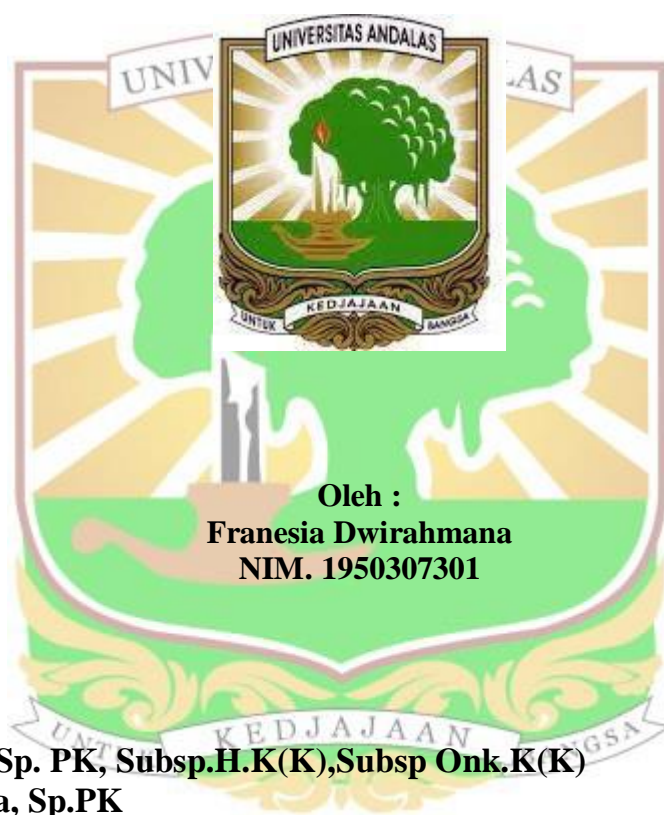


Tesis

**NILAI DIAGNOSTIK *HUMAN EPIDIDYMIS 4* SERUM  
SEBAGAI PENANDA KEGANASAN PADA  
TUMOR OVARIUM**



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**PADANG**

**2023**

# NILAI DIAGNOSTIK *HUMAN EPIDIDYMIS 4* SERUM SEBAGAI PENANDA KEGANASAN PADA TUMOR OVARIUM

## ABSTRAK

**Latar Belakang:** Kanker ovarium menempati peringkat ketujuh diantara kanker lain dan peringkat kedelapan sebagai penyebab kematian terbanyak. Deteksi dini kanker ovarium sulit dilakukan karena manifestasi klinis penyakit tidak jelas pada saat awal penyakit. Metode non-invasif menggunakan penanda keganasan menjadi pilihan untuk menunjang diagnosis kanker ovarium. Epitel ovarium pada penderita kanker ovarium akan mensekresikan HE4 ke dalam aliran darah. Penelitian ini bertujuan untuk mengetahui nilai diagnostik HE4 sebagai penanda keganasan pada tumor ovarium.

**Metode:** Penelitian analitik dengan rancang potong lintang dilakukan terhadap 43 sampel penelitian dengan tumor ovarium mulai Februari sampai Juni 2023. Pemeriksaan HE4 menggunakan alat *immunology analyzer* dilakukan pada sampel penelitian. Setelah operasi pengangkatan tumor ovarium, dilakukan pemeriksaan patologi anatomi untuk diagnostik kanker ovarium. Analisis statistik untuk mendapatkan nilai diagnostik HE4 serum meliputi sensitivitas, spesifisitas, *positive predictive value* dan *negative predictive value*.

**Hasil:** Karakteristik sampel penelitian adalah 49 (37-59) tahun, multipara 74,4%, pasien dengan kanker ovarium 17 (40%) dengan status menopause 13 (76%), pasien dengan non-kanker ovarium 26 (60%), dengan status menopause 6 (23%). Hasil rerata nilai HE4 serum pada pasien kanker ovarium 326,11 (218,99) pmol/L dan pada pasien non-kanker ovarium 72,62 (28,85) pmol/L. Nilai diagnostik HE4 serum sebagai penanda keganasan ovarium didapatkan sensitivitas 70,59%, spesifisitas 73,08%, *positive predictive value* 63,16% dan *negative predictive value* 79,17%.

**Simpulan:** Nilai diagnostik *human epididymis 4* serum didapatkan kisaran 63,16%-79,17% sehingga dapat digunakan sebagai salah satu metode non-invasif untuk penanda keganasan pada tumor ovarium.

**Kata kunci:** HE4, penanda keganasan, kanker ovarium

# **DIAGNOSTIC VALUE OF HUMAN EPIDIDYMIS 4 SERUM AS A MARKER OF MALIGNANCY IN OVARIAN TUMORS**

## ABSTRACT

**Background:** Ovarian cancer ranks seventh among other cancers and ranks eighth as the most common cause of death. Early detection of ovarian cancer is difficult because the clinical manifestations of the disease are not clear at the onset of the disease. Non-invasive methods using malignancy markers are an option to support the diagnosis of ovarian cancer. The ovarian epithelium in ovarian cancer patients will secrete HE4 into the bloodstream. This study aims to determine the diagnostic value of HE4 as a marker of malignancy in ovarian tumors.

**Methods:** Analytical research with a cross-sectional design was carried out on 43 research samples with ovarian tumors from February to June 2023. HE4 examination using an immunology analyzer was carried out on the research samples. After the surgical removal of the ovarian tumor, an anatomical pathology examination is performed to diagnose ovarian cancer. Statistical analysis to obtain the diagnostic value of serum HE4 includes sensitivity, specificity, positive predictive value and negative predictive value.

**Results:** Characteristics of the study sample were 49 (37-59) years old, multipara 74.4%, patients with ovarian cancer 17 (40%) with menopausal status 13 (76%), patients with non-ovarian cancer 26 (60%), with menopausal status 6 (23%). The mean serum HE4 value in ovarian cancer patients was 326.11 (218.99) pmol/L and in non-ovarian cancer patients 72.62 (28.85) pmol/L. The diagnostic value of serum HE4 as a marker of ovarian malignancy was found to have a sensitivity of 70.59%, specificity of 73.08%, positive predictive value of 63.16% and negative predictive value of 79.17%.

**Conclusion:** The diagnostic value of human epididymis 4 serum was found to be in the range of 63.16%-79.17% so that it can be used as a non-invasive method for marking malignancy in ovarian tumors.

**Keywords:** HE4, marker of malignancy, ovarian cancer