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Prognostic value of p53 protein accumulation in ovarian carcinomas. Katsaros, D., Zola, P., Sismondi, P., Levesque, M., & Diamandis, E.P. Department of Gynecological Oncology, University of Turin, Italy and Department of Clinical Biochemistry, University of Toronto, Canada.

We have used a recently developed quantitative time-resolved immunoflurometric procedure (Oncogene 1993; 8: 1501-1509) to measure p53 mutant protein accumulation in 101 ovarian carcinomas. The tumors were pulverised, extracted and p53 was measured in the cytosolic fraction. Using a cutoff value of three units per mg of total protein for p53 (U/ng) we found 59 negative tumors. From the 42 positive tumors, six were weakly positive (3-5 U/g), three were moderately positive (6-10 U/g), six were highly positive (11-20 U/g) and 27 were very highly positive (>20 U/g). p53 positive tumors were associated with patient age >50 years (P=0.012). Patient distribution between stages was 35% (I), 2% (II), 47% (III) and 9% (IV) in the p53 (-) group and 5% (I), 2% (II), 74% (III) and 19% (IV) in the p53 (+) group (P=0.001). The distributions between histopathological grades was 23% (G1), 30% (G2) and 47% (G3) in the p53 (-) group and 5% (G1), 25% (G2) and 70% (G3) in the p53 (+) group (P=0.030). The p53 (+) group was associated with the presence of residual tumor post debulking surgery (P=0.001). The p53 (+) tumors were associated with serous adenocarcinomas and the p53 (-) tumors with endometrial adenocarcinomas (P=0.005). From the 68 alive patients 43 are p53 (-) and 25 are p53 (+). From the 31 patients who died, 14 were p53 (-) and 17 were p53 (+) (P=0.09). We conclude that p53 protein accumulation is a marker of poor prognosis in ovarian carcinoma.

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