**Presentation Abstract**

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| Presentation Title | Prognostic Impact of Pre-Operative Circulation Tumor Cell Count in Patients with Non-Metastatic Colorectal Cancer. |
| Presentation Time | Sunday, Dec 20, 2015, 14:50-15:00 |
| Location | Kaohsiung Exhibition Hall 3F |
| Presenter | Dr. Wen-Sy Tsai – Colon & Rectal Surgery, Chang Gung Memorial Hospital, Linkou |
| Abstract Body | ***Introduction:*** Presence of circulating tumor cells (CTCs) may represent the earliest sign of tumor dissemination. In this study, we evaluate the prognosis impact of preoperative CTC count in patients with non-metastatic colorectal tumor after curative resection. ***Patients and methods:*** CTCs detected from peripheral blood was carried out preoperatively in 95 non-metastatic CRC patients who received regular follow-up at least for 2 years postoperatively if no recurrence. The CMx platform was used for CTC isolation and enrichment and the isolated cells with positive expression of CK20 and DAPI but negative for CD45 are defined as CTC. Tumor recurrence was the endpoint to analyze the disease-free survival classified by CTC count. ***Results:*** The increase of preoperative CTC number correlated well with tumor progression. More CTC cells were found in CRC patients with advanced T, N classification, larger tumor size (all P< .05). The CTC number of patients with bowel obstruction caused by tumor is statistically higher than that of patients without obstruction (P< .001). Excluding out the 9 cases with tumor obstruction, the remained 84 cases contained 19 metastatic cases were enrolled into the survival |

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analysis related to CTC count. The patients possessed higher CTC count had more metastatic incidence, especially the liver/lung metastatic rate achieved to 27.8% of patients with CTCs ≥ 5cells significantly higher than 6.3% of patients with CTCs < 5 cells (Chi-Square test, P= .015). The 2-year disease-free survival rates were 66.9% and 87.3% of the patients with CTCs ≥ 5cells and not, respectively. (Kaplan-Meier method, P= .02). However, the disease-free survival of peritoneal/regional metastasis had no relation to CTC count. In multivariate analysis, in addition to N classification, tumor size, and tumor location, CTC count over 5 also is an independent prognostic factor of liver /lung metastasis (Odds ratio = 5.24, 95% CI: 1.19 to 23.0, P= .028), but the factors of CEA, T classification, histological differentiation are not. ***Conclusion:*** Higher preoperative CTC number in patients with non-metastatic CRC is an available biomarker to predict high risk of liver/lung metastasis.



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Presenter

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Dr Tsai is a clinician and medical-researcher focused on new oncology biomarkers for better management of cancer. He has served as a member of the Surgical Society, ROC and the Society of Colon and Rectal Surgeons, ROC. In addition to his clinical duties at CGMH, Dr. Tsai has conducted research in circulating tumor cell technologies and profiled pathologically relevant genetic signatures in colorectal cancer. He received his M.D. from the Medical College at National Yang-Ming University and his Ph.D from the University of Tokyo, Japan. Dr. Tsai is the author of numerous peer reviewed publications on onco-biomarkers in colorectal cancer.



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