

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

Yamagata T, Ajimura K, Yukawa S. Effect of juzentaihoto on myelosuppression during lung cancer chemotherapy. *Therapeutic Research* 1998; 19: 705-8 (in Japanese). [MOL](#), [MOL-Lib](#)

**1. Objectives**

To evaluate the preventive effect of juzentaihoto (十全大補湯) on myelosuppression in patients undergoing chemotherapy (carboplatin + etoposide) for primary lung cancer (squamous cell carcinoma, adenocarcinoma, or small cell carcinoma).

**2. Design**

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

**3. Setting**

One university hospital (third Department of Internal Medicine, Wakayama Medical University), Japan.

**4. Participants**

Thirty-six patients with stage III-IV primary lung cancer (25 with small-cell carcinoma, 6 with squamous cell carcinoma, and 5 with adenocarcinoma) receiving carboplatin on day 1 + etoposide 40 mg/m<sup>2</sup> on days 1-5.

**5. Intervention**

Arm 1: administration of the above-mentioned anti-cancer drugs + juzentaihoto (十全大補湯) (manufacturer unknown) 7.5 g/day (7 days before through 21 days after the start of administration of the anti-cancer drugs) (n=20).

Arm 2: the above-mentioned anti-cancer drugs alone (n=16).

**6. Main outcome measures**

Changes in platelet, white blood cell (WBC), and red blood cell (RBC) counts, and hemoglobin value during treatment, and change in each item between pre- and post-treatment.

**7. Main results**

Because baseline platelet and WBC counts were significantly lower in arm 1, there were no significant between-arm differences in their minimum values. However, decrements in these values from pre- to post-treatment were significantly smaller in arm 1 (platelet count,  $P<0.01$ ; WBC count,  $P<0.05$ ). The decrement in RBC count was significantly smaller in arm 1 ( $P<0.05$ ), although there was no significant between-arm difference in hemoglobin value.

**8. Conclusions**

Juzentaihoto extract helps reduce the severity of myelosuppression in patients on chemotherapy (carboplatin + etoposide) for primary lung cancer.

**9. From Kampo medicine perspective**

None.

**10. Safety assessment in the article**

There were no adverse drug reactions in arm 1 (adverse events in arm 2, not indicated).

**11. Abstractor's comments**

The authors concluded that combination of juzentaihoto with anti-cancer drugs (carboplatin + etoposide) is effective for reducing myelosuppression associated with anti-cancer drug treatment, and thus useful in administering potent chemotherapy and improving quality of life. However, the significant differences in pre-treatment platelet and WBC counts between arm 1 and arm 2 as well as the conclusion drawn from comparison of the degree of decrements were problematic.

**12. Abstractor and date**

Hoshino E, 22 February 2009, 6 January 2010, 22 October 2011, 31 December 2013.