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**Abstract Book**



**70**

**Impact of R0 Resection and Tumor Site on Recurrence after Surgery for Aggressive Fibrosarcoma: A Single-Center Experience over 15 Years.** E. Bertani,<sup>1</sup> A. Chiappia,<sup>1</sup> R. Misticiano,<sup>2</sup> T. De Pas,<sup>3</sup> G. Viale,<sup>4</sup> B. Androni,<sup>1</sup> I. Generali and Laparoscopic Surgery. *European Institute of Oncology, Milan, Italy.* 2. *European Institute of Oncology - Division of Oncology - Milan, Italy.* 3. *European Institute of Oncology - Division of Medical Oncology, Milan, Italy.* 4. *European Institute of Oncology - Division of Pathology, Milan, Italy.*

**Background:** Surgery is still the standard treatment for aggressive fibrosarcoma (AF), however local control remains a significant problem and the significance of R0 surgery and its impact on recurrence-free survival (RFS) is a matter of controversy. **Methods:** This is a single-institution study of 62 consecutively patients affected by AF who received macroscopically radical surgery within a time period of 15 years. Surgical principles that aided resection comprised a wide excision of the mass which involved the removal of all gross disease together with a normal tissue rim of at least 1 cm whenever possible, with the aid of intraoperative frozen section (IFS) margin evaluation in some cases. **Results:** The disease was primary in 52 and recurrent in 10 patients. The tumor was confined to trunk in 42, head and neck in 7, limbs in 7 and mesentery in 6 patients. The definitive pathology examination confirmed an R0 situation in 49 patients and R1 in 13 patients. The 17 patients who had IFS margin evaluation had a significantly higher probability of receiving R0 surgery (17 of 17 vs 32 of 45,  $p=0.013$ ). Five-year RFS for patients who underwent R0 vs R1 surgery was 93% vs 54% ( $p=0.039$ ), for tumor diameter  $<10$  vs  $\geq 10$  cm 92% vs 65% ( $p=0.038$ ) and for limb vs other localizations 68% vs 90% ( $p=0.013$ ) respectively. Age, gender, tumor presentation (primary vs recurrent) did not impact RFS. Patients who had IFS margin evaluation showed a significantly better RFS in comparison with patients who did not have such assessment (5-year RFS 100% vs 81%, respectively,  $p=0.049$ ). In multivariate analysis only limb localization showed a negative impact on RFS (HR: 1.708, 95% CI 1.03 to 2.84,  $p=0.039$ ). **Conclusions:** IFS evaluation should be staple of desmoplastic treatment including watchful follow-up could be indicated for patients with limb AF localization, because of the high risk of recurrence even after R0 surgery.

**71**

**Timing of Surgery and the Role of Adjuvant Radiation Therapy in Ewing Sarcoma of the Chest Wall: A Single Pediatric Institution Experience.** J.W. Denbo,\* W. Orr, Y. Wu, J. Wu, C.A. Billups, F. Navid, B. Rao, A.M. Davidoff, M.J. Krassin. *Sr. Jude Children's Research Hospital, Memphis, TN.*

Ewing sarcoma (ES) is the most common chest wall malignancy in adolescents. Current treatment strategies incorporate chemotherapy to treat systemic disease and ionizing radiation to assist with local control. We sought to evaluate the timing of surgery and the role of adjuvant radiation therapy in the management of these tumors. We reviewed our institutional experience in treating children with ES of the chest wall from 1979-2009. Patient demographics, tumor characteristics, treatment variables, and outcomes were recorded and analyzed with respect to the timing of surgical resection and use of adjuvant radiation. Thirty-six patients with ES of the chest wall were included in our review. At diagnosis, the mean tumor size was 10 cm; 39% had evidence of metastatic disease. With a median follow-up of 14 years, the 15-year estimates of event-free survival (EFS) and overall survival (OS) were  $56\% \pm 11\%$  and  $66\% \pm 11\%$ , respectively. The timing of surgical resection (up-front vs. delayed) in patients with localized disease did not appear to impact the extent of margin negativity or the use of adjuvant radiation, but did decrease the rate of chest wall resection. Additionally, 36% of patients who received neoadjuvant chemotherapy were found to have a complete pathologic response. When considering radiation, we found that patients with localized disease who did not receive adjuvant radiation therapy had smaller tumors ( $p=0.04$ ) and were OS were 74% for those who received adjuvant radiation and 100% for those who did not receive radiation. Multimodal therapy for ES of the chest wall yields good long-term results. Delayed surgical resection may or may not improve rates of margin negativity which directly impacts the use of adjuvant radiation, but does decrease the extent of chest wall resection and helps define a patient population with favorable tumor biology. In addition to patients with

**69**

**Risk of Recurrence after Surgical Treatment for Extra-abdominal Aggressive Fibromatosis.** J. Van Dalen,<sup>1</sup> T. Van Dalen,<sup>2</sup> H.K. Wijdren,<sup>3</sup> A.J. Witkamp,<sup>3</sup> K. Verhoef,<sup>3</sup> J. Van Gorp,<sup>2</sup> B.N. Van Geel,<sup>3</sup> H.K. Wijdren,<sup>1</sup> I. University Medical Center, Utrecht, Netherlands. 2. *Diakonessenhuis, Utrecht, Netherlands.* 3. *Daniel den Hoed Cancer Clinic, ErasmusMC, Rotterdam, Netherlands.*

Extra-abdominal aggressive fibromatosis (desmoid tumors) are benign soft tissue tumors with a biological behavior which varies between relatively indolent and progressive growth. The reported frequency of local recurrence in 5 years after treatment ranges from 5% up to 63%. Although there is a trend to treat desmoid tumors more conservatively, surgery remains the standard treatment for these locally aggressive tumors. Data was collected between November 1989 and May 2011 from 3 hospitals in the Netherlands. 152 patients were diagnosed with an extra-abdominal desmoid tumor. In the selection of patients that underwent surgical resection for a primary tumor, the risk of local recurrence was assessed and possible influencing factors evaluated. Median follow-up was 39 months (range 1-222 months). Overall, 140 patients (92%) received surgical treatment for a primary tumor. The average age was 37 years (range 1-80 yr) and the majority was female (62%). Macroscopic residual tumor remained in 6 patients (4%). Based on pathological examination, a microscopic radical resection (R0) was achieved in 91 patients (65%) while 38 patients (27%) had microscopically involved margins (R1). For 5 patients, the surgical margin was unknown. In addition to surgery, 60 patients (43%) received adjuvant radiotherapy. The 5-year cumulative risk of local recurrence was 18% with a median time to recurrence of 18 months. Both univariate and multivariate analysis showed no significant influence of tumor size, R0 vs R1 resection, or radiotherapy on the risk of local recurrence. Conclusion: After surgical treatment of an extra-abdominal aggressive fibromatosis, the 5-year risk of local recurrence was low. Since microscopic irradiation resection and adjuvant radiotherapy did not influence local recurrence rate, the necessity of aggressive local treatment may be questioned.

**69**

**Aggressive Fibromatosis D. Van Broekhoven,<sup>1</sup> T. Van Dalen,<sup>2</sup> H.K. Wijdren,<sup>3</sup> A.J. Witkamp,<sup>3</sup> K. Verhoef,<sup>3</sup> J. Van Gorp,<sup>2</sup> B.N. Van Geel,<sup>3</sup> H.K. Wijdren,<sup>1</sup> I. University Medical Center, Utrecht, Netherlands. 2. *Diakonessenhuis, Utrecht, Netherlands.* 3. *Daniel den Hoed Cancer Clinic, ErasmusMC, Rotterdam, Netherlands.***

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