

**FAKULTAS KEDOKTERAN  
UNIVERSITAS PEMBANGUNAN NASIONAL “VETERAN” JAKARTA  
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**PERBANDINGAN PROFIL SEL IMUN DARI PBMC PASIEN KANKER KOLON  
TANPA RIWAYAT KEMOTERAPI DENGAN PROFIL SEL IMUN PASIEN NON  
KANKER DI KLINIK HAYANDRA TAHUN 2020–2022.**

RINCIAN HALAMAN (xiv + 59 halaman, 7 tabel, 5 gambar, 6 lampiran)

## **ABSTRAK**

### **Tujuan**

Penyakit kanker adalah kondisi yang memiliki karakteristik berupa pembelahan sel-sel yang bersifat abnormal dan tidak terkendali, serta dapat menyebar pada jaringan di sekitarnya. Kanker kolon adalah kanker yang terjadi pada daerah kolon. Seiring dengan perkembangan zaman, metode *immune cell therapy* (ICT) semakin banyak ditemukan sebagai salah satu pilihan metode terapi kanker. Namun, penelitian mengenai ICT masih tergolong minim. Hal ini mendorong peneliti untuk meneliti lebih lanjut di Klinik Hayandra, Jakarta. Penelitian ini bertujuan untuk mengetahui perbandingan profil sel imun dari *Peripheral Blood Mononuclear Cells* (PBMC) pasien kanker kolon tanpa riwayat kemoterapi dengan profil sel imun pasien non kanker di Klinik Hayandra tahun 2020–2022.

### **Metode**

Penelitian ini menggunakan metode analitik observasional dan desain *cross-sectional* dengan teknik *total sampling* pada 48 rekam medis yang memenuhi syarat kriteria restriksi penelitian. Analisis data penelitian ini menggunakan uji statistik *compare means independent-samples T test*.

### **Hasil**

Rata-rata persentase PBMC tertinggi ditemukan pada ekspresi CD3-/CD19- (52,14%) secara umum, CD3-/CD19- (53,39%) untuk kelompok pasien kanker kolon, dan CD3-/CD19- (50,90%) untuk kelompok pasien non kanker. Rata-rata ekspresi CD3+ dari PBMC kelompok pasien kanker kolon sebesar 32,37% dan pada kelompok pasien non kanker sebesar 35,58%. Hasil analisis uji statistik *compare means independent-samples T test* menunjukkan nilai  $p > 0,05$ .

### **Kesimpulan**

Tidak terdapat perbedaan yang bermakna secara statistik antara profil sel imun dari PBMC pasien kanker kolon tanpa riwayat kemoterapi dengan profil sel imun pasien non kanker di Klinik Hayandra tahun 2020 – 2022. Namun, rata-rata persentase ekspresi CD3+ dari PBMC kelompok non kanker lebih besar dibandingkan kelompok kanker kolon.

**Daftar Pustaka** : 34 (2010 – 2024)

**Kata Kunci** : *Peripheral Blood Mononuclear Cells* (PBMC), kanker kolon, *Cluster of Differentiation* (CD)

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*Undergraduate Thesis, Januari 2025*

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**COMPARISON OF IMMUNE CELL PROFILES IN PBMC OF COLON CANCER PATIENTS WITHOUT HISTORY OF CHEMOTHERAPY WITH IMMUNE CELL PROFILES OF NON-CANCER PATIENTS AT THE HAYANDRA CLINIC IN 2020–2022.**

*PAGE DETAIL (xiv + 59 pages, 7 tables, 5 pictures, 6 appendices)*

## **ABSTRACT**

### **Objective**

*Cancer is a condition characterized by the abnormal and uncontrolled division of cells, which can spread to surrounding tissues. Colon cancer refers to cancer that occurs in the colon region. As we advance towards modern times, immune cell therapy (ICT) has emerged as a promising cancer treatment method. However, research demonstrating the use and benefits of ICT remains limited. This encourages for further studies at Hayandra Clinic, Jakarta. The purpose of this study is to compare the immune cell profiles from Peripheral Blood Mononuclear Cells (PBMCs) of colon cancer patients with no history of chemotherapy to those of non-cancer patients at Hayandra Clinic between 2020 and 2022.*

### **Methods**

*This study employed an observational analytic method with a cross-sectional design, utilizing total sampling techniques on 48 medical records that met the study's restriction criteria. Data analysis was performed using the compare means independent-samples T-test statistical method.*

### **Results**

*The results revealed that the highest average percentage of PBMC expression was found in CD3-/CD19- (52.14%) overall, CD3-/CD19- (53.39%) in the colorectal cancer patient group, and CD3-/CD19- (50.90%) in the non-cancer patient group. The average CD3+ expression from PBMCs in the colorectal cancer patient group was 32.37% and 35.58% in the non-cancer patient group. Statistical analysis using the compare means independent-samples T-test showed a p-value > 0.05.*

### **Conclusion**

*There was no statistically significant difference between the immune cell profiles of PBMCs from colorectal cancer patients without a history of chemotherapy and those of non-cancer patients at Hayandra Clinic from 2020 to 2022. However, the average percentage of CD3+ expression from PBMCs was higher in the non-cancer group compared to the colorectal cancer group.*

**Bibliography** : 34 (2010 – 2024)

**Keywords** : Peripheral Blood Mononuclear Cells (PBMC), colon cancer, Cluster of Differentiation (CD)