

Treatment of Newly Diagnosed Higher Risk Favorable Histology Wilms Tumors (AREN0533)

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Synopsis:

This protocol will investigate two separate strategies for risk stratification for patients with Stage III and IV Favorable Histology Wilms Tumor. The first is the identification of patients with pulmonary nodules who can be spared bilateral pulmonary irradiation. Patients with Stage IV favorable histology Wilms tumor have a 4 year event free survival (EFS) of 75% with chemotherapy and irradiation to sites of metastatic disease (most frequently in the lungs). European investigators are able to spare 75% of their patients with pulmonary nodules from irradiation based on the initial response to chemotherapy. We propose to use the response of the lung metastases to 6 weeks of chemotherapy consisting of vincristine, dactinomycin, and doxorubicin (Regimen DD4A) to determine if radiation of lung nodules is needed. Patients who have complete disappearance of their lung metastases (or who have tissue confirmation that the nodules do not contain viable tumor) at the Week 6 evaluation will be considered rapid responders and will continue with DD-4A. Patients who do not have complete resolution of pulmonary nodules by Chest CT will undergo pulmonary irradiation and will be switched to regimen M (DD4A variation with dactinomycin and doxorubicin given on the same day plus cyclophosphamide and etoposide).

Central radiology review of the chest CTs will be performed on all Stage IV patients with lung metastases at study enrollment and at Week 6.

The second risk stratification variable is the allelic loss of 1p and 16q. Patients with Stage III and IV favorable histology Wilms tumor with loss of heterozygosity (LOH) of both 1p and 16q have a 4 yr EFS of 65%. Patients with LOH of 1p and 16q will be assigned to regimen M in an attempt to improve the 4 year EFS of this group of patients to 84%.