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Title: Doxorubicin eluting intra-arterial therapy for extra-abdominal desmoid fibromatoses- a promising approach for a perplexing disease

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Abstract: Systemic doxorubicin is effective for desmoid fibromatosis (DF) but its use is limited by dose-dependent cardiotoxicity. A protocol of selective intra-arterial doxorubicin drug eluting embolization (DEE-TACE) was designed to maximize target tissue efficacy of doxorubicin while minimizing systemic exposure. Four children with recurrent or refractory DF were treated between 2014-2017. Tumor volumes were reduced by 54% - 97% over a follow-up interval of 6-32 months. A single patient experienced transient lower extremity paresthesia (CTCAE Grade I). Further investigation is needed to better establish these promising results for trans-arterial doxorubicin-eluting embolization in DF treatment.