

## ABSTRAK

**Latar Belakang:** Kanker kolorektal adalah keganasan ke 6 tertinggi di Rumah Sakit Kanker Dharmais. Pemberian kemoradiasi adjuvan pasca reseksi tumor diberikan pada KKR stadium II dan III. Banyak faktor yang mempengaruhi ketahanan hidup KKR antara lain gen p53, K-ras, kandungan DNA dan SPF.

**Tujuan:** Penelitian ini bertujuan untuk mengetahui hubungan antara gen K-ras dan p53 dengan kandungan DNA, serta untuk mengetahui angka ketahanan hidup penderita kanker kolorektal stadium II dan III yang mendapat terapi adjuvan pasca reseksi kuratif dan hubungannya dengan gen K-ras, gen p53, DNA dan indeks proliferasi.

**Metode:** Penelitian ini adalah penelitian kohort retrospektif yang dilakukan di Rumah Sakit Kanker Dharmais. Dilakukan analisa bivariat dan multivariat untuk mengetahui hubungan antara variabel. Analisis kesintasan dilakukan dengan metode Kaplan-Meier. Untuk menguji hipotesis kehidupan digunakan *log (overall survival)* dari berbagai variabel yang bermakna secara statistik, digunakan *Proportional Hazard (Cox) Regression*.

**Hasil:** 42 kasus sampel parafin blok memenuhi syarat inklusi. Ditemukan adanya mutasi gen p53 pada kodon 247 exon 6. Hubungan antara variabel dapat dijelaskan dengan rumus berikut:  $H(t,x) = h_0(t) \exp [-0,194(K-ras) - 6,379(p53) - 0,72 (DNA) - 25,797 (SPF) + 6,993(stadium) - 0,947(differensiasi\ sedang) - 2,952(differensiasi\ buruk)]$ .

**Kesimpulan:** Tidak ditemukan hubungan yang bermakna antara gen K-ras dan p53 dengan kandungan DNA dan SPF. Angka ketahanan hidup lebih tinggi pada pasien dengan DNA aneuploid, SPF yang tidak normal, dan mutasi gen p53.

**Kata kunci:** K-ras, p53, Kandungan DNA, SPF, kanker kolorektal.

## ABSTRACT

**Background:** Colorectal Cancer is the 6<sup>th</sup> most common malignancy found at Dharmais Cancer Hospital. Adjuvant chemoradiation post tumor resection is given to CCR stage II and III. Many factors are considered to determine the survival rate of the colorectal cancer's patient such as gene p53, K-ras, DNA content and SPF.

**Objective:** To discover the relationship between the K-ras and p53 gene with the DNA and the survival rate in patients with stage II and II coloractal cancers and its correlation with the K-ras gene and p53 gene mutations receiving adjuvant therapy after resections.

**Method:** This was a restropective cohort study completed at Dharmais Cancer Hospital. Bivariate and multivariate analysis was performed to discover the relationships between variables. The survival rate was analyzed using the Kaplan-Meier method and the overall survival log hypothesis of the statistically significant variables used the Proportional Hazard (Cox) Regression.

**Results:** 42 block paraffin samples were included in this study. We discovered that there were p53 gene mutations in the 247 codon exxon 6. The relationship between variables is described with the following formula:  $H(t,x) = h_0(t) \exp [-0,194(K\text{-ras}) - 6,379(p53) - 0,72 (DNA) - 25,797 (SPF) + 6,993 (Stage) - 0,947(Moderate\ differentiated) - 2,952 (Poorly\ differentiated)]$ .

**Conclusions:** We concluded that the K-ras and p53 gene was not strongly correlated with DNA and SPF. The survival rate was higher in patients with aneuploid DNA, abnormal SPF, and p53 gene mutations.

**Key words:** K-ras, p53, DNA, SPF, colorectal cancer.