

Health-Related Quality of Life (HRQL) Trajectories during Treatment for Advanced Stage Pediatric Hodgkin Lymphoma (HL)

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Background

- Treatment of advanced stage HL typically includes dose-dense chemotherapy with or without involved field radiation
- Although overall survival rates are high in the pediatric and adolescent age group, patients may experience morbidity due to the disease process or as a result of treatment
- Little is known about the health-related quality of life (HRQL) of pediatric patients during initial treatment for HL
- We described the HRQL trajectory over the treatment course and examined factors associated with the trajectory

Methods

Sample:

- Children and adolescents, ages 5-18.9 years newly diagnosed with advanced stage HL and enrolled in Children's Oncology Group AHOD1331 and their parents (N=310)

HRQL assessment:

- Children (age ≥ 11 years) and parent proxies (of all) reported on the child's global HRQL using the Child Health Rating Inventories (CHRIs)-Global.
- Five assessment times: (1) baseline, (2) cycle 2, (3) cycle 5, (4) off treatment, and (5) 12 mos off treatment
- The 7-item CHRIs-Global yields scores that range from 0-100, with higher scores indicating better HRQL

Covariates:

- Baseline patient & disease factors
- Baseline fatigue (frequency of "need for rest")
- Receipt of radiation
- Presence of peripheral neuropathy (clinical grading)

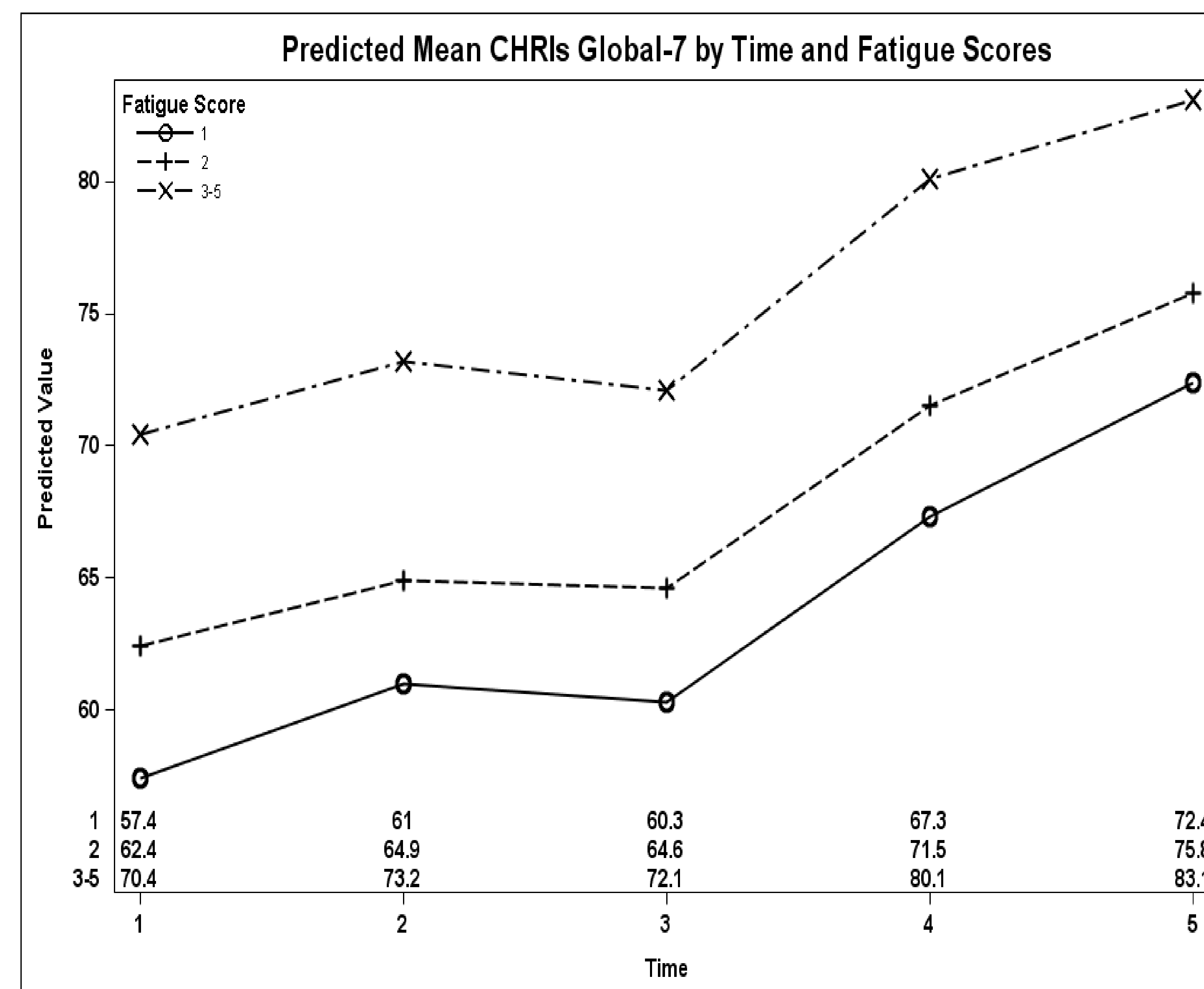
Statistical Analysis:

- A repeated measures linear regression model was fit with categorical time, rater, and covariates listed above
- The following interactions with time were considered: rater, radiation, and peripheral neuropathy
- Predicted mean HRQL scores were plotted

Results

Table 1. Patient Characteristics, n=310

Age in years, median (range)	15.5 (5-18)
Male	50%
White	76%
Hispanic	17%
Stage	
• IIB bulk, IIIB	42%
• IVA, IVB	58%
Baseline fatigue	
• Low	56%
• Moderate	19%
• High	14%
B symptoms	75%
Any radiation	57%
Any peripheral neuropathy	20%



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Results, Cont'd

Table 2. Multivariable Mixed Model for HRQL

	Estimate (95% CI)
Time	
• Baseline	reference
• Cycle 2	3.1 (0.9, 5.3)
• Cycle 5	2.3 (-0.1, 4.8)
• Off treatment	10 (7.3, 12.7)
• 12 mos off treatment	13 (9.7, 16.3)
Child rater	4.9 (3.3, 6.5)
Age in years	-0.6 (-1.3, 0.1)
Male	5.3 (1.9, 8.8)
Not White	2.3 (-1.8, 6.5)
Not Hispanic	3.8 (-0.6, 8.3)
Stage	
• IVA, IVB	reference
• IIB Bulk, IIIB	-6.3 (-9.9, -2.7)
Baseline fatigue	
• Low	reference
• Moderate	-5.8 (-10.2, -1.5)
• High	-11.8 (-16.9, -6.7)
No radiation	1.5 (-2.7, 5.7)
No peripheral neuropathy	3.6 (-0.8, 8.0)

Bolding indicates $p < 0.05$

All interactions were non-significant and were removed from the model

Conclusions

- HRQL was impaired at baseline, likely from the disease process, with little change during treatment, despite the intensity of therapy. Improvements were detected following treatment
- Children rated their HRQL higher than parent proxies
- Baseline fatigue impacted the entire HRQL trajectory
- Radiation and peripheral neuropathy did not impact the HRQL trajectory, but should be considered as time-varying covariates.
- Further analysis is planned to evaluate persistence of fatigue over time, address potential collinearity, and account for any missing data.