

# **p53, AND p16 EXPRESSION IN LOW GRADE AND HIGH GRADE SEROUS CARCINOMA OF OVARY**

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## **ABSTRACT**

**Background** : Ovarian serous carcinoma is a common ovarian epithelial malignancy, divided into high grade serous carcinoma (HGSC) and low grade serous carcinoma (LGSC). HGSC accounts for 60-80% of ovarian carcinomas and is the most aggressive type and has a poor prognosis. The literature has described various genetic mutations involved in the occurrence of HGSC, one of which is p53 and p16 mutations. Diagnostic and prognostic value of LGSC and HGSC related to its targeted therapy.

**Objective** : This study aimed to analyze the differences in the expression of p53 and p16 in LGSC and HGSC at anatomical pathology of laboratory dr. Kariadi Hospital.

**Methods** : This study was an observational analytic study with a cross sectional design involving 65 patients with ovarian serous carcinoma diagnosed between January 2017 and December 2021. The data collected were age, low grade serous carcinoma and high grade serous carcinoma subtypes as well as p53 and p16 expressions which were read by two pathologists and the observations were tested using the Kappa test. Data analysis used Chi square test and Fisher's exact test. **Result** : this study included 65 patients aged between 30-68 years, consist of 50 patients with HGSC and 15 patients with LGSC. Kappa test results between two observers showed a score of  $k = 1,000$

There is a significant difference between the expression of p53 and p16 in HGSC, as the expression of p53 and p16 is much stronger and diffuse in high grade serous carcinoma compared to LGSC.

**Conclusion** : Strong expression of p53 and p16 is much stronger in high grade ovarian serous carcinoma may contribute targeted therapy so futher studies must be done.

**Key word** : Serous Carcinoma, p53, p16

# EKSPRESI p53 DAN p16 PADA LOW GRADE DAN HIGH GRADE SEROUS CARCINOMA OF OVARIUM

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## ABSTRAK

**Latar belakang :** Karsinoma serosa ovarium merupakan keganasan epitelial ovarium yang terbagi menjadi high grade (HGSC) dan low grade (LGSC). HGSC menyumbang 60-80% dari karsinoma ovarium dan merupakan jenis yang paling agresif dan memiliki prognosis yang buruk. Literatur telah menjelaskan berbagai mutasi genetik yang terlibat dalam terjadinya HGSC, salah satunya yaitu mutasi p53 dan p16.

**Objektif :** Penelitian ini bertujuan untuk menganalisis perbedaan ekspresi p53 dan p16 pada LGSC dan HGSC.

**Metode :** Penelitian berjenis analitik observasional dengan desain cross sectional melibatkan 65 pasien karsinoma serosa ovarium yang didiagnosis antara Januari 2017 sampai Desember 2021. Data yang dikumpulkan berupa usia, subtype HGSC dan LGSC serta ekspresi p53 dan p16 yang dibaca oleh dua ahli patologi dan hasil pengamatan diuji menggunakan uji Kappa. Analisis data menggunakan uji Chi square dan uji Fisher's exact.

**Hasil :** Penelitian mengikutsertakan 65 pasien berusia antara 30-68 tahun, dengan HGSC sebanyak 50 pasien dan LGSC sebanyak 15 pasien, didapatkan hasil ekspresi p53 dan p16 pada HGSC menunjukkan skor yang lebih tinggi dibandingkan ekspresinya pada LGSC ( $P < 0.001$ ). Hasil uji Kappa antara dua pengamat menunjukkan skor  $k = 1,000$ .

**Kesimpulan :** Terdapat signifikansi perbedaan antara ekspresi p53 dan p16 pada HGSC dengan LGSC, dimana ekspresi p53 dan p16 jauh lebih kuat dan difus pada HGSC dibandingkan dengan LGSC.

Kata kunci : Karsinoma serosa ovarium, ekspresi p53, p16, HGSC, LGSC