

## **Difference of Cea Level Before, after Surgery and After Chemotherapy with Folfox Regime on Colorectal Stage IIB-III in H. Adam Malik General Hospital Medan**

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**Abstract : Introduction** Colorectal carcinoma is the fourth most common cancer in the world and is the second leading cause of death in the United States. In 2012, there are an estimated 103,170 new cases of Colorectal Cancer. Management of colorectal carcinoma in the form of surgery, chemotherapy and radiotherapy have a good effect. Post-operative CEA level measurement is often performed as a monitoring indicator in stage III colorectal cancer patients. The purpose of postoperative CEA measurements and chemotherapy is to assess prognostics, assess recurrence as well as assess the response of chemotherapy.

**Materials and Methods** We collected 58 patients who met the inclusion criteria. Demographic studies of patient characteristics and histopathology were performed. We then measured the patient's CEA levels before the surgery, after the surgery and after receiving FOLFOX chemotherapy and performed the analysis of the CEA level against any given therapy.

**Results** We obtained the most common age distribution in colorectal patients at the age of 51-60 years, Adeno Ca Rekti with the most diagnosis found with stage IIIB dominating the sample, and well differentiated histopathology into the most demographic type of histology. The average CEA level was much lower after surgery 11.35 than before surgery with a mean of 15.6 ( $p < 0.0001$ ), and after surgery and after FOLFOX chemotherapy using the Wilcoxon test, a significant CEA result after chemotherapy became 5.4 ( $p < 0.001$ ).

**Conclusion** Combination therapy in colorectal cancer patients with surgery and chemotherapy provides significant decrease in CEA levels.

**Keywords:** Colorectal cancer, combination therapy, chemotherapy FOLFOX, Carcino-Embryonic Antigen (CEA).