

## RETROSPECTIVE ANALYSIS OF OUTCOMES FOR PATIENTS WITH INVASIVE THYMOMA RECEIVING SURGERY WITH OR WITHOUT ADJUVANT RADIOTHERAPY

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**Purpose** : To investigate the prognostic factors associated with outcome in patients with invasive thymoma undergoing surgery with or without adjuvant radiotherapy and strategies for optimal adjuvant radiotherapy.

**Methods and Materials** : This retrospective study included 63 patients with invasive thymoma. All patients received surgery and 49 patients underwent adjuvant radiotherapy. Patient characteristics and treatment related parameters were analyzed to correlate with overall survival and disease free survival.

**Results** : The 5-year overall survival and disease-free survival rate was 83% and 81.5%, respectively. The most common site of failure is pleural seeding. The univariate analyses showed that Masaoka stage and extent of surgical resection were important prognostic factors. The 5-year overall survival rate was 95.8 % in stage II thymoma and 71.9% in stage III/IV thymoma ( $p= 0.06$ ). The 5-year survival rate was 87.3% for those who underwent complete resection compared with 44.4% for those with microscopic or gross residual disease ( $p= 0.04$ ). Patients receiving extended-field or involved-field radiotherapy had similar 5-year overall survival (88% versus 94.7%,  $p= 0.53$ ). In this study, we can not identify significant prognostic factors for disease free survival.

**Conclusion** : In our study, the extent of resection is important prognostic factor for invasive thymoma. Extensive radiation field covering mediastinum is not associated with better outcome.

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Key words: Invasive thymoma, Surgery, Adjuvant radiotherapy, Prognostic factor

### INTRODUCTION

Thymomas are the most common tumors of the anterior mediastinum [1]. These rare tumors originate from epithelial cells within the thymic gland. They are cytologically

benign but biologically aggressive. Thymomas are capable of local invasion and pleural dissemination but extrathoracic metastasis is rarely seen. Treatment of thymomas is often multidisciplinary, including surgery, radiotherapy or chemotherapy. However, some

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