

SURVIVAL AMONG KENYAN CHILDREN TREATED FOR ENDEMIC BURKITT LYMPHOMA BETWEEN 2003 AND 2011: A LONGITUDINAL ANALYSIS OF RISK FACTORS

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No financial disclosures to report



Endemic Burkitt lymphoma



Rochford, Cannon, Moormann
Nat Rev Micro 2005

- ▶ Most common pediatric cancer in Kenya
Admit an average of 2 eBL patients per week at JOOTRH
Peak incident age 5–9 years
Sex ratio 1.5 males to females
Only 1.2% were HIV positive
- ▶ Extranodal monoclonal B cell tumor
High tumor proliferation index therefore responsive to combination chemotherapy without radiotherapy
Diagnosis by fine needle aspirate (May Grunewald–Giemsa stain), ultrasound or Xray

BL treatment regimen used from 2003–2012

Induction–Consolidation schedule:

Cyclophosphamide ($1200\text{mg}/\text{m}^2$) and
vincristine ($1.5\text{mg}/\text{m}^2$) IV weekly for six doses

Doxorubicin ($60\text{mg}/\text{m}^2$) IV on days 1 and 22

Methotrexate ($7.5\text{mg}/\text{m}^2$) intrathecal (IT) weekly
for four doses

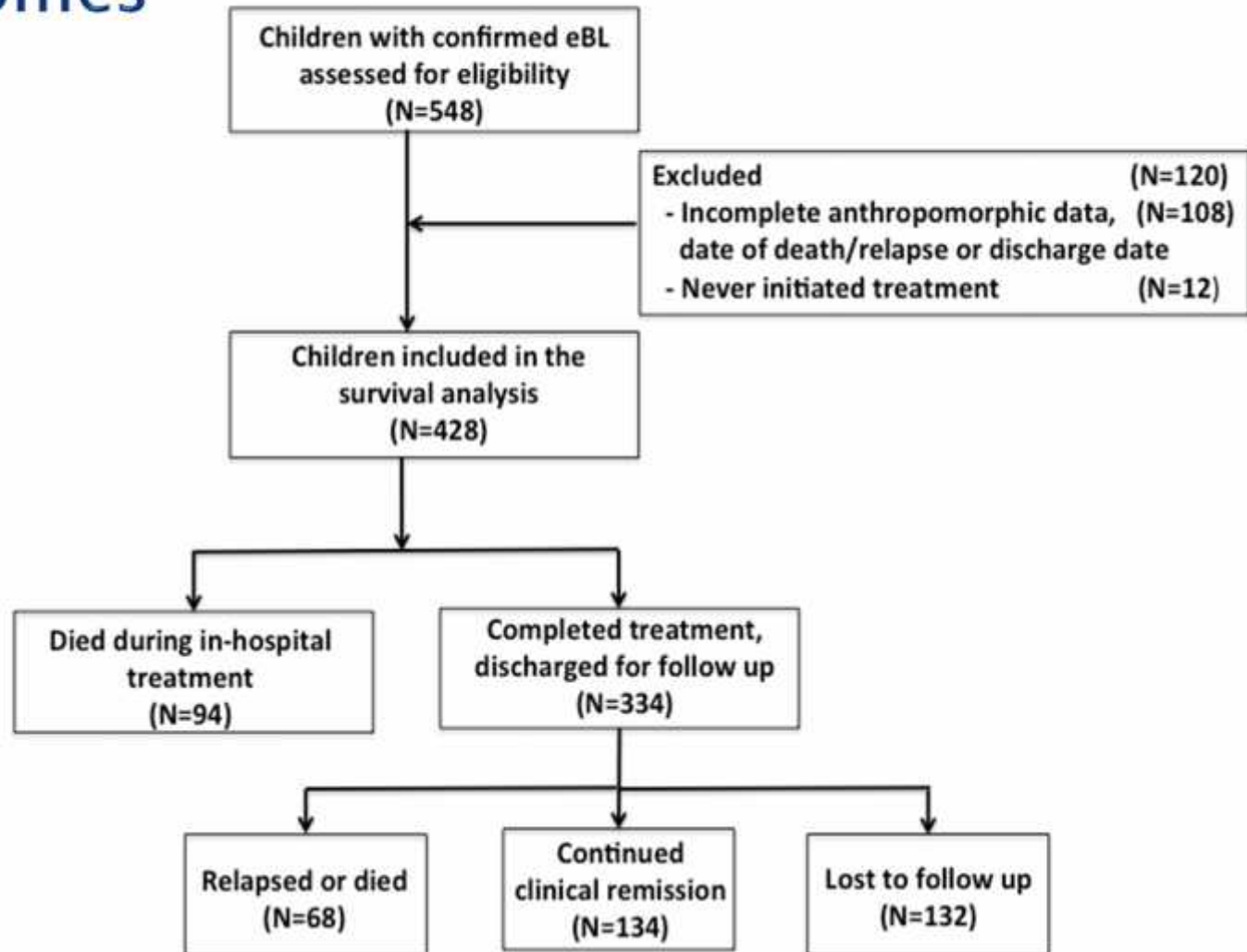
Tapering dose of oral prednisone

Maintenance schedule:

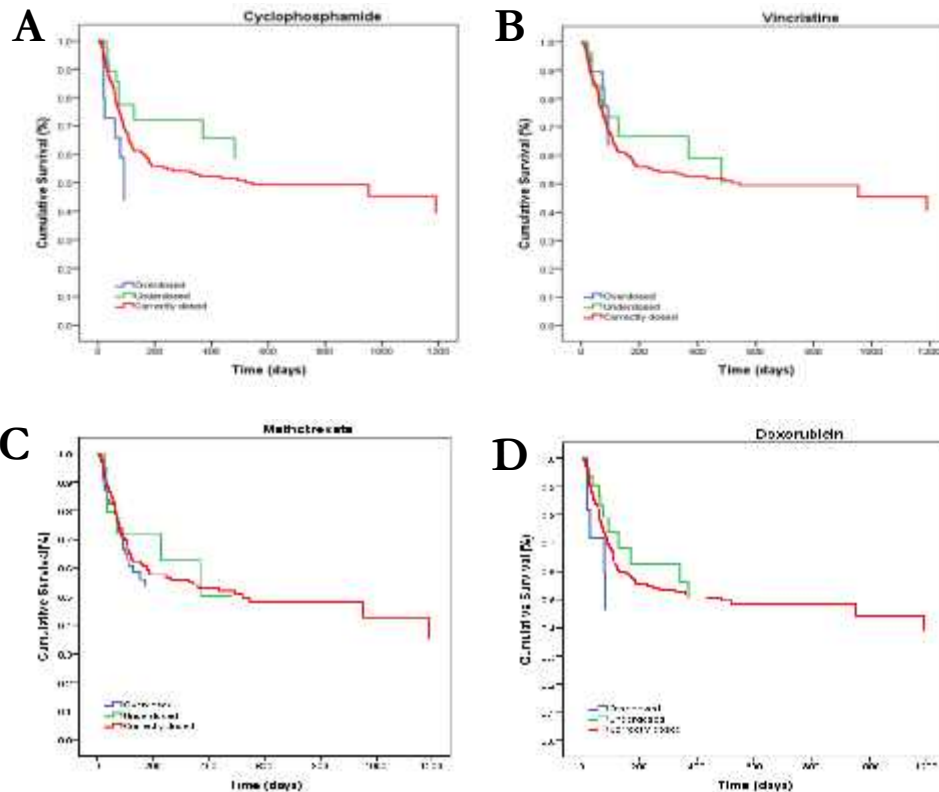
Cyclophosphamide ($300\text{ mg}/\text{m}^2$) and
vincristine ($1.5\text{mg}/\text{m}^2$) IV monthly for the next 24 months as
out-patient.



Summary of eligibility for survival analysis and outcomes



Result: Higher dosages of Cyclophosphamide or Doxorubicin associated with poor outcomes

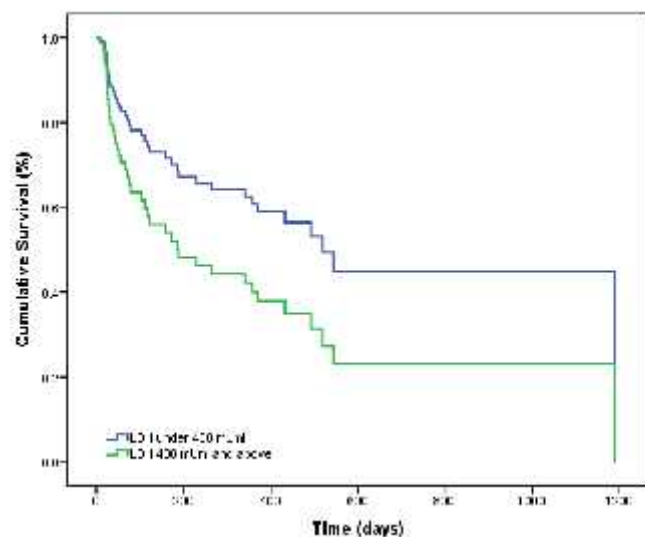


- A. Cyclophosphamide (a HR=1.43, [0.84 to 2.43]).
- B. Vincristine – not significant
- C. Methotrexate – not significant
- D. Doxorubicin (a HR: 1.25, [0.66 to 2.35]).



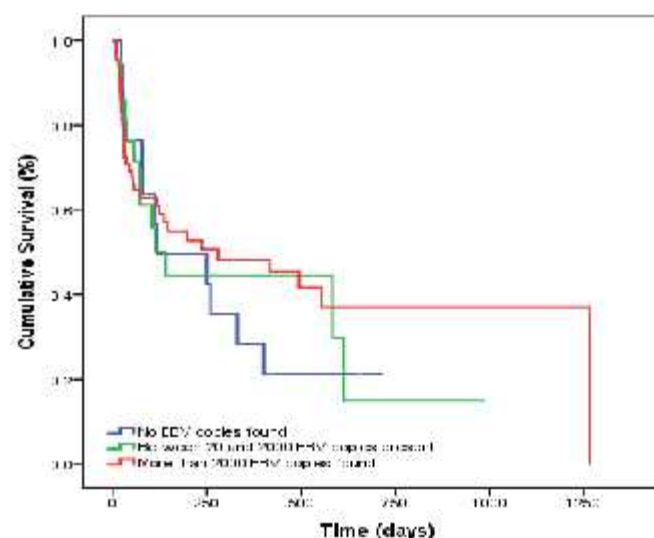
Result: LDH levels but not EBV load are predictive of survival

Lactate Dehydrogenase



HR=1.84, [0.91 to 3.69])

Epstein-Barr virus



HR=0.85, [0.34 to 2.16]) >2000 EBV copies/μg human DNA
HR=0.95, [0.33 to 2.73]) 200-2000 EBV copies/μg human DNA
Compared to 0-200 EBV copies/μg human DNA

Analysis only included accurately dosed patients.
Hazard Ratios are adjusted for age, tumor stage and sex

Acknowledgements

We would like to thank the patients and their families for participating in this study

