

**RELATIONSHIPS BETWEEN IMMUNOLOGICALLY DISTINCT P53
FORMS AND P21^{WAF1} AND PCNA EXPRESSION IN OVARIAN
CARCINOMAS**

ANTONINA HARŁOZIŃSKA¹, JULIA BAR¹, MATHIAS MONTENARH²
and SABINE KARTARIUS²

¹Chair and Department of Clinical Immunology, Academy of Medicine, 50-368 Wrocław, Poland, ²Medizinische Biochemie und Molekularbiologie Universität des Saarlandes, D-66424 Homburg, Germany

The purpose of the expression of the tumor suppressor p21^{WAF1} in epithelial ovarian cancer has not been fully explained. The clarification of mutual P53 and P21^{WAF1} relationships as regards proliferative activity seems to be very important for understanding the functional link between P53 and cell-cycle control. To better understand this matter, the expression of P53 and P21^{WAF1} was assessed immunohistochemically in a series of 50 ovarian carcinomas, with measurement of the clinico-pathological variables. The reactivity of three anti-P53 monoclonal antibodies (DO-7, PAb240, and PAb1620) recognizing immunologically distinct P53 forms were analysed in relation to the P21^{WAF1} level in individual patients. P21^{WAF1} was expressed in 24 (48%) of the cases. The detection of the P53 protein was related to the antibody applied – the DO-7 antibody appears to be better than PAb240 or PAb1620. There was no significant correlation between P53 and P21^{WAF1} expression and the histology, stage and grade of the studied ovarian carcinomas ($p > 0.05$). High cell proliferation, observed in all except two of the cases, was usually accompanied by undetectable or weak P21^{WAF1} staining. In ovarian carcinomas, significant inter- and intratumoral heterogeneity in P53 and P21^{WAF1} expression was revealed, and different P53/P21^{WAF1} phenotypes were identified. Regardless of the anti-P53 antibody used, no correlation between P53 and P21^{WAF1} protein expression was found, indicating that in ovarian carcinomas P21^{WAF1} expression could be induced using a P53-independent method.