Objective: We aimed to investigate the concordance among preoperative clinical parameters, tumor positiveness at the surgical borders and Gleason scores (GS) determined at diagnostic prostate needle biopsy (PNB) and radical retropubic prostatectomy (RRP) specimens in patients that had undergone RRP for clinically local stage prostate cancer, and to determine the value of GS in predicting the clinical course of PNB. Materials and methods: The 12 quadrant PNB and RRP specimens of 76 patients who were diagnosed with prostate adenocarcinoma and undergone RRP between 2002 and 2008 at the Urology Department of Süleyman Demirel University Faculty of Medicine were retrospectively evaluated. GS was classified as 2-4 (well differentiated), 5-7 (moderately differentiated), and 8-10 (poorly differentiated). Results: The most frequently observed GS in RRP specimens was GS7 (27/76, 35.5%) and GS6 (26/76, 34.2%). Totally, lower grading was detected in 22 patients (28.9%) and higher grading was detected in 9 patients (11.8%), and the PNB and RRP GS sums were same in 45 (59.21%) patients. A statistically significant relation was found between higher grading mistake and positive surgical border, extracapsular spreading, and recurrence (p<0.05). No statistically significant relation was detected between prostat size and positive surgical border (p>0.05). There was a strong positive correlation between pathologic stage and GS (r=0.586). Conclusion: Although there is a need for new markers for predicting recurrence in prostate cancer patients, the evaluation of clinical and pathological parameters is the most convenient and economical approach at present.