

Demographics, Outcomes, Prognostic Factors in Adolescent-Adult Non-metastatic Ewing's Sarcomas- Experience from a Tertiary Cancer Center in India

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Abstract

Background Outcome and toxicity data in adolescent-adult Ewing's Sarcoma (AA-ES) patients is sparse and merits exploration. **Methods** Histopathologically confirmed, non-metastatic AA- ES patients, who received standard institutional combination chemotherapy regimen (EFT-2001) comprising of ifosfamide plus etoposide and vincristine, doxorubicin, plus cyclophosphamide, lasting a total of 12 months between 2013 and 2018, were analyzed for treatment-related toxicities, event-free survival (EFS) and overall survival (OS). **Results** There were 235 patients (primary safety cohort, PSC) with median age of 23 (15-61) years; 159(67.7%) were males, 155 (65.9%) had skeletal primary and 114(48.5%) had extremity tumors. 196(83.4%) were treatment naïve (primary efficacy cohort, PEC) and of these 119 (60.7%) had surgery. In PEC, at a median follow up of 36.4 (IQR 20 – 55) months, estimated 5 year EFS and OS were 60.9% (95% CI 53.1% - 69.9%) and 84.5% (95% CI 77.7% - 91.9%) respectively. Of these, 158 (80.6%) complying with intended treatment, at a median follow up of 39 (IQR 26- 57) months had an estimated 5 year EFS of 63.1% (95% CI 54.8%-72.6%). In multivariable analysis good prognostic factors included, longer symptom(s) duration (HR=0.93, 95% CI 0.86-0.994), [?] 99% necrosis (HR=0.30, 95% CI 0.11-0.77) and treatment completion (HR=0.32, 95% CI 0.14-0.74). Among PSC, grade 3-4 toxicities were febrile-neutropenia (119, 50.6%), anemia (130,55.3%), peripheral neuropathy (37,15.7%), with 3(1.3%) chemo-toxic deaths . **Conclusions** The outcomes of AA non-metastatic ES patients treated with EFT-2001 regimen were comparable to those reported by others, with acceptable toxicity. This regimen could be considered a standard-of-care in AA-ES.

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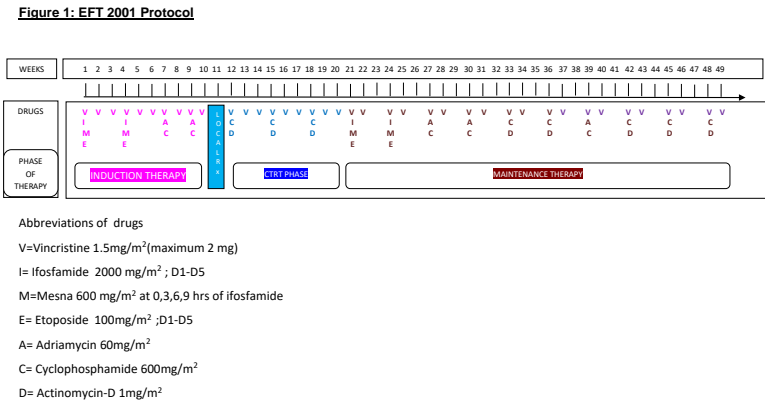
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table_3A.docx available at <https://authorea.com/users/395932/articles/562192-demographics-outcomes-prognostic-factors-in-adolescent-adult-non-metastatic-ewing-s-sarcomas-experience-from-a-tertiary-cancer-center-in-india>

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Table 3B.docx available at <https://authorea.com/users/395932/articles/562192-demographics-outcomes-prognostic-factors-in-adolescent-adult-non-metastatic-ewing-s-sarcomas-experience-from-a-tertiary-cancer-center-in-india>



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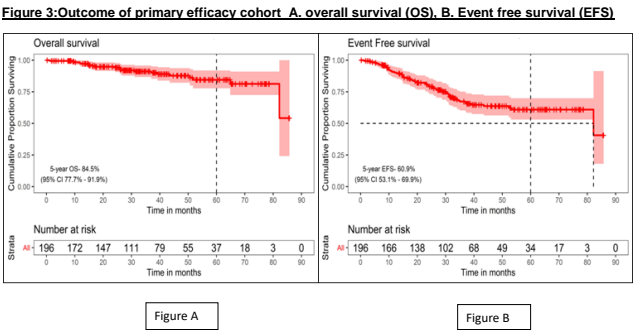


Figure4:Outcome comparison of prior untreated (primary safety cohort)and prior treated cohort, A. overall survival (OS), B. Event free survival (EFS)

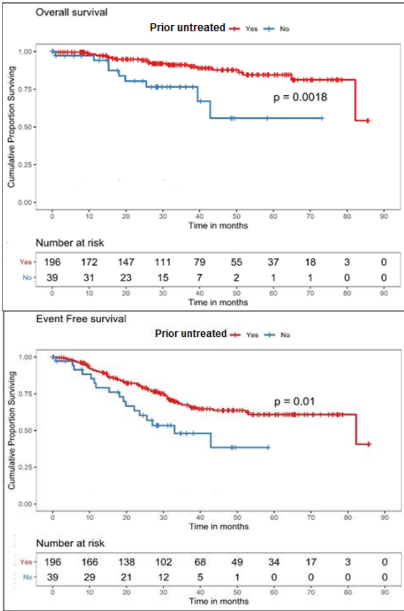


Figure A

Figure B

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Supplementary table 1.docx available at <https://authorea.com/users/395932/articles/562192-demographics-outcomes-prognostic-factors-in-adolescent-adult-non-metastatic-ewing-sarcomas-experience-from-a-tertiary-cancer-center-in-india>