into the tumors by an infusion pump, through the vinyl tube inserted in the gastric artery or gastroepiploic artery. The labeling indices of the tumors were 20–25%. At any site of the tumors, labeling index was almost equal and the labeling index of non-cancerous regions around the tumor was about 40%.

**The Relation of X-Ray Findings and Scintigrams on $^{131}$I-MAA Injected Intravenously on Lung Cancer**

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With the patient supine, 150µCi of $^{131}$I-MAA was injected intravenously Shimazu dual opposed five inch rectilinear scanners with 102 hole focusing collimators and photo-dot recording were used to obtain the scans. Dual counter was exactly opposed and addition technique was used. Fortyfive cases were scard by these methods. In nodular pulmonary carcinoma located deep lung place and less than 2cm in diameter it was very difficult to visualize a lesion as a negative shadow by intravenous injection of $^{131}$I-MAA. Four cases with early cancer in the main stem bronchus and with almost normal chest X-ray findings showed remarkable diminishing of activity in the regional lung fields. These four cases were operated and hilar invasion to pulmonary artery, metastases and extra bronchial extension of carcinoma were not confirmed. Gas mixture with 8% Oxygen, 92% Nitrogen was administered to unilateral side of lung by means of Carlen's bronchial divided catheter, and during this procedure, MAA was injected intravenously. Significant decrease of activity was observed on hypoxic side. The reaction for the decreased deposition of the cases bronchus may be due to reflex decrease pulmonary artery perfusion secondary to lobar hypoxia as a result of bronchial obstruction by tumors.

**On the Diagnosis of Malignant Tumor with Semiconductor Detector**

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For its compactness, unfragility and safety, the semiconductor detector has been used currently as a radiation detector.

However, the utilization of this detector in the medical field is still underdeveloped. We have been studied its medical utilization. Last time we discussed its capability to the medical applications. This time we report its utilization for detection of cancers in the oral cavity, digestive organs and uterus. This detector was inserted in the cavity 20-48hours after intravenous injection of 300µCi $^{32}$P uptake in the cancerous tissue was measured. A considerable increase of $^{32}$P uptake was marked in the cancerous tissue, which was found to be useful for estimation of the region of the cancer.

In order to determine the distribution of the $^{32}$P in tissue, the semiconductor detector were coupled on the existing scintiscanner. Scinti-