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### Strategy for colorectal cancer liver metastases

In this presentation, the surgical indications for liver metastasis from colorectal cancer (CRC) and its optimal timing will be discussed. Clinically, our treatment policy has been to perform hepatectomy first, if the resection can be done with no limit on size and number of tumors. However, if curative resection is not, chemotherapy is begun first and timing for the possibility of a radical operation is planned immediately. Recurrence was detected after hepatectomy, similar between simultaneous and staged resection, but early detection was higher in simultaneous cases, indicating the staged operation to be better. As a research target focused on hepatocyte growth factor (HGF) and its receptor (c-Met), the signaling pathway might induce cancer progression in the process of liver regeneration after hepatectomy. Actually, c-Met overexpression was closely associated with liver metastases, but its expression was detected to reduce in the metastatic site compared with primary lesions. In addition, pre-treatment of CRC cells with HGF enhanced 5-FU-induced cell death by 63% compared with the control during the expression of signaling pathway by HGF/c-Met activation. E2F is a transcriptional factor of thymidylate synthase (TS), which is important to metabolite 5FU, and the D-type cyclins, which play a critical role in the cell cycle and correlate the activation of E2F. The expression of E2F1 was decreased significantly to 50.5% by HGF with a reduction of cyclin D1 to 52.1%. TS were also decreased in a time-dependent manner to 80.6±2.0% after 24 hours and to 52.7±1.5% after 96 hours. In conclusion, the presence of HGF was found to increase the 5FU-induced death signal, the best procedure for favorable patient prognosis will be a hepatectomy after chemotherapy. The present study also lead to a novel concept in which the hepatectomy-induced high serum level of HGF for liver regeneration allows drug-resistant cancer cells to become sensitive again.

### Biography

Shinji Osada is a Professor at the Department of Surgical Oncology, Gifu University School of Medicine, Japan. He has published several articles in the field of Ophthalmology. He is a recipient of many awards and grants for his valuable contributions and discoveries in major area of research. His international experience includes various programs, contributions and participation in different countries for diverse fields of study. His main research areas are Anti-Cancer Drug, Eye Cancer, Eye diseases, Cancer Immunobiology and Cancer Immunobiology.

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