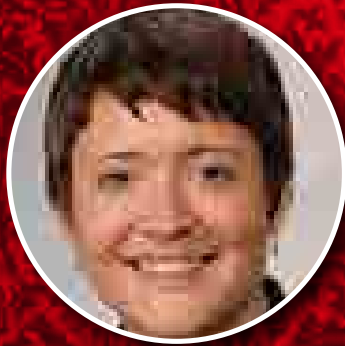


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EPIDEMIOLOGY OF ADULT ACUTE MYELOID LEUKEMIA: IMPACT OF EXPOSURES ON CLINICAL PHENOTYPES AND OUTCOMES AFTER THERAPY

An increased risk of adult myeloid leukemia (AML) is associated with lifestyle and environmental exposures, including obesity, smoking, medications, and rural/farm habitats in case control studies. The association of exposures with AML cytogenetics, therapeutic outcomes, and survival is unknown. Relevant exposures were evaluated in 295 AML patients diagnosed and treated at Mayo Clinic. Our central cytogenetic laboratory reviewed standard cytogenetic categories. The association of exposures with cytogenetic risk, complete remission (CR) after therapy, and overall survival was evaluated using logistic and Cox regression models. A significant association between obesity and intermediate-abnormal cytogenetics was identified (OR: 1.94, $P = 0.025$). Secondary AML patients were more likely to have poor risk (OR: 2.55, $P < 0.001$) and less likely to have intermediate normal (OR: 0.48, $P = 0.003$) cytogenetics. In multivariate analysis, overall survival was improved for patients ≥ 60 years receiving intensive (RR: 0.21, $P < 0.001$) and non-intensive therapy (RR: 0.40, $P < 0.001$) compared to no treatment, and was lower for smokers (RR 1.39, $P = 0.032$), and those with poor risk cytogenetics (RR: 3.96, $P = 0.002$) or poor performance status (RR: 1.69, $P < 0.001$). Association between statins (OR: 2.89, $P = 0.016$) and increased CR after intensive chemotherapy was identified. Solid organ transplantation was associated with lower CR after therapy (OR: 0.10, $P = 0.035$). Our results provide evidence that specific epidemiologic exposures are significantly associated with AML cytogenetic risk categories and response to therapy. This supports a link between patient lifestyles, clinical exposures, and leukemogenesis.

Biography

Laura Finn is currently Associate Director of Inpatient Oncology at the Gail and Tom Benson Cancer Center of the Ochsner Health System in New Orleans, Louisiana. She completed residency at Louisiana State University, fellowship at Mayo Clinic Florida and bone marrow transplant scholarship at the University of Minnesota. She has an Assistant Professorship of Medicine from Mayo Clinic where she was also Medical Director of Inpatient Oncology. Her current research focuses are epidemiology of hematologic malignancies and early palliative care in acute leukemia and bone marrow transplant.

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