

## Predictors of Chronic Immune Thrombocytopenia: Analysis of ICIS Registry II Data

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Approximately 20% of children with immune thrombocytopenia (ITP) develop chronic thrombocytopenia beyond 12 months, and little data exists to predict disease chronicity. We analyzed the Intercontinental Cooperative ITP Study Group Registry II dataset to identify predictors of chronic disease at 12 and 24 months. ICIS Registry II was a prospective cohort study enrolling children ages 4 months to 20 years of age with newly diagnosed ITP. For this analysis, we included patients from Registry II that did not undergo splenectomy between diagnosis and 24 months. 705 patients that had platelet counts and treatment data between diagnosis and 12 months were identified and, of these, 383 patients also had these data available at 24 months. In univariate analysis, younger age, higher bleeding severity, and drug treatment at diagnosis were all significantly associated with remission at 12 and 24 months. Gender and platelet count at diagnosis were not associated with chronic disease. By multivariable analysis, younger age, particularly < 1 year, as compared to patients ≥ 12 years was associated with a greater likelihood of remission at both 12 and 24 months (OR 3.44, 95% CI 1.37 – 8.65 at 12 months and OR 3.6, 95% CI 1.42 – 9.15 at 24 months). By multivariable analysis, higher bleeding grade at presentation was associated with greater likelihood of remission at 12 months; however at 24 months there was an interaction between treatment and bleeding severity. In our analysis, we show that younger age, particularly < 1 year, and significant bleeding at diagnosis are predictors of remission at 12 months. Although pharmacologic treatment correlated with remission in univariate analysis, based on the multivariable analysis, treatment appears to be a marker of bleeding rather than an independent predictor. Future efforts should focus on biological predictors of response and ongoing prospective data collection.