

Selecting Treatment Protocols to Optimize Patient Outcomes and Survival

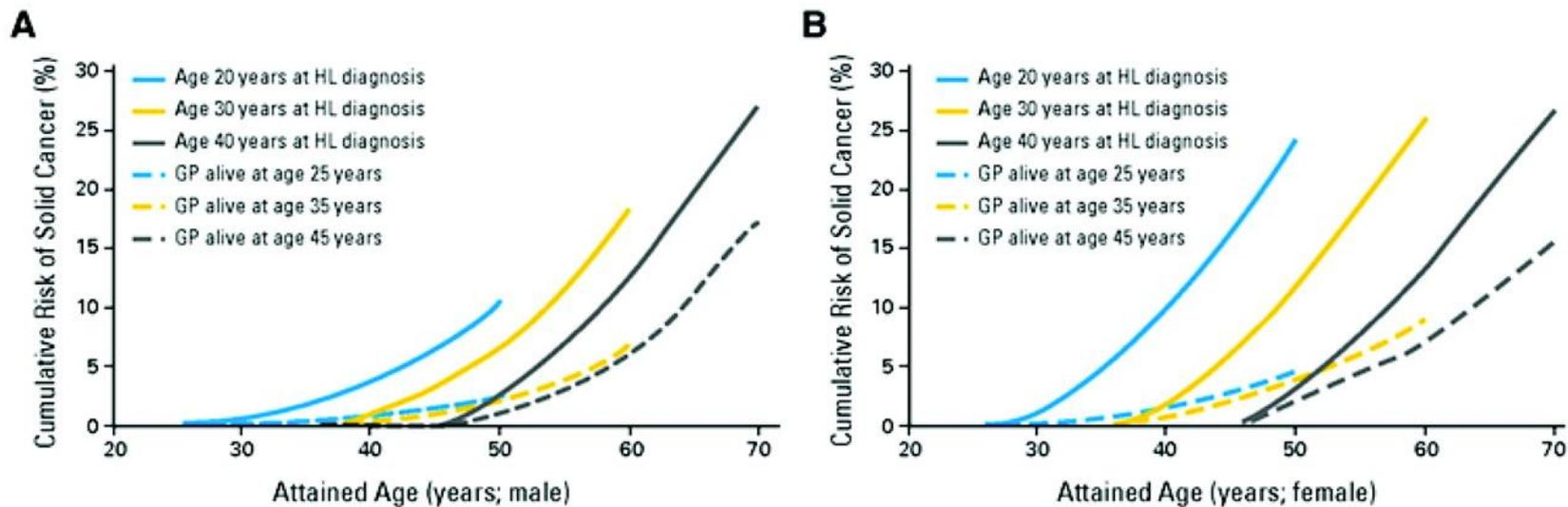
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Factors in Selecting Treatment Protocols

- **Outcomes**
 - Survival
 - Morbidity
 - QOL
- Biological basis
 - Disease
 - Host
- Setting

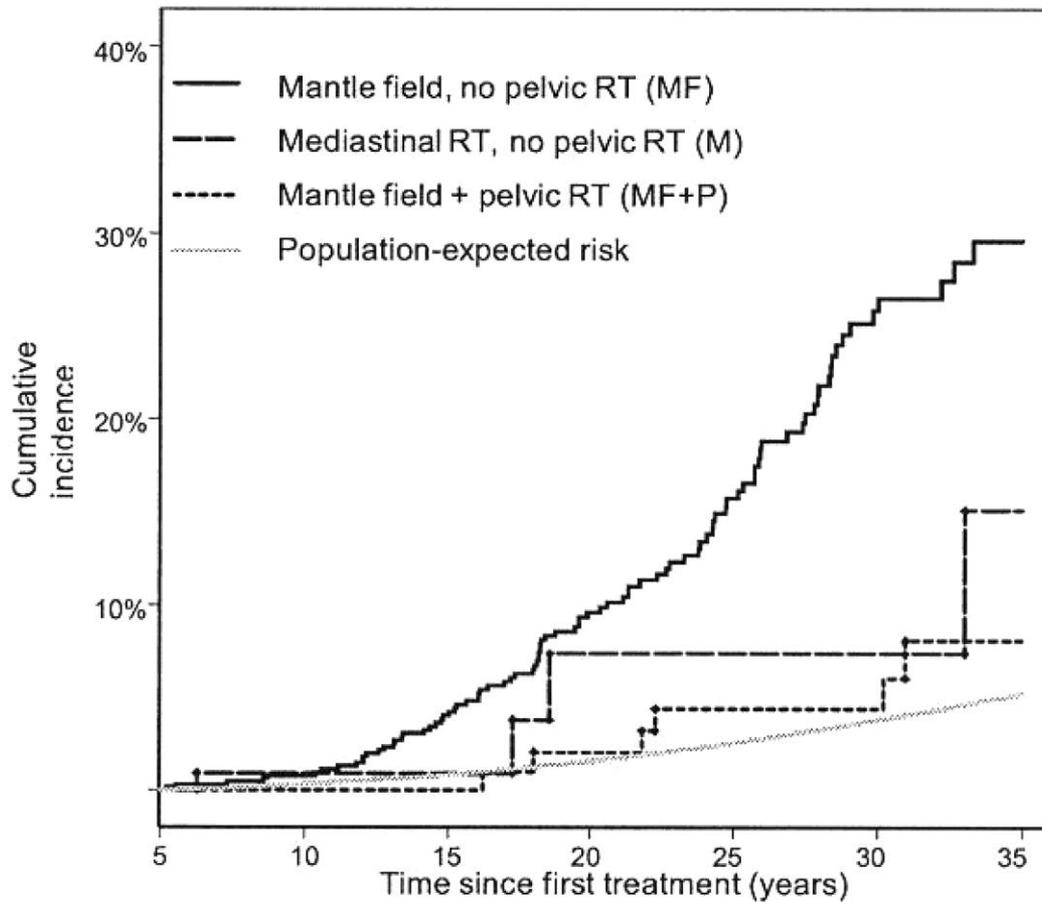
Cumulative incidence of solid cancers among 5-year survivors of HL compared with controls of the same age in the general population.



Hodgson D C Hematology 2011;2011:323-329



Cumulative incidence of invasive breast cancer according to radiation fields and population-expected risk.



Nr at risk	5	10	15	20	25	30	35
MF	637	582	448	293	151	64	11
M	109	99	42	20	11	10	5
MF+P	107	87	69	51	33	19	1

Hodgson D C Hematology 2011;2011:323-329



Hodgkin Lymphoma

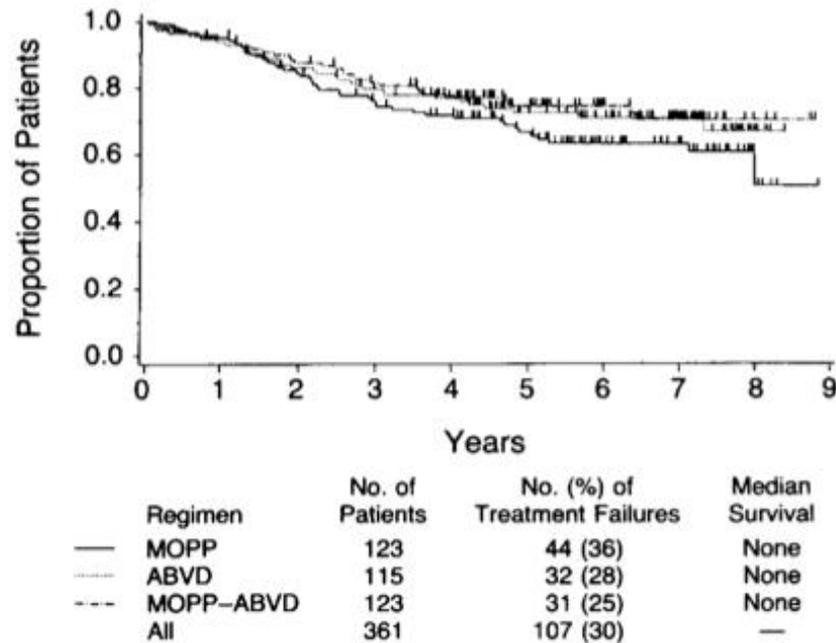
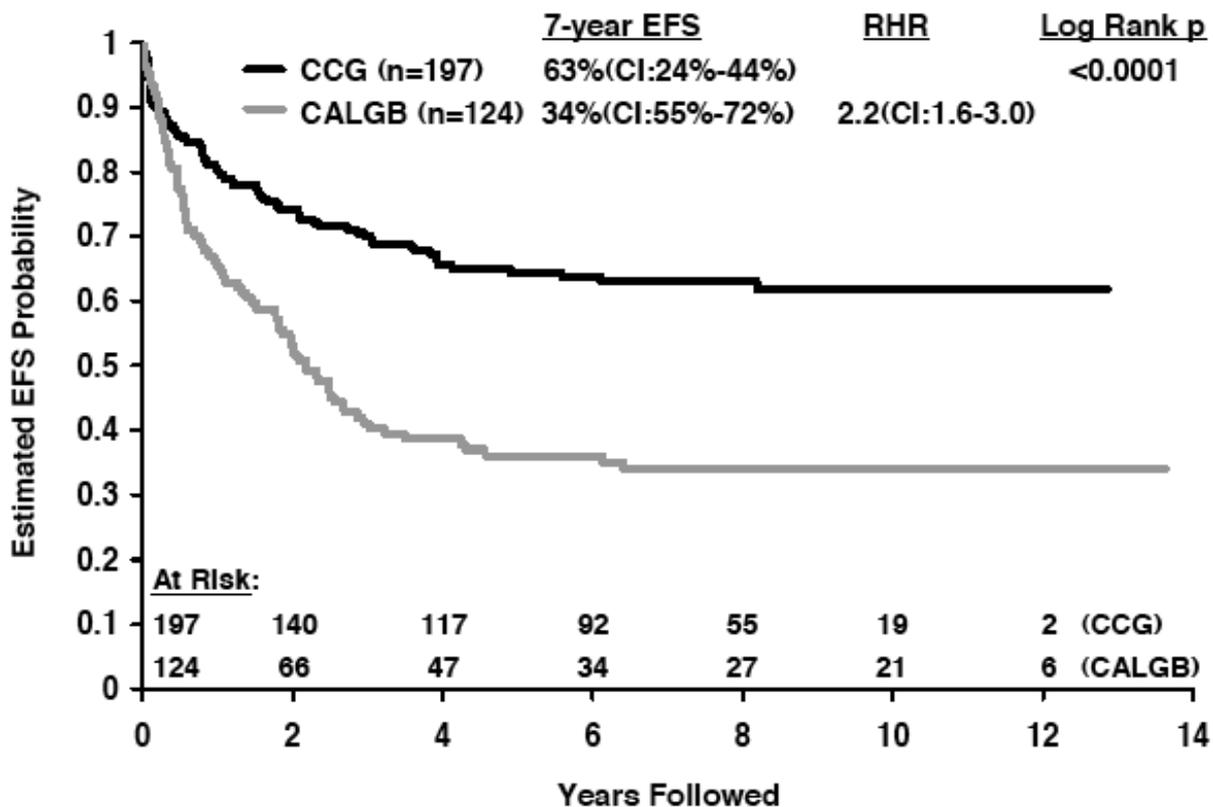


Figure 2. Overall Survival According to Primary Chemotherapeutic Regimen.

No significant differences between the three regimens were noted ($P = 0.28$). In the column for median years of survival, none indicates that the median survival has not yet been reached.

ALL Survival: Pediatric vs. Adult Regimens

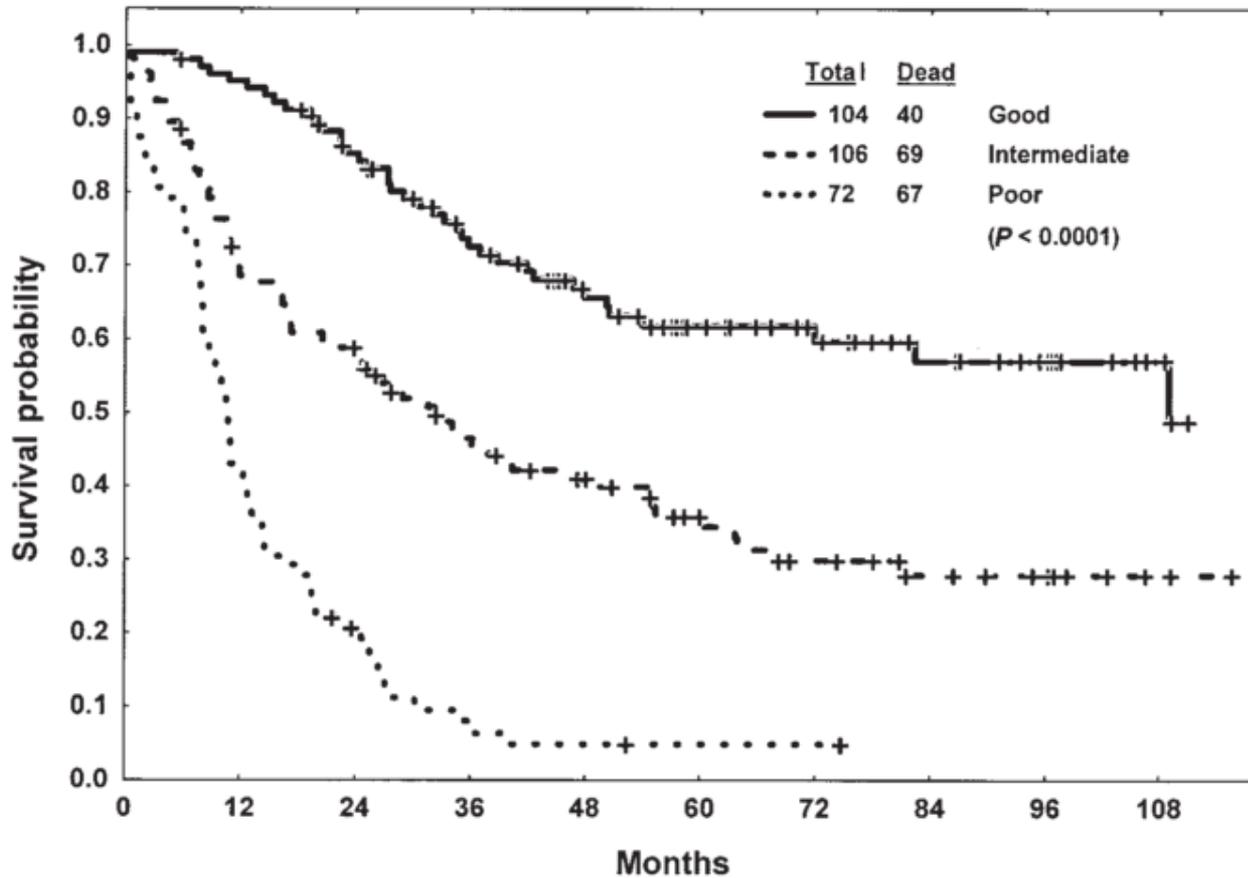
Figure 1a : Event-free Survival



Hyper-CVAD

Factor	Score
Age: <40, 40-59, 60+	0, 1, 2
KPS: 0-2, 3-4	0, 2
Hepatomegaly	0, 1
WBC: <50k, >50k	0, 2
Plt: >80, 20-80, <20	0, 1, 2
Philadelphia chromosome	0, 2

Hyper-CVAD



Good risk 0-1
5-year OS 62%

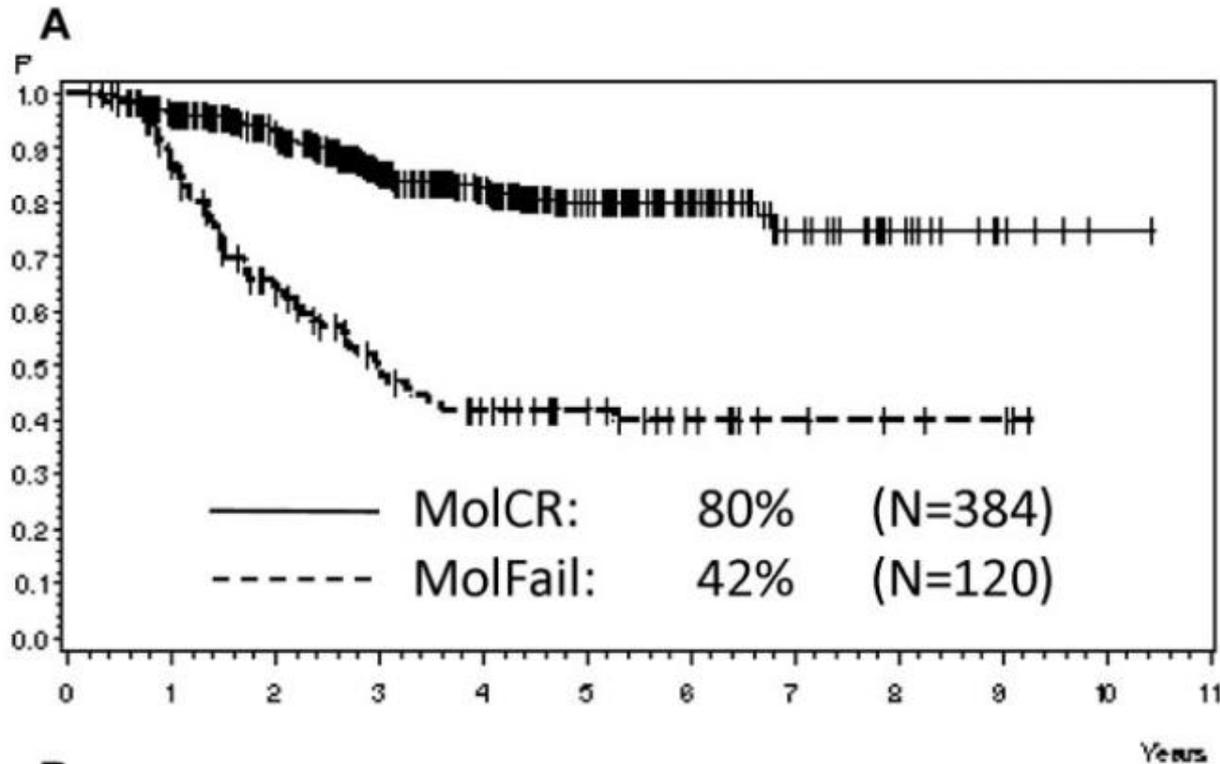
Intermed risk 2-3
5-year OS 34%

Poor risk 4-6
5-year OS 5%

ALL Allogeneic Transplant in CR1?

- Available sibling, or randomized auto vs chemo
 - 13 studies, N=2962, excluding Ph+
 - Age <35 having matched sibling OR 0.79 (p=0.0003)
 - Age 35+ having matched sibling OR 1.01
 - Auto vs chemo OR 1.18 (CI 0.99-1.41)

Minimal Residual Disease (16 week, GMALL)



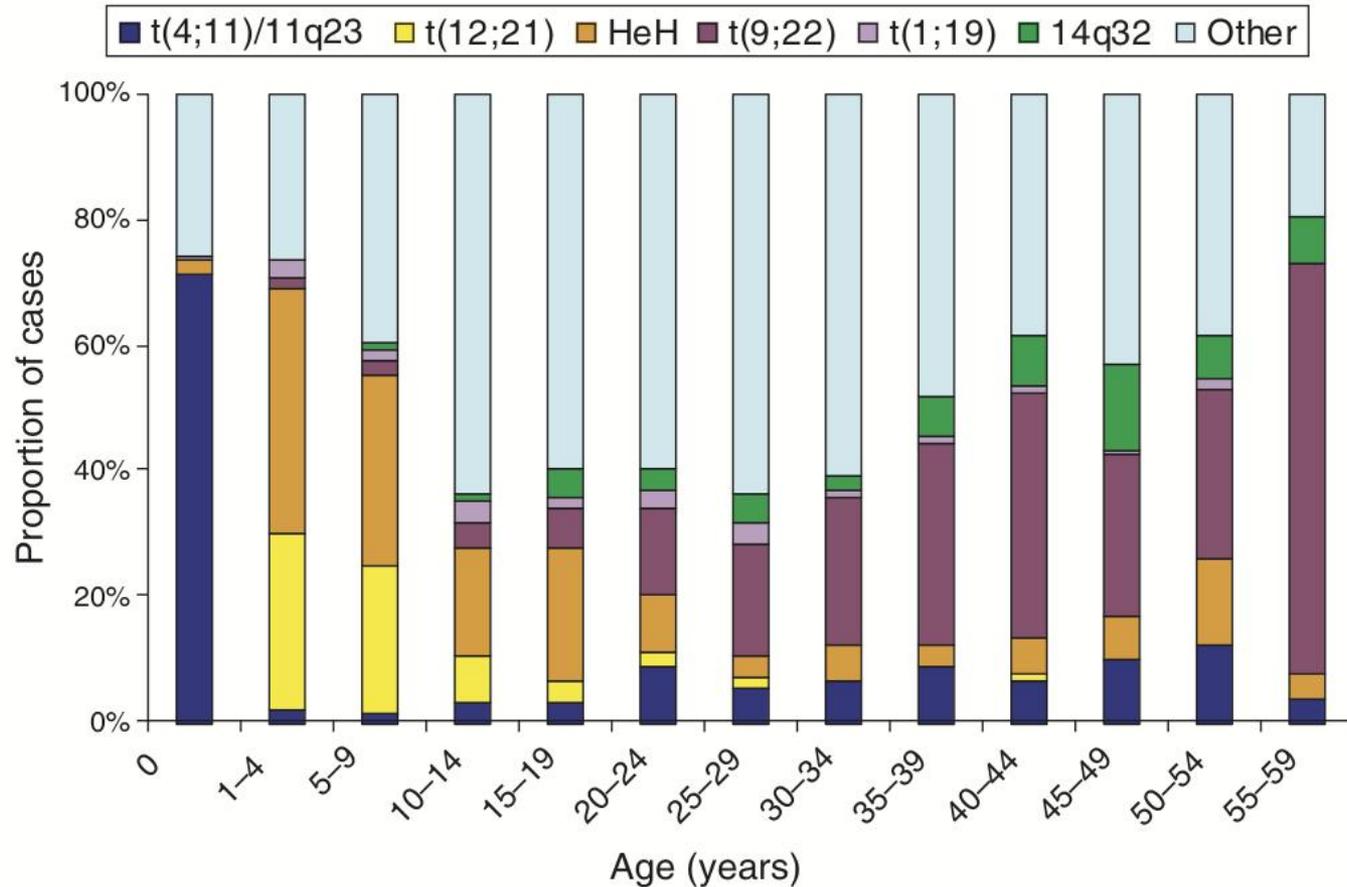
Overall survival
 $p < 0.0001$

Only significant factor
in multivariate
analysis

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ALL Cytogenetics by Age



BRAF Mutations and Age

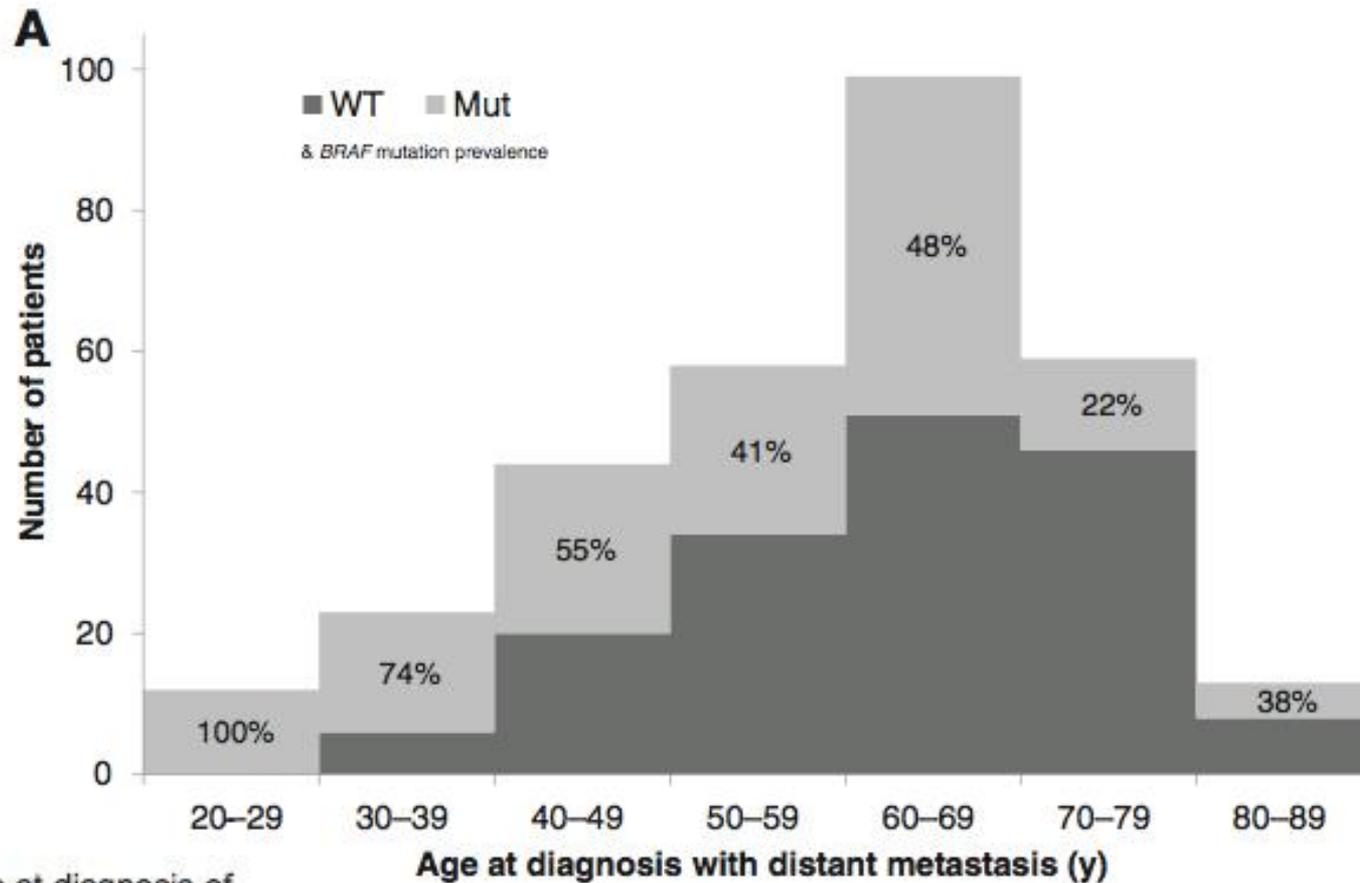
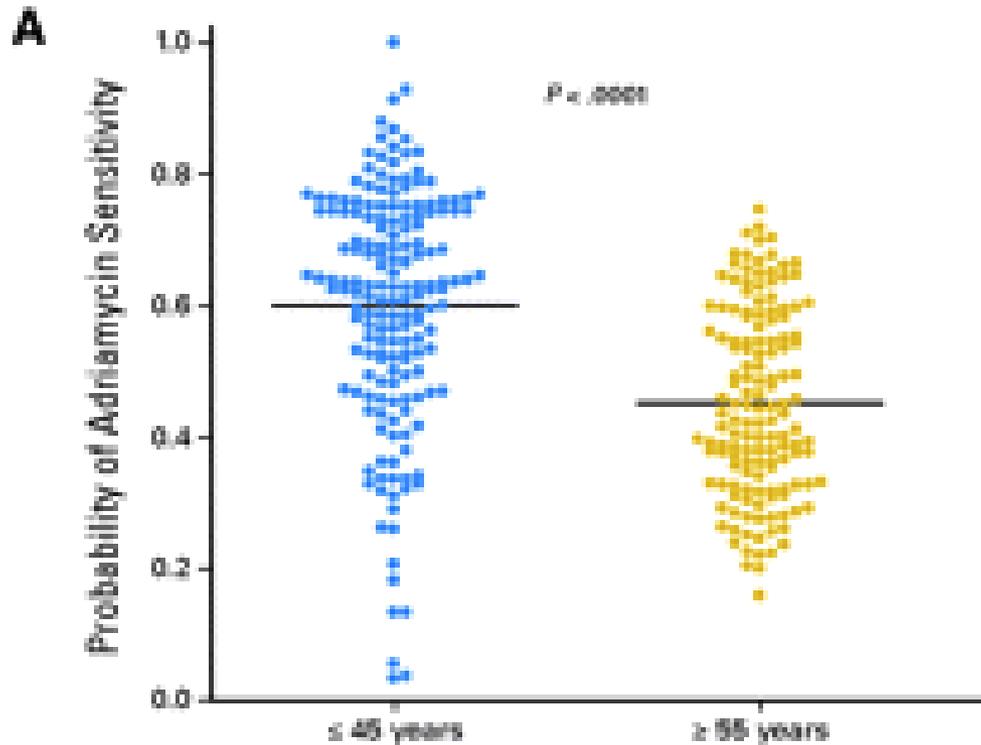


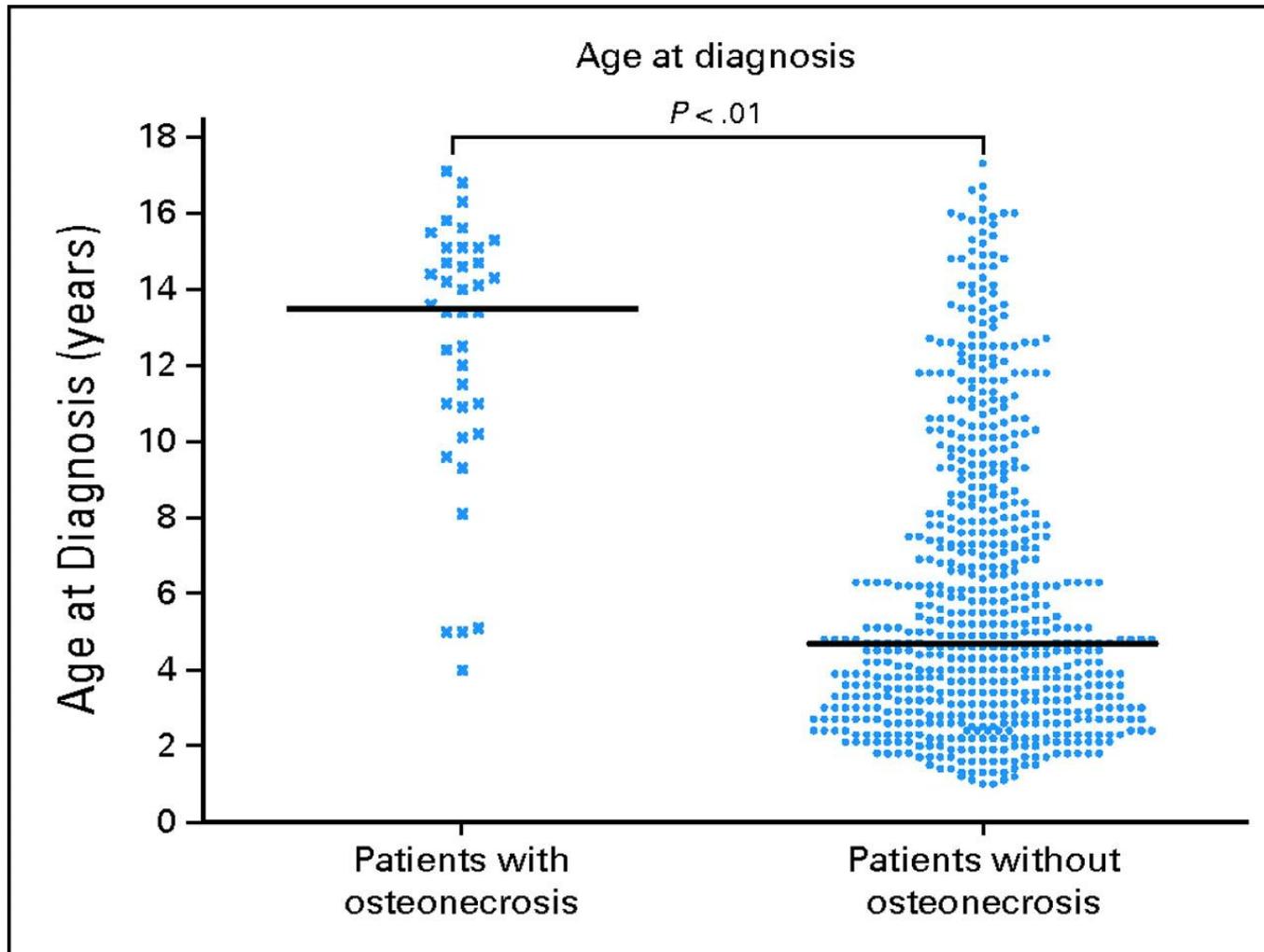
Figure 1. A, age at diagnosis of metastatic melanoma and prevalence of *BRAF* mutation

AML Gene Microarray

- Older patients predicted to have less sensitivity to anthracycline



Age at diagnosis in patients with and without symptomatic osteonecrosis.

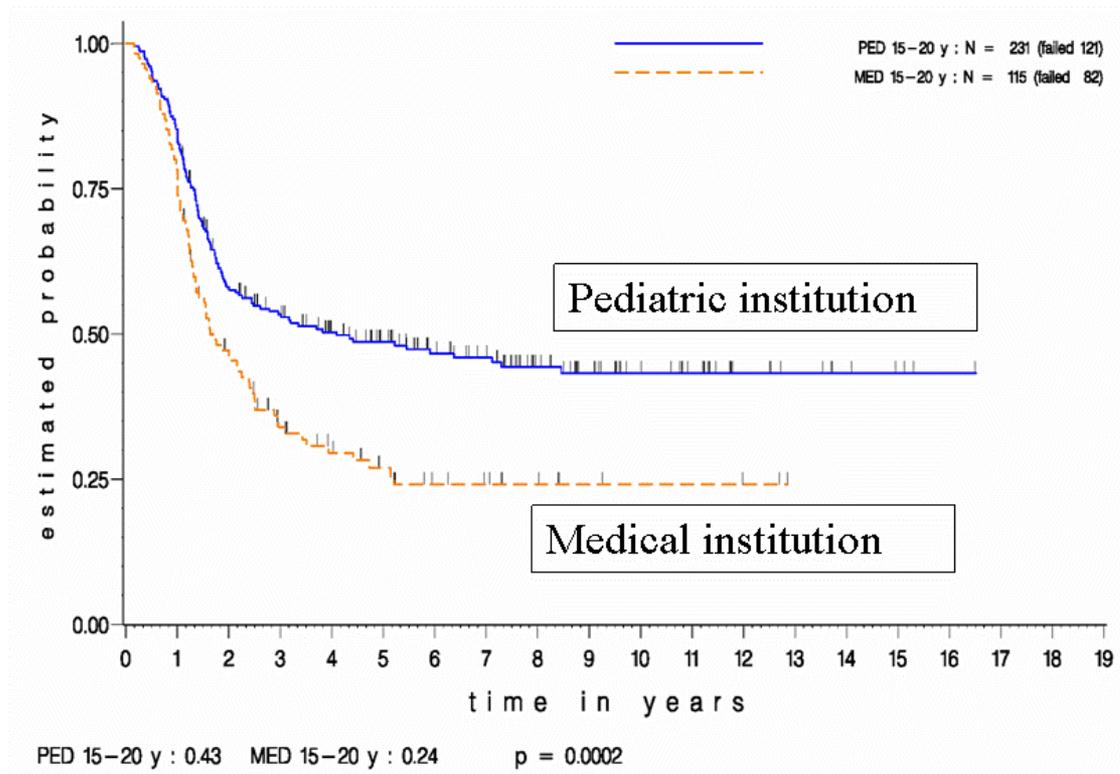


te Winkel M L et al. JCO 2011;29:4143-4150

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Age and Outcomes Recommendations

- Age may be a surrogate for biologic features
 - Opportunity to identify new biology
 - Recommend analyses of biology age
- Age may be a surrogate for care delivery features
 - Opportunity to identify required elements of care
 - Recommend analyses of patient and provider adherence (and factors for reduced adherence)