

#2524 How many prostate cancer patients are considered 'cured' after radical prostatectomy? Vassilikos, E.J.K., Yu, H., Trachtenberg, J., Nam, R., Narod, S., Diamandis, E.P. *Department of Pathology & Laboratory Medicine, Mount Sinai Hospital, Toronto, ON, Department of Laboratory Medicine & Pathobiology, University of Toronto, ON; The Prostate Centre, The Toronto Hospital, Toronto, ON; The Centre for Research in Women's Health, University of Toronto, ON and Section for Cancer Prevention and Control, Louisiana State University, Shreveport, LA 71130.*

The objective of this study was to determine how many prostate cancer patients who have undergone radical prostatectomy can be considered cured, based on non-changing PSA levels in their serum over long periods of time. 197 patients from whom we had at least 4 (median 6) serial serum samples over a 5-year post-surgical period were selected. All patients had post-operative PSA less than 0.1 $\mu\text{g/L}$. These patients were monitored by serum PSA analysis with an ultrasensitive assay (detection limit of 0.001 $\mu\text{g/L}$). Based on PSA changes with time, the patients were classified in three groups. Group 1 (118 patients) maintained post-surgical PSA at very low levels (generally less than 0.01 $\mu\text{g/L}$) which was not changing significantly with time. Group 2 (30 patients) had slowly rising PSA with doubling times greater than 300 days. Group 3 (52 patients) had definite biochemical relapse with PSA rising continuously over time. We found that all patients who relapsed, except one, demonstrated rising PSA levels within 2 years post-surgery. One patient had undetectable PSA for 3½ years and then developed relapse, with rapidly changing PSA values. These data suggest that if post-surgical PSA does not change significantly within the ultrasensitive regime (0.001–0.1 $\mu\text{g/L}$) within 3 years post-surgery, these patients can be considered cured from the disease. Our data also show that based on this definition, at least 60% of prostate cancer patients can be considered cured by prostatectomy.