Submitted by Sophia Polychronopoulou

Vassilios Papadakis[a], Agapi Parcharidou[a], Anna Paisiou[a], Natalia Tourkantoni[a], Sofia Papargyri[a], Kalliopi Stefanaki[b], Sophia Polychronopoulou[a]
Departments of [a]Pediatric Hematology-Oncology and [b]Department of Pathology, Agia Sophia Children's Hospital, Athens, Greece

INTRODUCTION: Treatment results for pediatric non-Hodgkin's lymphoma (NHL) continue to improve internationally.
OBJECTIVE: Our goal was to evaluate patient characteristics in our series of patients with NHL and outcomes for the last 16 years (1990–2006).
METHODS: Our patients included 52 newly diagnosed children (11 girls) with a median age of 8.40 years (range: 0.33–14.5 years). Histology results included B-lymphocyte NHL, T-lymphocyte NHL, and Ki-1 in 35, 12, and 5 patients, respectively. In each 5-year period, 14 (3), 17 (3), and 21 (5) patients (girls) were diagnosed, respectively. Common presenting sites were the mediastinum (16), neck area (14), and abdomen (10). Disease was at stage I, II, III, and IV in 3, 14, 23, and 7 patients, respectively. Treatment varied over time. Berlin-Frankfurt-Munich (BFM) protocols had been applied since 1995 (BFM-NHL-90), and since 1997 the BFM-NHL-95 protocol had been applied. Irradiation was given to 5 patients (2 with B-NHL, 3 with T-NHL), and autologous stem cell transplantation was performed on 4 patients, all with B-NHL (1 with central nervous system disease, 1 with residual disease at the end of treatment, and 2 at relapse).
RESULTS: At this writing, 41 patients are alive; 39, 2, and 1 are in first, second, and third remission, respectively. In total, 9 have succumbed (2 died soon after admission in other hospitals as a result of acute-phase complications), and 5 patients died during the first decade of our retrospective study (with T-histology and extensive disease). The event-free survival rate is 74.4% (39 of 52 patients), and the overall survival rate is 80.9% (41 of 52 patients), for a median follow-up time of 6.1 years (range: 0.01–14.7 years) for all patients. For the 39 patients treated with the BFM-95 protocol since 1997, event-free survival and overall survival rates are 79.4% and 88.2%, respectively, for a median follow-up time of 4.8 years.
CONCLUSIONS: Overall and event-free survival rates and outcome of our patients with NHL treated during the last 16 years are standing high. There has been limited use of irradiation and stem cell transplantation.

SERUM LEVELS OF *MYCN* AMPLIFICATION IN NEUROBLASTOMA WITH TUMOR-RELEASED DNA BY REAL-TIME QUANTITATIVE POLYMERASE CHAIN REACTION

Submitted by Tohru Sugimoto

Tohru Sugimoto[a], Takahiro Gotoh[a], Tomoko Iehara[a], Kunihiko Tsuchiya[a], Miki Ohira[b], Akira Nakagawara[b], Hajime Hosoi[a]
[a]Kyoto Prefectural University of Medicine, Kyoto, Japan; [b]Chiba Cancer Center Research Institute, Chiba, Japan

INTRODUCTION: *MYCN* amplification (MNA) indicates a poor prognosis in neuroblastoma and is routinely assayed for therapy stratification.
OBJECTIVE: We aimed to develop a diagnostic tool to predict *MYCN* status by using serum DNA, which, in patients with cancer, predominantly originates from tumor-released DNA.
METHODS: Using DNA-based real-time quantitative polymerase chain reaction, we simultaneously quantified *MYCN* (2p24) and a reference gene, *NAGK* (2p12), and evaluated *MYCN* copy number as a *MYCN*/*NAGK* ratio in 87 patients with neuroblastoma whose *MYCN* status had been determined by Southern blotting. Of these patients, 17 had *MYCN*-amplified neuroblastoma, and 70 had nonamplified neuroblastoma.
RESULTS: The serum *MYCN*/*NAGK* ratio in the MNA group (median: 199.32; range: 17.1–901.6 [99% confidence interval: 107.0–528.7]) was significantly ($P < .001$) higher than that in the non-MNA group (median: 0.87; range: 0.25–4.6 [99% confidence interval: 0.82–1.26], Mann-Whitney *U* test). The sensitivity and specificity of the serum *MYCN*/*NAGK* ratio as a diagnostic test were both 100% when the serum *MYCN*/*NAGK* ratio cutoff was set at 10.0. Among 6 patients in the MNA group whose clinical courses were followed, the serum ratios decreased to within the normal range in the patients in remission ($n = 3$), but they rose to high levels in the patients who had a relapse ($n = 2$) or failed to achieve remission ($n = 1$). The serum *MYCN*/*NAGK* ratio in the MNA group is likely to be the more sensitive tumor marker than conventional urinary vanillylmandelic and homovanillic acid markers and neuron-specific enolase markers to predict patients' clinical course.
CONCLUSIONS: Measurement of the serum *MYCN*/*NAGK* ratio seems to be a promising method for accurately assessing *MYCN* status in neuroblastoma.

RECURRENT IDIOPATHIC THROMBOCYTOPENIC PURPURA IN CHILDHOOD

Submitted by Maria Vranou

Maria Vranou, Helen Pergantou, Helen Platokouki, Dimitris Kousiafes, Maria Avgeri, Sophia Aronis
Hemostasis Unit, Agia Sophia Children's Hospital, Athens, Greece

INTRODUCTION: Idiopathic thrombocytopenic purpura (ITP) is usually a benign disease that remits within

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