

**2. Cancer (Condition after Cancer Surgery and Unspecified Adverse Drug Reactions of Anti-cancer Drugs)****Reference**

Yamada T. Clinical study of juzen-taiho-to administration for postoperative esophageal carcinoma, gastric carcinoma, and colorectal carcinoma – Influence of surgical intervention and postoperative chemotherapy on cell mediated immunity–. *Wakan Iyaku Gakkaishi (Journal of Medical and Pharmaceutical Society for WAKAN-YAKU)* 1992; 9: 157-64 (in Japanese with English abstract).

**1. Objectives**

To evaluate the effect of juzentaihoto (十全大補湯) on the cell-mediated immunity of postoperative patients with esophageal, gastric, or colorectal cancer.

**2. Design**

Randomized controlled trial using sealed envelopes for allocation (RCT-envelope).

**3. Setting**

A university hospital (Kyorin University Hospital), Japan.

**4. Participants**

One hundred seventy-four postoperative patients with esophageal, gastric, or colorectal cancer.

**5. Intervention**

Arm 1: TSUMURA Juzentaihoto (十全大補湯) Extract Granules 7.5 g/day beginning 2 weeks after surgery (n=75).

Arm 2: no treatment (n=99).

Patients in arms 1 and 2 who received anticancer agents within 1 month after surgery were considered to be separate groups, i.e., combination therapy groups (cf., arm 3 and arm 4), and their data were analyzed separately.

Arm 3: TSUMURA Juzentaihoto (十全大補湯) Extract Granules 7.5 g/day + anticancer agents beginning 2 weeks after surgery (n=49).

Arm 4: no treatment with juzentaihoto (十全大補湯) + anticancer agents (n=55).

The duration of treatment was 6 months.

**6. Main outcome measures**

Hemoglobin, white blood cell count, lymphocyte count, and levels of serum albumin, CD3, CD4, CD8, phytohemagglutinin (PHA) lymphocyte proliferation, and NK-cell activity.

**7. Main results**

In patients undergoing total gastrectomy in arm 3, hemoglobin and red blood cell count increased significantly and the white blood cell count decreased significantly. Immune function as indicated by PHA-induced lymphocyte proliferation and NK-cell activity was enhanced in patients with esophageal cancer or total gastrectomy in arm 3.

**8. Conclusions**

Juzentaihoto postoperatively administered for treatment of esophageal, gastric, or colorectal cancer may act as a biological response modifier (BRM).

**9. From Kampo medicine perspective**

None.

**10. Safety assessment in the article**

None.

**11. Abstractor's comments**

This study evaluates the change in cell-mediated immunity in response to postoperative administration of juzentaihoto in patients with esophageal, gastric, or colorectal cancer. The data suggest that juzentaihoto may act as a BRM. This study included a variety of cancers, operative procedures, and medical conditions. Investigation (including survival analysis) with a larger sample size in limited populations is expected.

**12. Abstractor and date**

Oikawa T, 19 September 2008, 6 January 2010, 1 June 2010.