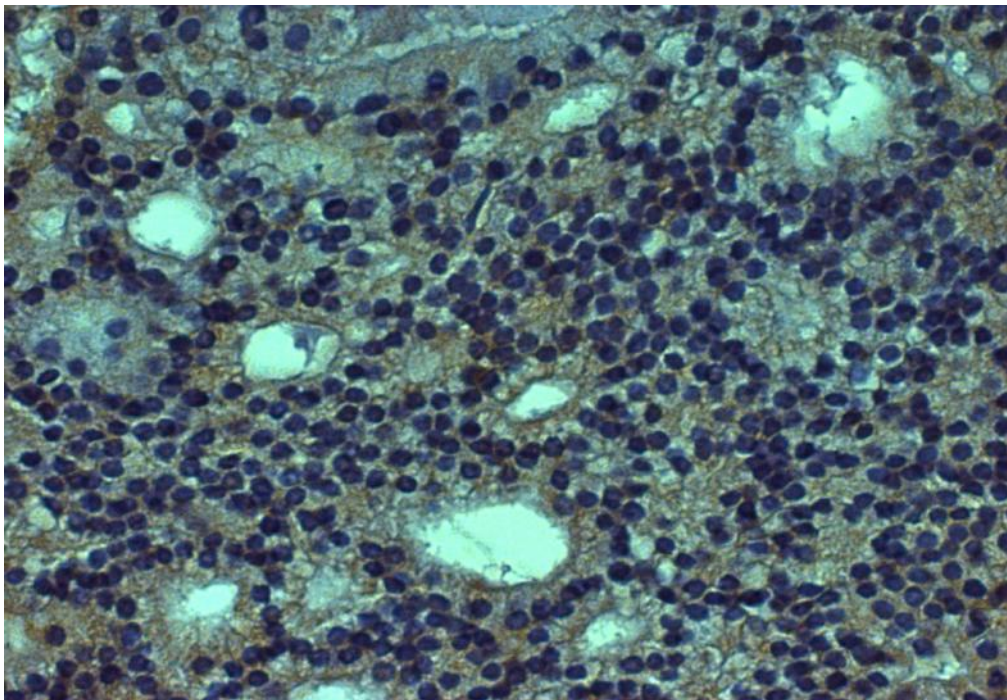
(IHH, VEGF, x10)



5.13. E

VEGF-a

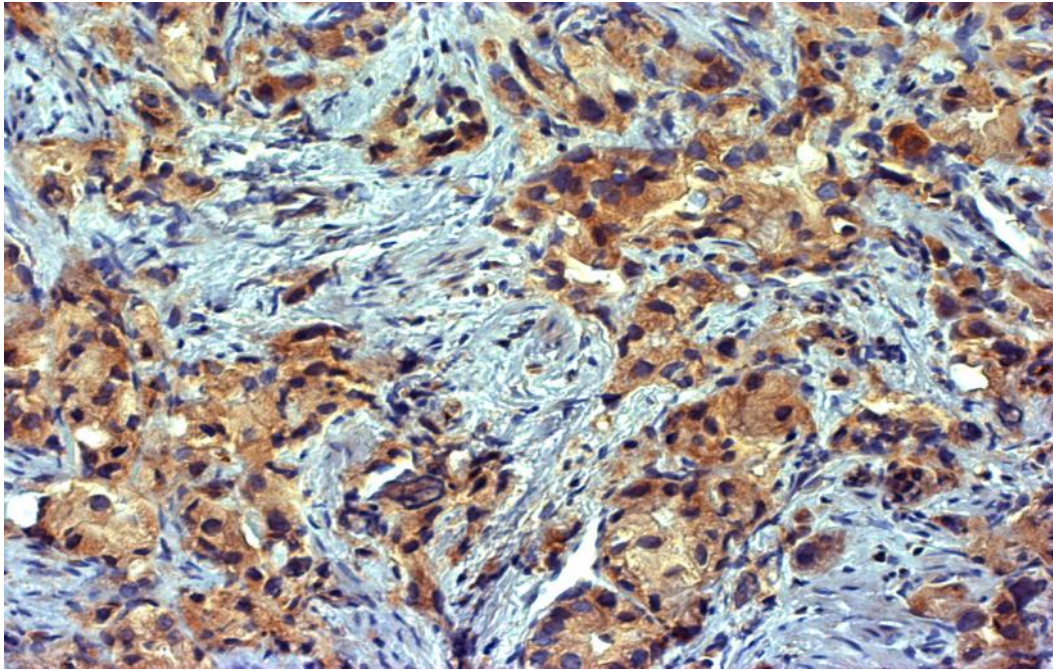
(IHH, VEGF, x20)



5.14.

VEGF-a

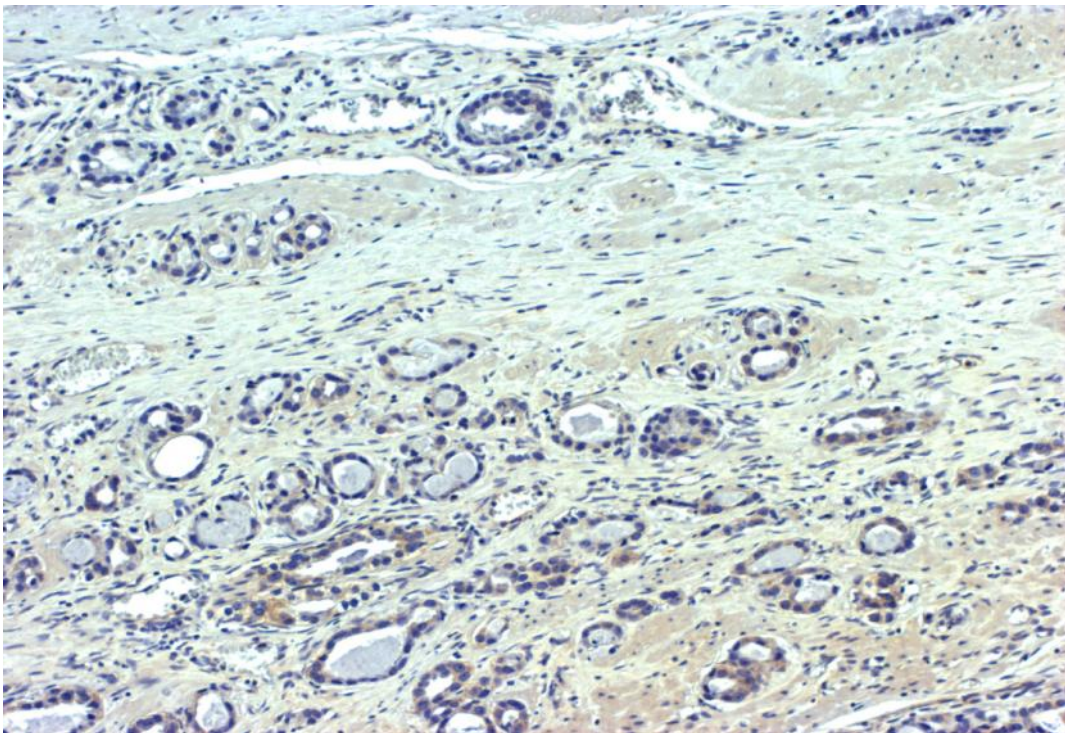
(IHH, VEGF, x40)



5.15.

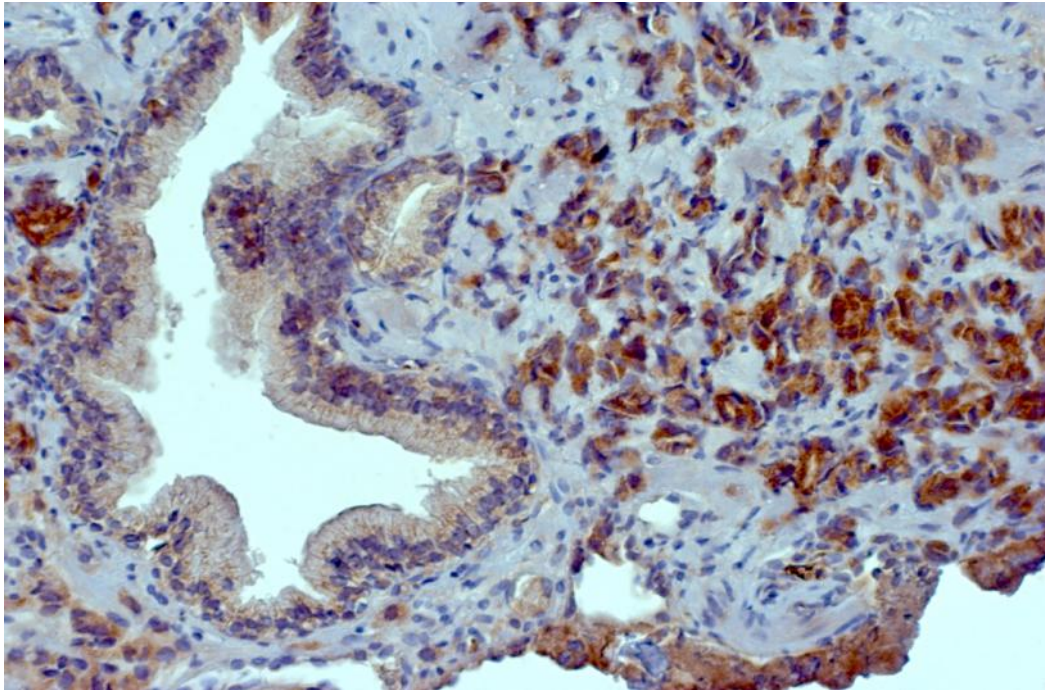
a VEGF-a

(IHH, VEGF, x40)



5.16. VEGF

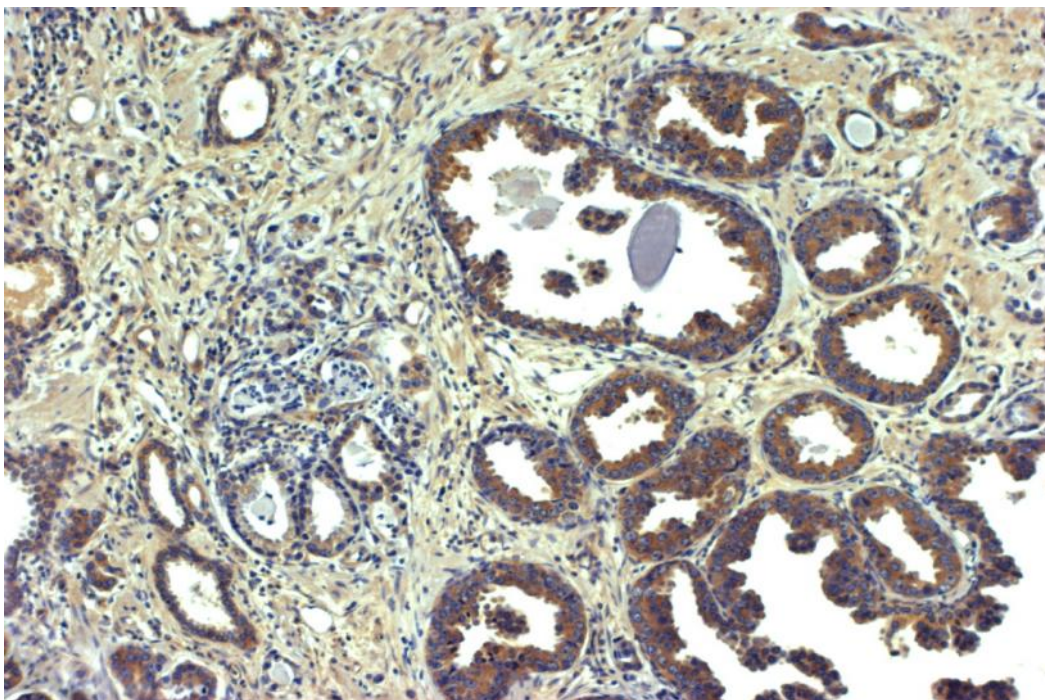
(IHH, VEGF, x20)



5.17.

VEGF-a

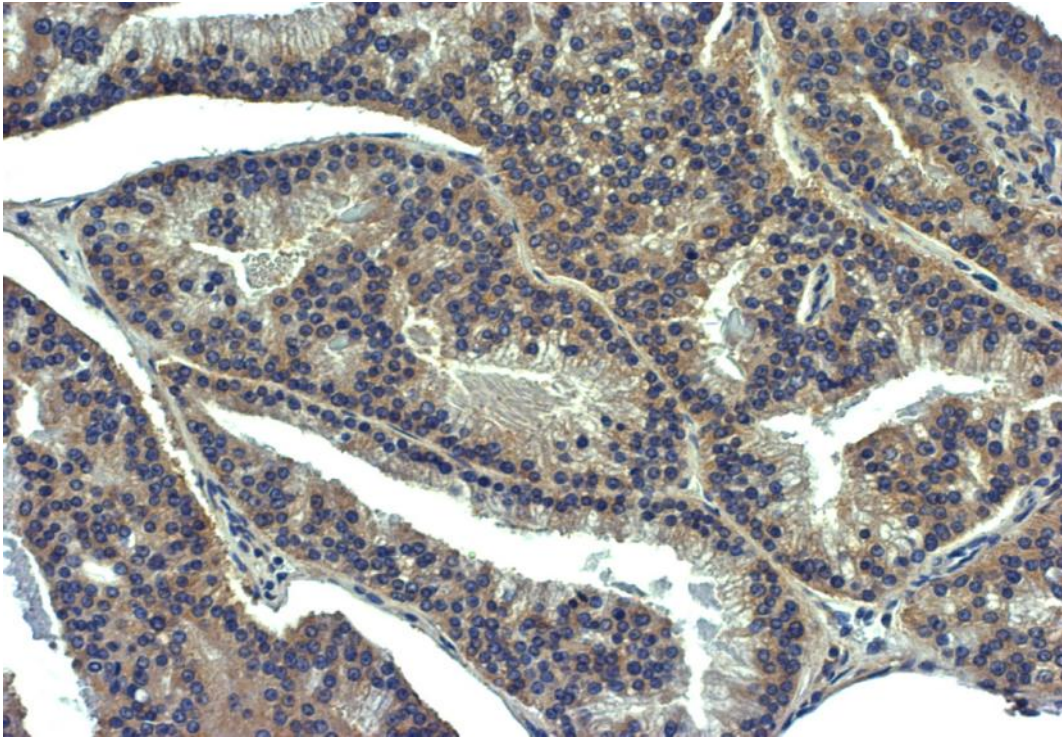
(IHH, VEGF, x20)



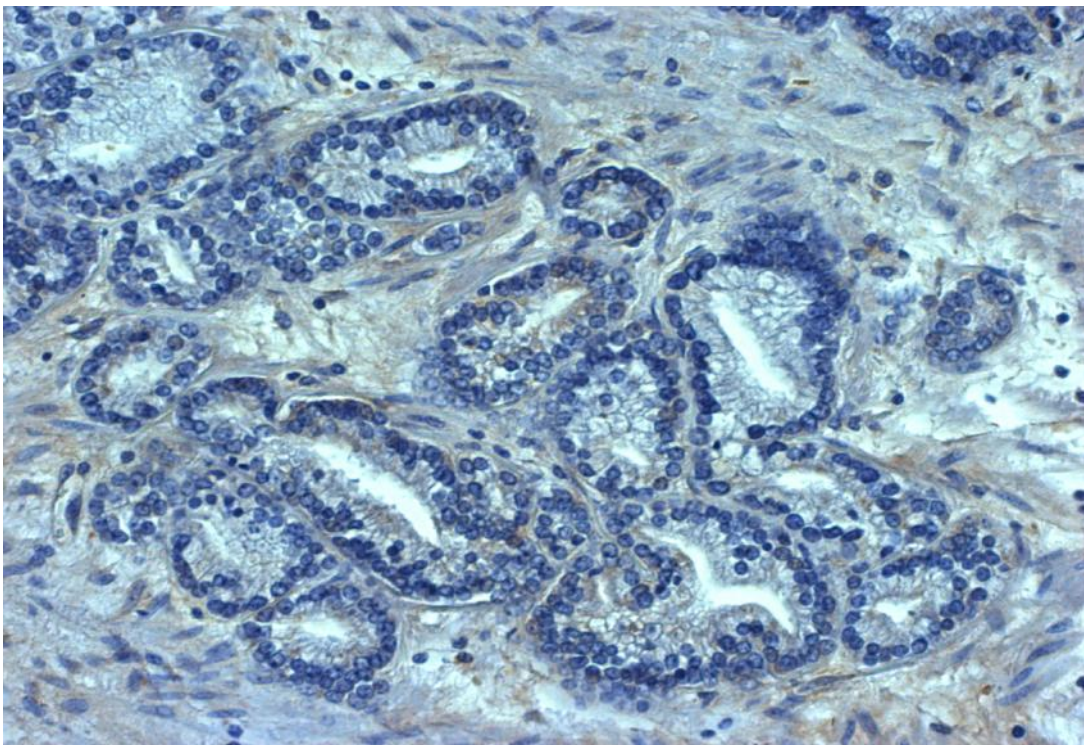
5.18.

a VEGF-a

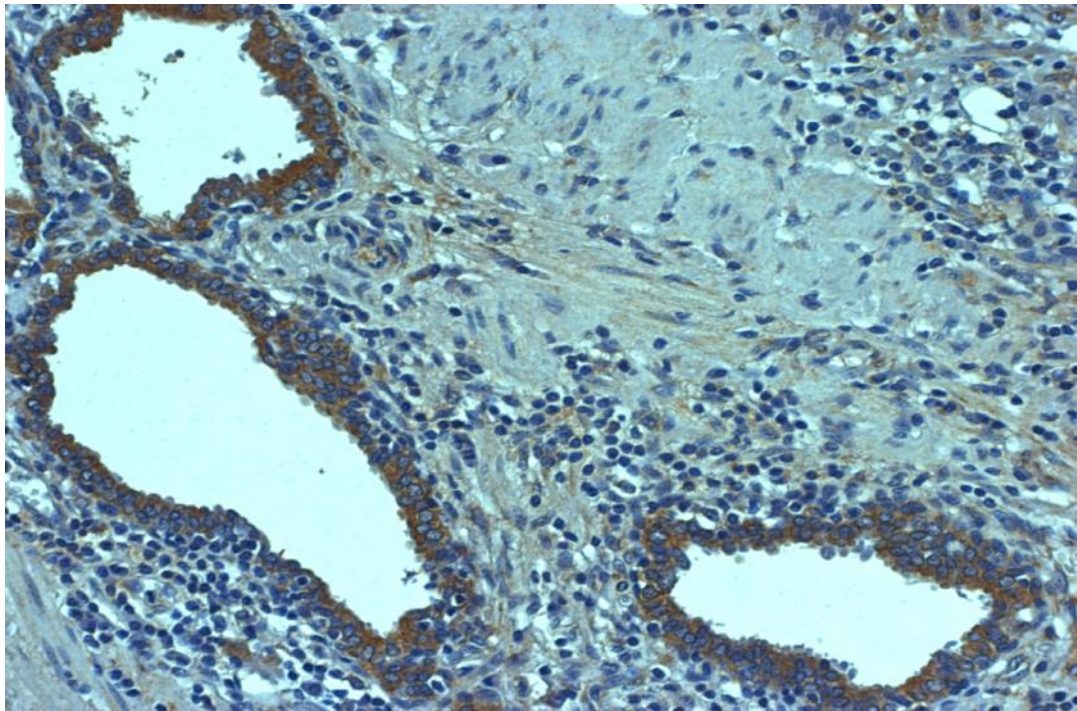
(IHH, VEGF, x20)



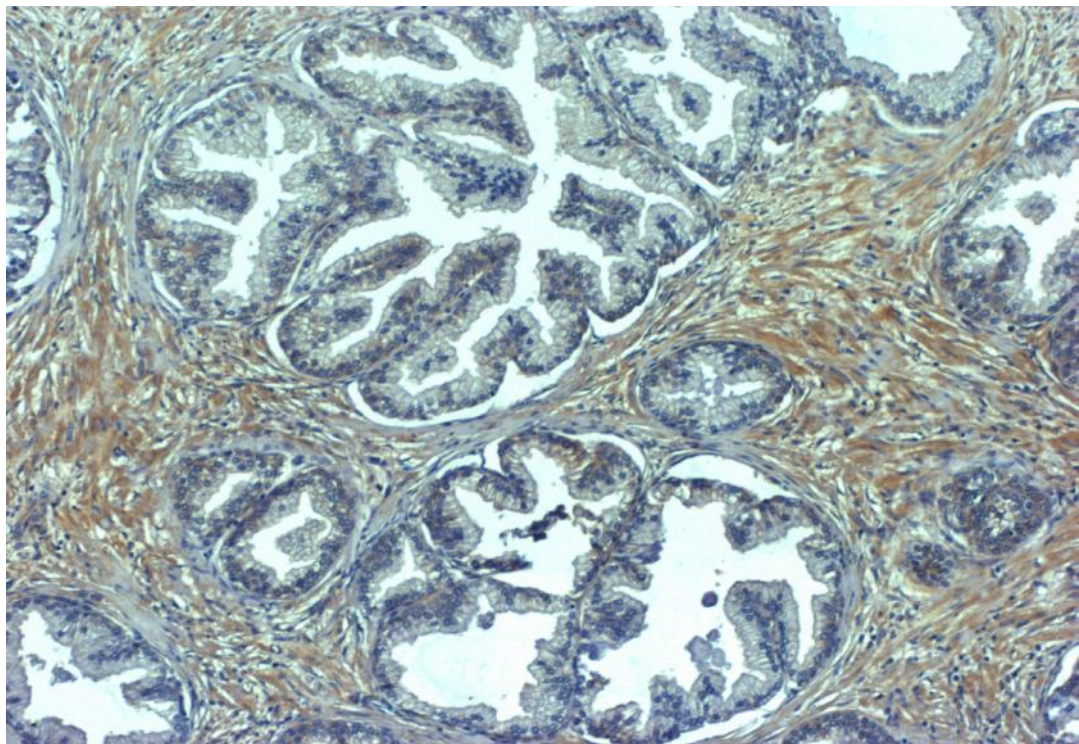
5.19. E VEGF-a u (IHH, VEGF, x40)



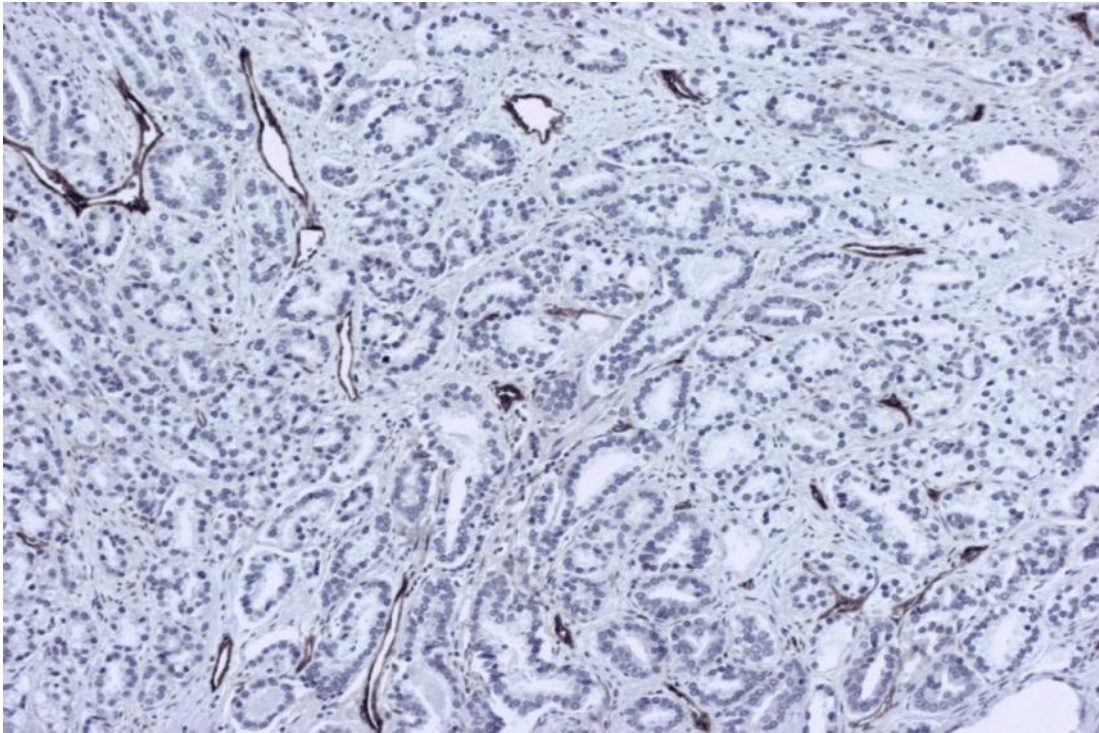
5.20. VEGF () (IHH, VEGF, x40)



5.21. E VEGF-a , (IHH, VEGF, x40)

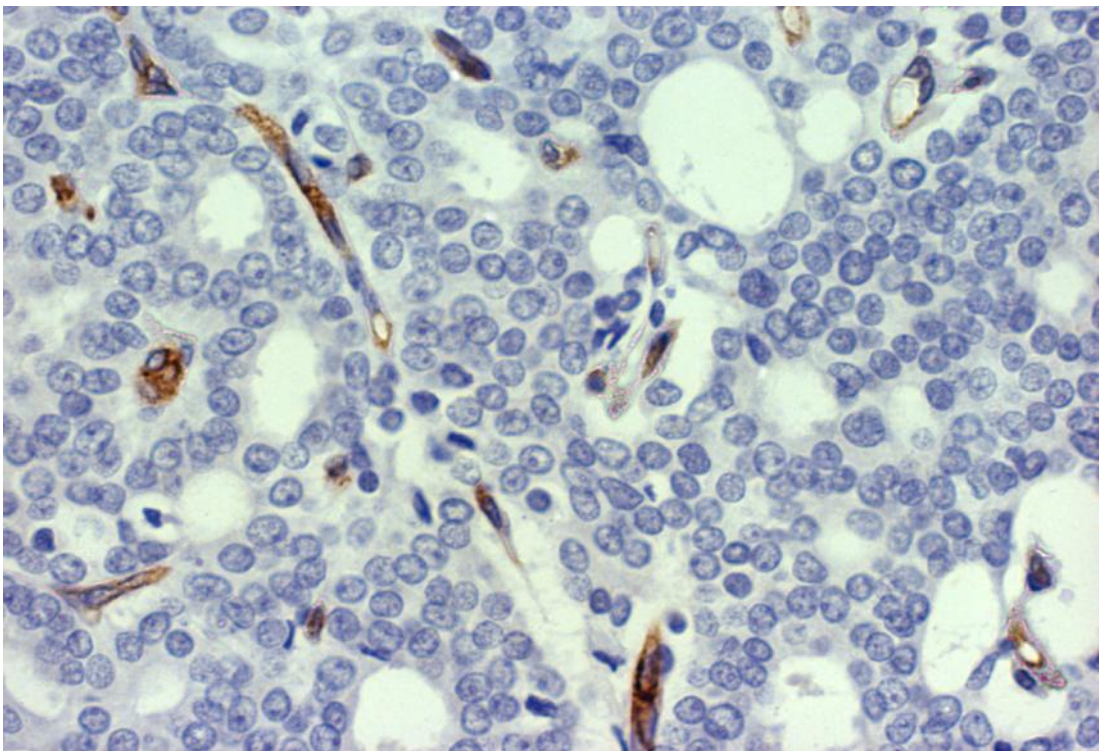


5.22. VEGF , + , (IHH, VEGF, x20)



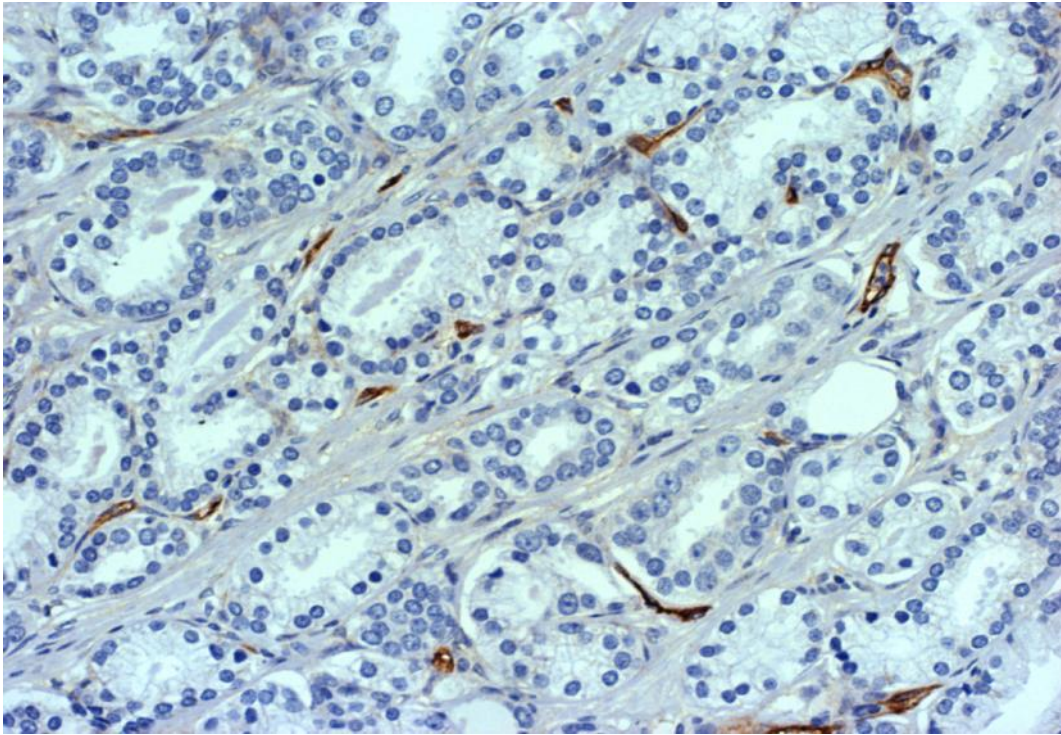
5.23.

MVG - „hot spot area“ (IHH, CD105, x10)



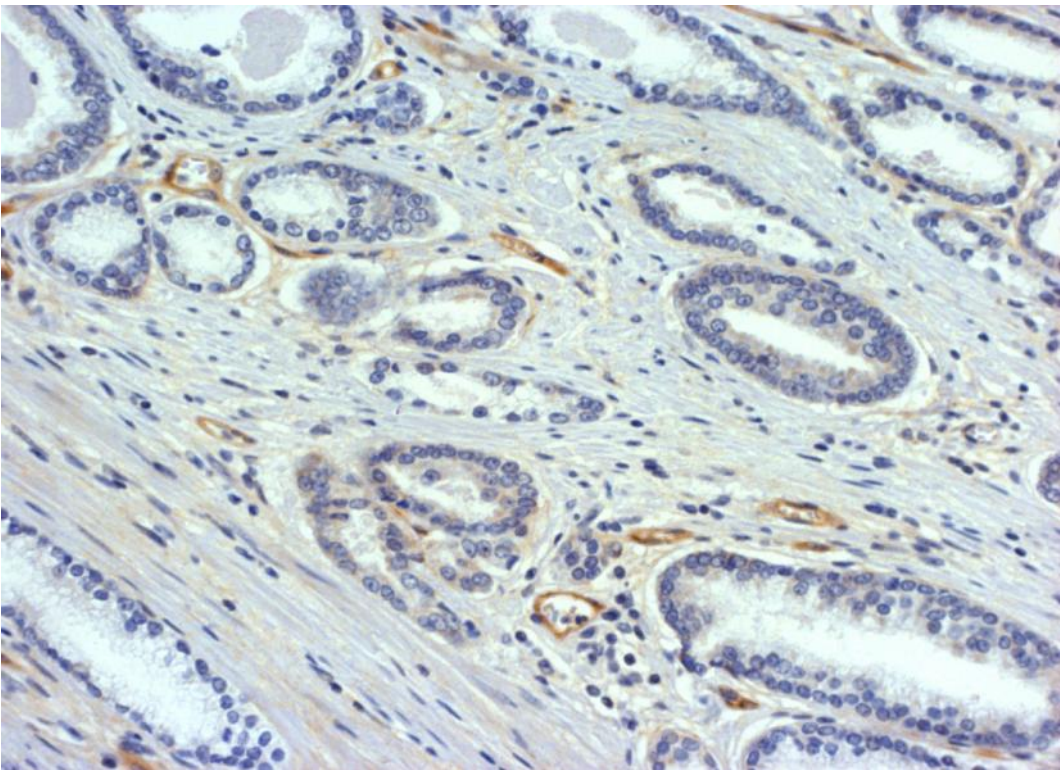
5.24. MVG –

(IHH, CD105, x40)



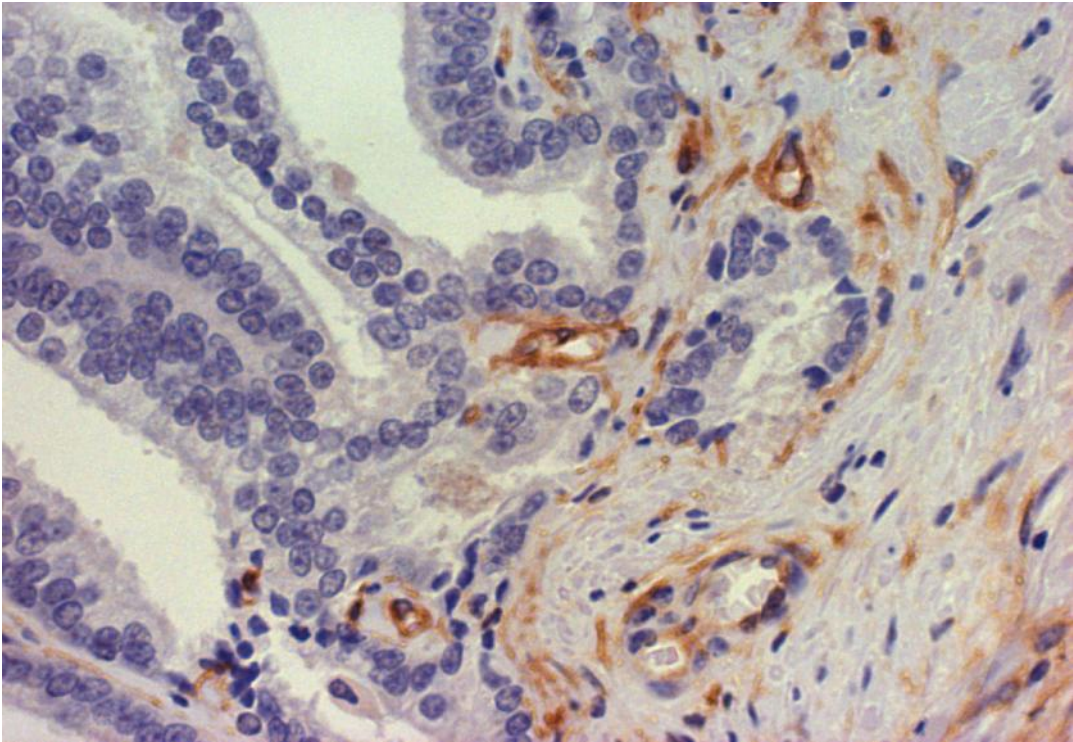
5.25. MVG -

(IHH, CD105, x40)

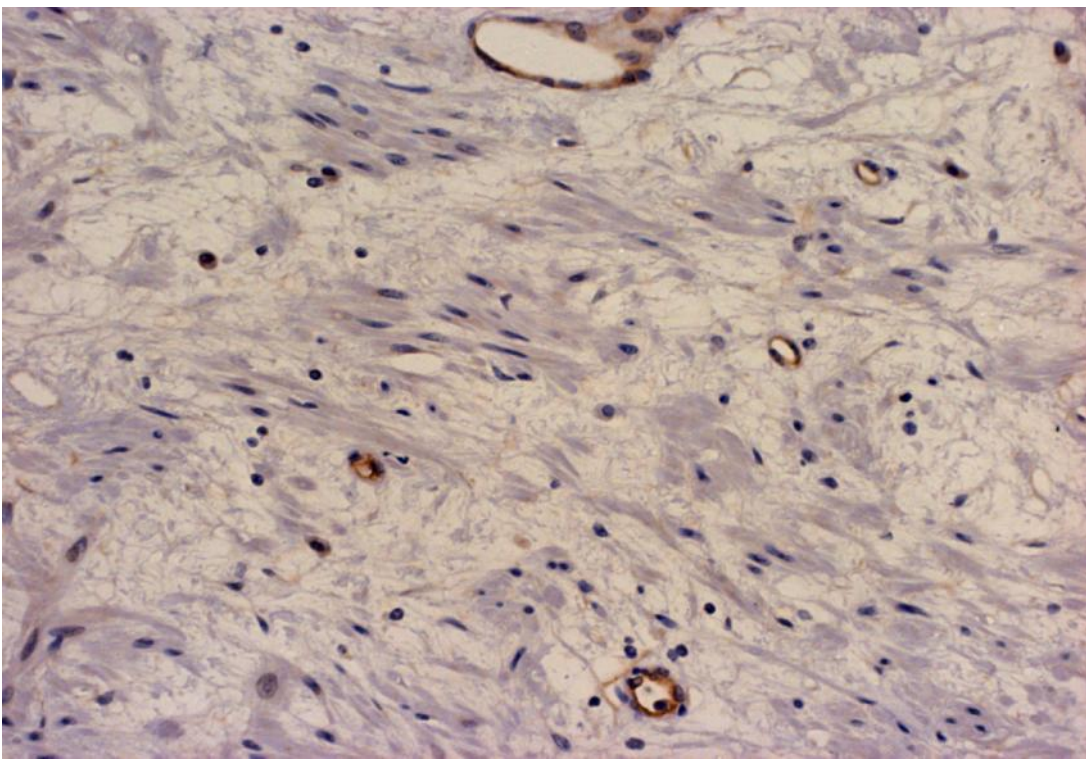


5.26. MVG -

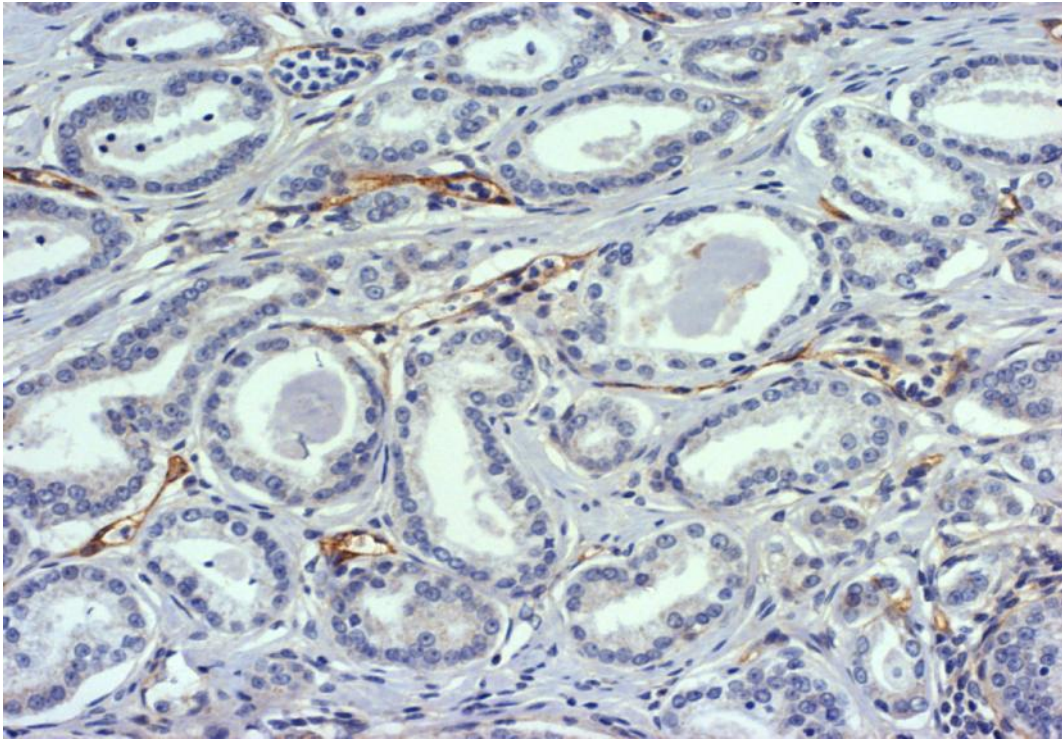
(IHH, CD105, x40)



5.27. MVG - (IHH, CD105, x40)

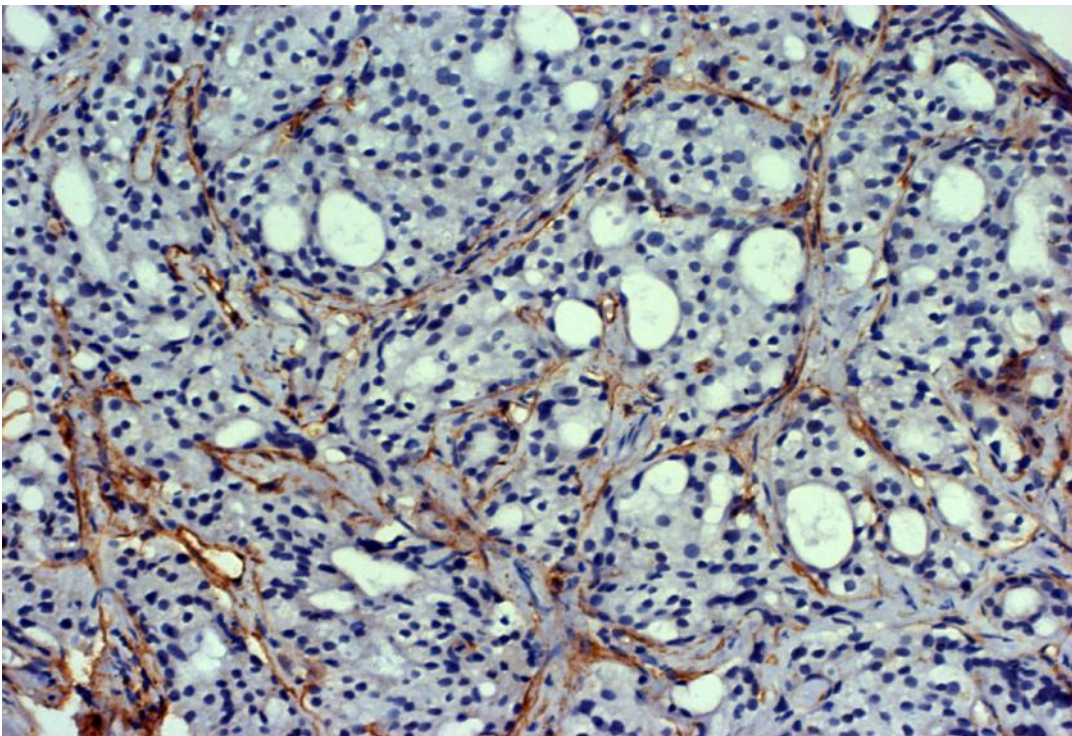


5.28. MVG (IHH, CD105, x40)



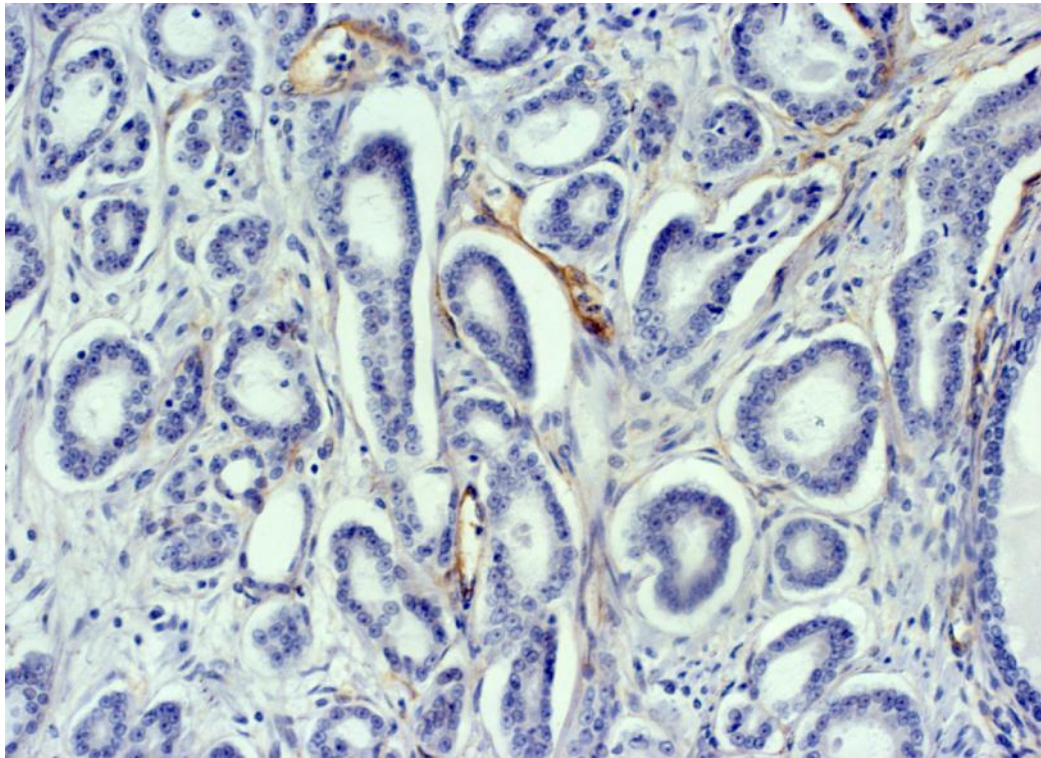
5.29. MVG,

(IHH, CD105, x40)



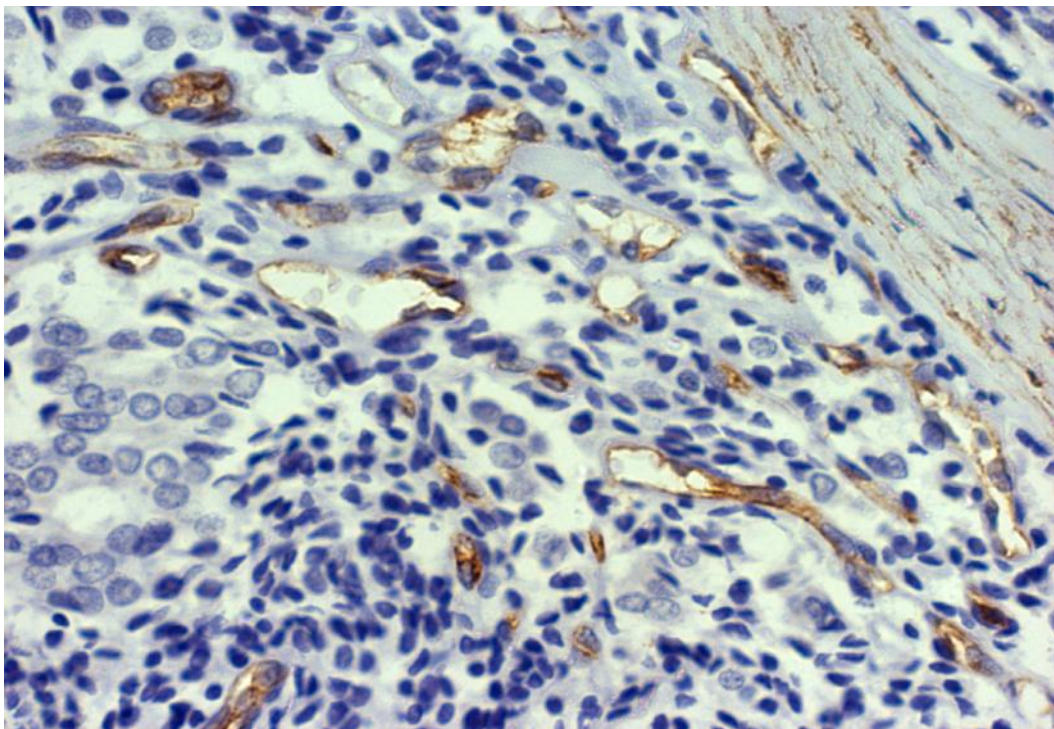
5.30. MVG,

(IHH, CD105, x40)



5.31. MVG,

(IHH, CD105, x40)



5.32. MVG,

(IHH, CD105, x40)

6.

177

177,178

179

PSA, Gleason-

(PSA)

19

PSA

PSA¹⁸⁰

Gleason- ; PSA Gleason-

Gleason- PSA

PSA MVG VEGF- ,
H

PSA

Gleason- PSA

Gleason-¹⁸¹

(2-4), (8-10)
(5-7).¹⁸² H

Gleason- 8-10, Gleason- 2-4.¹⁸¹

Gleason-¹⁸³

Gleason- 7 40,4%

Gleason- 6

41%

Gleason-

VEGF-

Gleason-

97%

,

. H ,

138

184

3

, 50-60%

5

75%

10

15%,

80%,

. H

1

4

2%. , 16 25%
 (8-10).¹⁷⁸ 1b
 2 . ,
 , , ,
 .¹⁸⁵ H
 104 ,
 IV 48,1% .
 I (68,2%), 31,8% II .
 H PSA,
 Gleason- , ,
 MVG VEGF- .
 . 75-84% ,
 .
 .¹⁸⁶ .
 .
 , .¹⁸⁷ ,
 ,
 .
 52 (50%) ,
 14-53%.
 13,5%, 90% .
 VEGF- , MVG . ,
 , -
 - . H

188

, *in situ*

(
)

, H -

189,190

H

191

192

193 Folkman

194 H

195

1991

196

Bossi i Pietra

, Saclarides i Choi

197,198

199,200

175,201,202,203 H

Gleason-

related antigen), VEGF, CD31

CD34.^{201,202}

Willebrand-ov faktor (*factor VIII-*

204,205

(CD105) 180kDa

206

207

206

a

199,208,209,210

VEGF

VEGF-

211
(MVG)

212

Gleason

205

CD31, Rubin

MVG
VIII, Barth

Gleason-

201,213 Wikstrom sa

MVG

Gleason-

214

MVG

214

W ; MVG

PSA, Gleason-

214

Gleason

5 7,

2

215

Gleason-

MVG.

CD34, CD31

VIII

²¹⁶ k VIII

²¹⁴
cell adhesion molecule)

CD31 (*platelet-endothelial*

²¹⁶

CD34

²¹⁷

CD34

²¹⁶

CD34

²¹⁸

(CD105)

MVG

MVG

214,216

MVG.

, MVG

“ ” (*hot spot areas*).

(x200, 0,739 ²).

(VEGF).²⁰⁵ VEGF

. In vivo

VEGF

VEGF-

VEGF

VEGF-

219

VEGF-

205,168

VEGF-

(p53),

(1

6), (v-Raf i v-Src),

), () .

VEGF

PSA, Gleason-

VEGF
 .
 . MVG,
 VEGF-
 220,221
 VEGF-
 44%
 64%,
 MVG.
 VEGF-
 ,
 ,
 VEGF-
 VEGF-
 VEGF MVG
 ,
 Gleason-
 ,

7.

1. MVG
31,69±22,38, 24±12,57,
2. 0,5%
. 3%
3. VEGF-
63,68±26,57, 44,09±27,73,
4. (),
PSA, Gleason
5. (), MVG
VEGF- (%)
PSA, Gleason-
6. (),
VEGF- (%
) MVG ,
7. (),
VEGF- (%
) MVG.
8. 36 , 60%
100%

9. MVG .

;

(MVG),

38,89% ,

(MVG),

90%.

8.

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