Positive ratios in each surgical procedure were as follows: 96% in colocolostomy cases, 97% in ileal conduit cases, 100% in ureteroplasty cases using the ileum and 93% in nephro ureterostomy cases. The CEA levels were not affected by the presence of concomitant urinary tract infection. There is a tendency that the urinary CEA levels in cases with reconstruction using the ileum are slightly higher than those of cases with colo-cystoplasty.

(2) Experimentally, there is no significant difference in tissue CEA levels of the small bowel and large bowel in mice.

**SUMMARY** Urinary CEA in patient with bladder reconstruction after cystectomy is of no value as a screening test for malignancy recurrence. The difference of urinary CEA levels between colocolostomy and ileal conduit or ileal ureter is probably not due to difference in location of the bowels, but possibly due to difference in surface areas of the mucosa between the resected small bowel and large bowel, for the small bowel contains much larger mucosal surface.

**Evaluation of Urinary CEA in Patients with Urologic Cancer and Histological Localization of CEA in Urologic Cancer**

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Urinary CEA was examined on 45 patients with urologic cancer, 13 cases with urinary tract infection and 17 normal controls using "one step sandwich method". These results are compared with serum CEA.

Urinary CEA levels elevated in the patients with renal pelvic, ureteral and bladder tumors which were in direct contact with urine.

Also in the patients with urinary tract infection, urinary CEA levels showed remarkably high values.

Mean value of urinary CEA was $1.40 \pm 0.77$ ng/ml in the normal subjects, but $4.41 \pm 4.42$ ng/ml in patients with urinary tract infection.

Mean value of urinary CEA of the bladder tumor without urinary tract infection was $3.79 \pm 2.91$ ng/ml, while the value of the bladder tumor with urinary tract infection was $8.20 \pm 4.75$ ng/ml.

CEA values of bladder tumor with and without infection showed significant difference.

The correlation between the urinary CEA level and serum CEA level showed to be significant ($r=0.6$) in cases with urinary tract infection, but not significant in cases without urinary tract infection.

Histological localization of CEA in urologic cancer was investigated by sandwich tests of immunofluorescence technique using FITC labelled IgG.

Histological localization of CEA in urologic cancer was investigated by sandwich tests of immunofluorescence technique using FITC labelled IgG.

Fluorescent cells appeared clearly in transitional cell tumors of the urinary bladder and ureter, and mildly in testicle embryonal carcinoma. But renal cell carcinoma did not show positive fluorescence.

Grade of positive fluorescence in the cell of urologic cancer was less than those of gastrointestinal cancers.