

information available at other time points throughout the cancer journey should be considered.

#### 403 | German AMLCG-Survivorship Study: Quality of Life and Life Satisfaction in AML Long-Term Survivors

*Eva Telzerow<sup>1</sup>, Dennis Görlich<sup>2</sup>, Cristina Sauerland<sup>2</sup>, Anna S. Moret<sup>1</sup>, Maja Rothenberg-Thurley<sup>1</sup>, Friederike H. A. Mumm<sup>1</sup>, Susanne Amler<sup>2,3</sup>, Wolfgang E. Berdel<sup>4</sup>, Bernhard Wörmann<sup>5</sup>, Utz Krug<sup>6</sup>, Jan Braess<sup>7</sup>, Pia Heussner<sup>8</sup>, Wolfgang Hiddemann<sup>1</sup>, Karsten Spiekermann<sup>1</sup>, Klaus H. Metzeler<sup>9</sup>*

<sup>1</sup>Department of Medicine III and Comprehensive Cancer Center (CCC Munich LMU), University Hospital, LMU, Munich, Germany, <sup>2</sup>Institute of Biostatistics and Clinical Research, University of Münster, Münster, Germany, <sup>3</sup>Current address: Friedrich Loeffler-Institut, Federal Research Institute for Animal Health, Greifswald, Germany, <sup>4</sup>Department of Medicine A, Hematology and Oncology, University of Münster, Münster, Germany, <sup>5</sup>Charité University Hospital Berlin, Berlin, Germany, <sup>6</sup>Department of Medicine 3, Hospital Leverkusen, Leverkusen, Germany, <sup>7</sup>Department of Oncology and Hematology, Hospital Barmherzige Brüder, Regensburg, Germany, <sup>8</sup>Department of Internal Medicine, Hospital Garmisch-Partenkirchen, Garmisch-Partenkirchen, Germany, <sup>9</sup>Dept of Medicine 1, Hematology and Cell Therapy, University Hospital Leipzig, Leipzig, Germany

**Background/rationale or Objectives/purpose:** An increasing proportion of patients with Acute Myeloid Leukemia (AML) become long-term survivors. Somatic and psycho-social outcomes are therefore becoming increasingly important, but little is known about long-term effects of the disease and its treatment.

**Methodology or Methods:** We collected data from AML long term survivors (AML-LTS). The primary aim of this study was to compare their quality of life and general and health-related life satisfaction with normative data of adults not diagnosed with AML.

**Impact on practice or Results:** 427 former AML patients participated 5-18.6 years after diagnosis. Median age was 61 and 56% were female. Unexpectedly, quality of life and general life satisfaction summary scores were significantly higher in AML-LTS compared to “healthy” adults. However, these differences were small and likely not clinically relevant. No difference was found for health-related life satisfaction.

Notably, a subgroup of participants (26%) reported poor physical well-being (i.e. >1 SD below normal), overall QoL was impaired for 13%. Associated with poorer QoL were younger age, male sex, lower educational level, shorter time since diagnosis and altered financial situations. No influence was found for other characteristics including treatment or previous relapse.

**Discussion or Conclusions:** Our large study establishes that overall QoL in AML long-term survivors is comparable to the general population, with further improvement from five years post diagnosis onwards. Importantly, disease- and treatment-related factors are not associated with overall QoL. However, we delineated a subgroup of patients that may still have a need for targeted psycho-social interventions ≥5years after an AML diagnosis.

#### 404 | Fatigue as a risk to cognitive dysfunction in childhood acute lymphoblastic leukemia survivors

*Alice Mochon<sup>1</sup>, Stacey Marjerrisson<sup>2</sup>, Sarah Lippé<sup>1</sup>, Maja Krajcinovic<sup>1</sup>, Caroline Laverdière<sup>1</sup>, Bruno Michon<sup>3</sup>, Philippe Robaey<sup>4</sup>, Daniel Simnett<sup>1</sup>, Serge Sultan<sup>1</sup>*

<sup>1</sup>Université de Montréal, Montreal QC, Canada, <sup>2</sup>McMaster University, Hamilton ON, Canada, <sup>3</sup>CHU de Québec, Québec QC, Canada, <sup>4</sup>University of Ottawa, Ottawa ON, Canada

**Background/rationale or Objectives/purpose:** The present study aims to (1) explore interrelationships between neurocognitive dysfunctions and fatigue in a well-characterized cohort of long-term survivors of childhood acute lymphoblastic leukemia (cALL) and (2) estimate the risk of presenting cognitive dysfunctions across levels of fatigue.

**Methodology or Methods:** Survivors from the PETALE PSY-ALL cohort completed the DIVERGT cognitive test battery and the PedsQL Multidimensional Fatigue Scale (MFS) (N=285). We conducted advanced multiple factor and cluster analyses to identify proximities between domains, and logistic regressions to assess the risk of a survivor to have cognitive difficulties (< 1.5 SD) or deficits (< 2.0 SD) based on their fatigue adjusting for known risk factors.

**Impact on practice or Results:** 66% percent presented at least one cognitive difficulty across the DIVERGT scales. Participants showed levels of fatigue comparable to other normative samples, with rest/sleep fatigue being slightly higher in younger ones (+7%). Preliminary analyses indicate that neurocognitive dysfunction and fatigue symptoms clustered within two symptom groups suggesting differential effects of fatigue across neurocognitive function in cALL. The risk for participants to present cognitive difficulties was increased with higher fatigue levels. For 10% more general fatigue, we found +12% median risk of presenting difficulties through the DIVERGT tests (median OR = 0.989 for 1 point of fatigue). The level of risk due to fatigue was maintained when ORs were adjusted for known risk factors.

**Discussion or Conclusions:** The results suggest that fatigue and mood may contribute to cognitive dysfunction in general. General and sleep/rest fatigue may have differential effects across cognitive abilities and should be systematically measured when assessing late-effects.

#### 410 | Objective Cognitive Function in a sample of Cancer Survivors with Insomnia and Cognitive Complaints

*Samlau Kutana, Joshua Tulk, Sheila Garland SNGarlandPhD Memorial University of Newfoundland, St. John's, Canada*

**Background/rationale or Objectives/purpose:** Cognitive impairment is a common concern for cancer survivors. Experiencing insomnia may worsen actual or perceived cognitive function. We compared the short and long-term memory, verbal fluency, and working memory of cancer survivors with insomnia and subjective cognitive impairment to published normative data.

**Methodology or Methods:** Pre-treatment data from an ongoing clinical trial investigating whether treatment of insomnia in cancer survivors can lead to improvements in subjective cognitive impairment was used. Short- and long-term memory were assessed using the Hopkins Verbal Learning Test: Revised (HVLT-R) total and delayed recall scales, respectively. Verbal fluency was assessed using the Controlled Oral Word Association Test (COWAT). Working memory was assessed using the three digit-span subscales (forward, backward, and sequencing) of the Weschler Adult Intelligence Scale: Fourth Edition (WAIS-IV).

**Impact on practice or Results:** Participants (N = 79; 70.9% women) were a mean of 58.1 years old with 16.1 years of education. The most common cancer diagnosis was breast (44.3%). Cancer survivors were not significantly different than normative samples on verbal fluency. Compared to norms, cancer survivors did not differ on the WAIS-IV forward digit span subscale but they had significantly lower scores on the backward digit span (p<.001) and digit span sequencing (p<.001)