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Risk of residual teratoma after complete response following first-line chemotherapy in men with metastatic non-seminomatous germ cell tumor and IGCCCG intermediate/poor prognosis: A multi-institutional retrospective cohort study

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Introduction & Objectives: Current guidelines recommend surveillance for men with metastatic non-seminomatous germ cell tumours (NSGCT) treated with first-line chemotherapy who had a complete clinical response to treatment (i.e., normalization of serum tumour markers and residual masses <1 cm). However, this recommendation is based on retrospective data of male patients in the International Germ Cell Cancer Cooperative Group prognostic group (IGCCCG-PG). The aim of this study was to analyse the proportion of residual teratoma and survival among male patients with intermediate or poor IGCCCG-PG and complete clinical response after first-line chemotherapy.

Materials & Methods: Retrospective study of men with intermediate or poor IGCCCGP-PG who had a complete clinical response after first-line chemotherapy. Men were followed or treated with post-chemotherapy retroperitoneal lymph node dissection (pcRPLND). Descriptive analyses and Cox regression were used to assess whether pcRPLND or surveillance leads to a longer overall survival (OS) for patients.

Results: Between 2009–2018, 143 men with intermediate (n = 83) or poor (n = 60) IGCCCG-PG were treated at 11 international centres. In 33 patients, pcRPLND revealed teratoma and vital cancer in 16 (48%) and 4 (12%) specimens, respectively. During a median 7-year follow-up, 22 of 143 patients relapsed, of whom 7 had a retroperitoneal-only relapse. No difference was observed regarding OS among men treated with pcRPLND or surveillance (5-year OS, respectively: 93% and 89%, p-value = 0.35). The median time to recurrence among men on surveillance was 1.3 years (range: 0.3–9.1), and the most common sites of relapses during surveillance included retroperitoneum (n = 12), chest (n = 6), and bones (n = 4).

Conclusions: Because the majority of men with intermediate or poor IGCCCG-PG harbour cancer in the retroperitoneum despite a complete clinical response to first-line chemotherapy, either pcRPLND or follow-up with imaging of the retroperitoneum for at least 10 years should be recommended for.