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A RETROSPECTIVE CASE-CONTROL STUDY  
EXAMINING THE RELATIONSHIP BETWEEN  
APREPITANT AND IFOSFAMIDE NEUROTOXICITY  
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Aprepitant, a substance P/neurokinin (NK1) inhibitor, is a long acting anti-emetic that acts as a substrate, inducer, and inhibitor of the cytochrome P450 system. It is given in combination with dexamethasone and a 5HT3 antagonist for the prevention of nausea and vomiting in highly emetogenic multiple day chemotherapy regimens. Ifosfamide is a cytotoxic pro-drug that requires activation by cytochrome P450 3A4 to active and toxic metabolites. A recent case study highlighted a possible pharmacokinetic interaction between aprepitant and ifosfamide demonstrating a possible increased risk of neurotoxicity through a transient induction of 3A4 and subsequent increase in toxic metabolites. The objective of this study is to examine aprepitant usage and the incidence of ifosfamide neurotoxicity in sarcoma patients treated with multiple day chemotherapy regimens. Data collection will consist of electronic medical record and pharmacy database review. Results and conclusions will be presented upon completion of data collection and analysis.