

## AB014. OA02.05: The role of postoperative radiotherapy in stage II and III thymoma: a Korean multicenter database study

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**Background:** For the Masaoka-Koga stage II and III thymoma, complete resection is a standard treatment. Postoperative radiotherapy (PORT) has been tried, but its role is controversial. We analyzed the data which were collected from four Korean hospitals to clarify the role of PORT in the stage II and III thymoma patients.

**Methods:** From January 2000 to December 2013, a total of 1,663 patients underwent operations for thymic tumors in the four Korean hospitals. Of those, patients who had thymic carcinoma, neuroendocrine tumor, Masaoka-Koga stage I and IV, and had absent data were excluded. The remaining 668 patients (527 stage II and 141 stage III) were included. Among them, 443 patients received PORT (335 stage II and 108 stage III). Propensity score matching (PSM) was performed and 404 patients (346 stage II and 58 stage III) were selected.

**Results:** Perioperative characteristics including age, sex, preoperative conditions, extent of surgery, WHO subtype, tumor size, R0 resection, and lymph node metastasis were not different between PORT group and no PORT group after PSM. The median follow up duration was 61.4 months (range, 0.3–182.4 months). In the survival analysis of stage II, PORT group showed no difference of both 5-year recurrence free survival (RFS) (95.9% *vs.* 96.8%,  $P=0.573$ ) and 5-year overall survival (OS) (94.6% *vs.* 93.8%,  $P=0.839$ ). But in the stage III, PORT group showed better trend of 5-year RFS (72.8% *vs.* 49.2%,  $P=0.067$ ) and significant better 5-year OS (86.5% *vs.* 54.7%,  $P=0.008$ ). In the multivariate Cox regression analysis in stage III, PORT was a significant positive prognostic factor for both RFS ( $P=0.011$ ) and OS ( $P=0.004$ ). But in stage II, it was not significant.

**Conclusions:** In this analysis, PORT could improve the RFS and OS in stage III thymoma patients, but in stage II thymoma patients, it couldn't show survival benefit.

**Keywords:** Postoperative radiotherapy; Korea Association for Research on the Thymus; propensity score matching; thymoma

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