

## Effect of Positive Surgical Margin on Biochemical Recurrence and Overall Survival After Radical Prostatectomy: Median Long-Term Results

**Introduction and Objectives:** To evaluate effect of positive surgical margin (SM) on and biochemical recurrence (BR) and overall survival at patients who underwent radical prostatectomy.

**Materials and Methods:** There were 186 patients who underwent radical prostatectomy in our clinic over the last 8 years. We excluded the patients who were operated on in last 2 years. Then we continued with 121 patients. We evaluated age, clinical and pathological stages, Gleason scores before and after surgery, follow-up times, adjuvant chemo/radiotherapies, biochemical recurrences and survival. One patient was included the study group because of his biochemical recurrence (BR) at the 12th month. We took the PSA value for biochemical recurrence 0,4ng/ml and up.

**Results:** Positive SM was found in 25 (%20) patients. Mean age was 68.2, parameters evaluated were indicates at table 1. Nine (%36) patients were administrated with adjuvant RT and/or HT. The results of these patients according to biochemical recurrence were indicated at table 4. Four patients had not taken adjuvant therapy with pathological stage of T3 had 39 (mean) months follow-up without biochemical recurrence. Biochemical recurrence ratio of patients with positive surgical margin was 24%, clinical and pathological evaluations indicated at table 2. Biochemical recurrence was found 36.3% at pT2, and 14.3% at pT3 ( $p<0.05$ ). Overall survival was found 100%.

**Conclusion:** Positive surgical margin was seen at patients with pT2b and up stages. In the patients with positive surgical margin, biochemical recurrence was seen at pT3 more than pT2. We did not find any effect of positive surgical margin over overall survival.

**Table 1** Clinical and pathological characteristics of patients with positive surgical margin

	N	Mean	Max	Min
Age	25	68.2	79.0	58.0
Follow Up(Month)	25	46.7	72.0	12.0
Preoperative Gleason Score	25	3	8	4
Postoperative Gleason Score	25	4	9	4
Preoperative PSA(ng/ml)	25	13.7	39.0	3.2
Postoperative PSA(ng/ml)	25	0.05	0.60	0,01
PSA at recurrence(ng/ml)	6	1.3	2.5	0.5
Biochemical recurrence time (Mounth)	6	19.5	9.0	48.0

**Table 2** Clinical and pathological stages of patients with positive surgical margin and relationship between biochemical recurrence

T Stage	Clinical Stage (n) patient number	Pathological Stage (n)	Biochemical Recurrence
T1c	12 (48%)		
T2a	10 (40%)	2(8%)	
T2b	2 (8%)	3(12%)	1(4%)
T2c	1 (4%)	9(36%)	1(4%)
T3a		6(24%)	2(8%)
T3b		2(8%)	1(4%)
T3c		3(12%)	1(4%)

<b>Total</b>	25 (%100)	25 (%100)	6 (%24)
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**Table 3** Relationship between pathological stage and biochemical recurrence

	<b>n</b>	<b>pT2 (Postop)</b>	<b>pT3 (Postop)</b>
Biochemical Recurrence (+)	6 (%24)	2 (%14.3)	4 (%36.3)
Biochemical Recurrence (-)	19 (%76)	12 (%85.7)	7 (%63.7))
Total	25 (%100)	14 (%100)	11 (%100)

**Table 4** Evaluation of adjuvant therapy according to biochemical recurrence at patients with positive surgical margin

	<b>T2(Postop) Biochemical Recurrence (+)</b>	<b>Biochemical Recurrence (-)</b>	<b>T3(Postop) Biochemical Recurrence (+)</b>	<b>Biochemical Recurrence (-)</b>
Adjuvant Hormonotherapy	1		4	2
Adjuvant Radiotherapy	1		1	1
Total	2		4 (one patient was administrated both HT+RT)	3