Myeloid Malignancy Outcomes among Geriatric Populations at UConn Health

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Introduction

- Myeloid malignancies include acute myeloid leukemia (AML), chronic myelomonocytic leukemia (CMML), myelodysplastic syndrome (MDS), myelofibrosis (MF), polycythemia vera (PV), and essential thrombocytopenia (ET).
- Myeloid malignancies disproportionately affect geriatric populations.
- Long term survival remains poor for geriatric patients due to comorbidities, frailty, and inability to tolerate treatments.
- We conducted a retrospective chart review at our institution and benchmarked geriatric age survival of myeloid malignancies against national standards to understands the outcomes and the barriers.

Methods

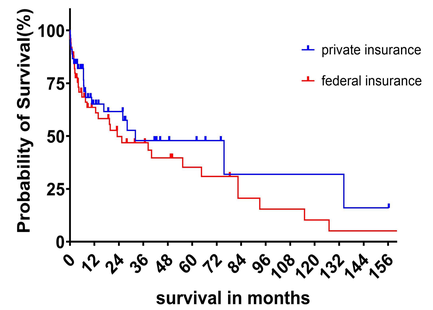
- A total of 107 geriatric (≥65 years) patients with myeloid malignancy from 2018-2025 were analyzed from UConn Epic data.
- Demographic, clinical, and insurance data were abstracted from electronic medical records.
- Data on the utilization of geriatric oncology assessments was also collected.
- Institutional outcomes were compared with population-level survival data from the SEER database for corresponding diseases.

Results

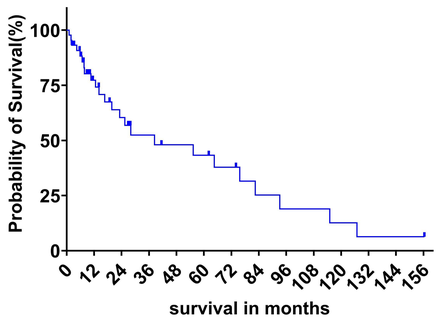
- Cohort is enriched with high-risk biology including abnormal/complex karyotype andTP53/ASXL1mutations
- ~ 50% received only supportive care or not treatment from comorbidities/age.
- No discrepancies between survival outcome based on insurance type(Federal vs Private) was noted.

Total Patients	107
Age at Diagnosis	Median=77.2
Sex	Male (N=56)
	Female (N=51)
Race/Ethnicity	White (N=96)
	Black (N=6)
	Hispanic (N=4)
	Other (N=1)
Type of Insurance	State (N=10)
	Federal (N=50)
	Private (N=45)
Type of Myeloid Malignancy	AML (N=35)
	MDS (N=44)
	CMML (N=14)
	MPN (N=4)
	MF (N=9)
	Other (N=1)
AML White Blood Cell Counts at Diagnosis (cells/μL)	Median 5.9 (0.4–353.6)
AML Platelets at Diagnosis (platelets×10³/μL)	Median 45.5 (13–292)
AML Bone Marrow Blasts at Diagnosis (%)	Median 50.0 (10-98)
MDS White Blood Cell Counts at Diagnosis (cells/μL)	Median 4.0 (0.8–17.9)
MDS Platelets at Diagnosis (platelets×10³/μL)	Median 126.0 (13–600)
MDS Bone Marrow Blasts at Diagnosis (%)	Median 2.0 (0-24)
CMML White Blood Cell Counts at Diagnosis (cells/μL)	Median 9.2 (2.9–96.2)
CMML Platelets at Diagnosis (platelets×10³/μL)	Median 168.0 (45–483)
CMML Bone Marrow Blasts at Diagnosis (%)	Median 1.0 (0-18)
"Other" White Blood Cell Counts at Diagnosis (cells/μL)	Median 9.6 (0.6–16.4)
"Other" Platelets at Diagnosis (platelets×10³/μL)	Median 396.0 (87–1,105)
"Other" Bone Marrow Blasts at Diagnosis (%)	Median 1.0 (0-85)
Cytogenetics	Normal (N=45)
	Abnormal (N=30)
	Complex (N=18)
	Not completed (N=14)
Molecular Markers	NPM1 (N=4)
	FLT3-ITD (N=4)
	TP53 (N=17)
	ASXL1 (N=16)
Treatment Exposure	Intensive Chemotherapy (N=10)
	HMA ± Ven (N=30)
	Supportive care (N=18)
	No treatment (N=35)
	Other (N=14)
Geriatric Assessment	Yes (N=2)
	No (N=105)
Status at Last Follow-up	Alive (N=59)
	Dead (N=47)
	Unknown (N=1)
Cause of Death	Disease Progression (N=27)
	Treatment complications (N=2)
	Organ Damage (N=2)
	Unrelated (N=13)
	Unknown (N=3)

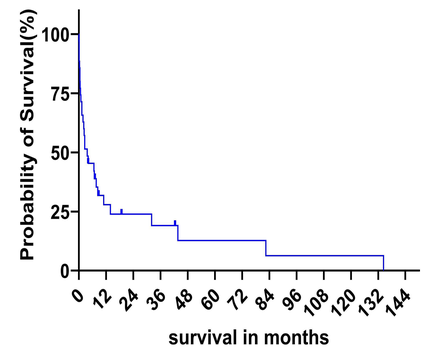
Kaplan–Meier curves depicting overall survival of geriatric patients with myeloid malignancies at UConn, stratified by insurance type



KM curve showing OS of UConn geriatric patients with MDS



KM curve showing OS of UConn geriatric patients with AML



Conclusions

- Although numerically comparable to national benchmarks, AML outcomes remains overall poor among the geriatric population.
- Geriatric Oncology Assessments were significantly underutilized at our institution which is being addressed as a potential intervention to improve outcomes.

References

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