



Interim PET in DLBCL in 2011 Pros and Cons




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Menton 2011

Adresse  http://clinicaltrials.gov/ct2/results?term=PET+lymphoma

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Found 145 studies with search of: PET lymphoma

45 trials ongoing worldwide
based-on or evaluating interim
PET

Predictive value of interim PET

Focus on DLBCL

study	N	Interim PET after...	Median follow up (months)	PET neg	PET pos	Rituximab
Jerusalem Haematologica 2000	28 (16 DLBCL)	median of 3 cycles	17.5	PFS 2y=62%	PFS 2y=0%	X
Spaepen Ann Oncol 2002	70 (47 DLBCL)	3-4 cycles	36.3	PFS 2y=85%	PFS 2y=4%	X
Kostakoglu J Nucl Med 2002	30 (13 DLBCL)	1 cycle	19	PFS 2y=85%	PFS 2y<15%	X
Mikhaeel Ann Oncol 2005	120 (75 DLBCL)	2-3 cycles	24.4	PFS 5y=87%	PFS 5y=34%	?
Haion Blood 2005	90 (85 DLBCL)	2 cycles	24	EFS 2y=82%	EFS 2y=43%	41%
Dupuis, Itti Ann Oncol 2009	103 (all DLBCL)	4 cycles	53	EFS 5y=80%	EFS 5y=36%	49%
Cashen J Nucl Med 2011	50	2-3 cycles	34	EFS 2y=85%	EFS 2y=63%	100%

Value of interim PET in Rituximab era?

Confusion



PET is more than just an image
It is a biomarker

Performed at interim

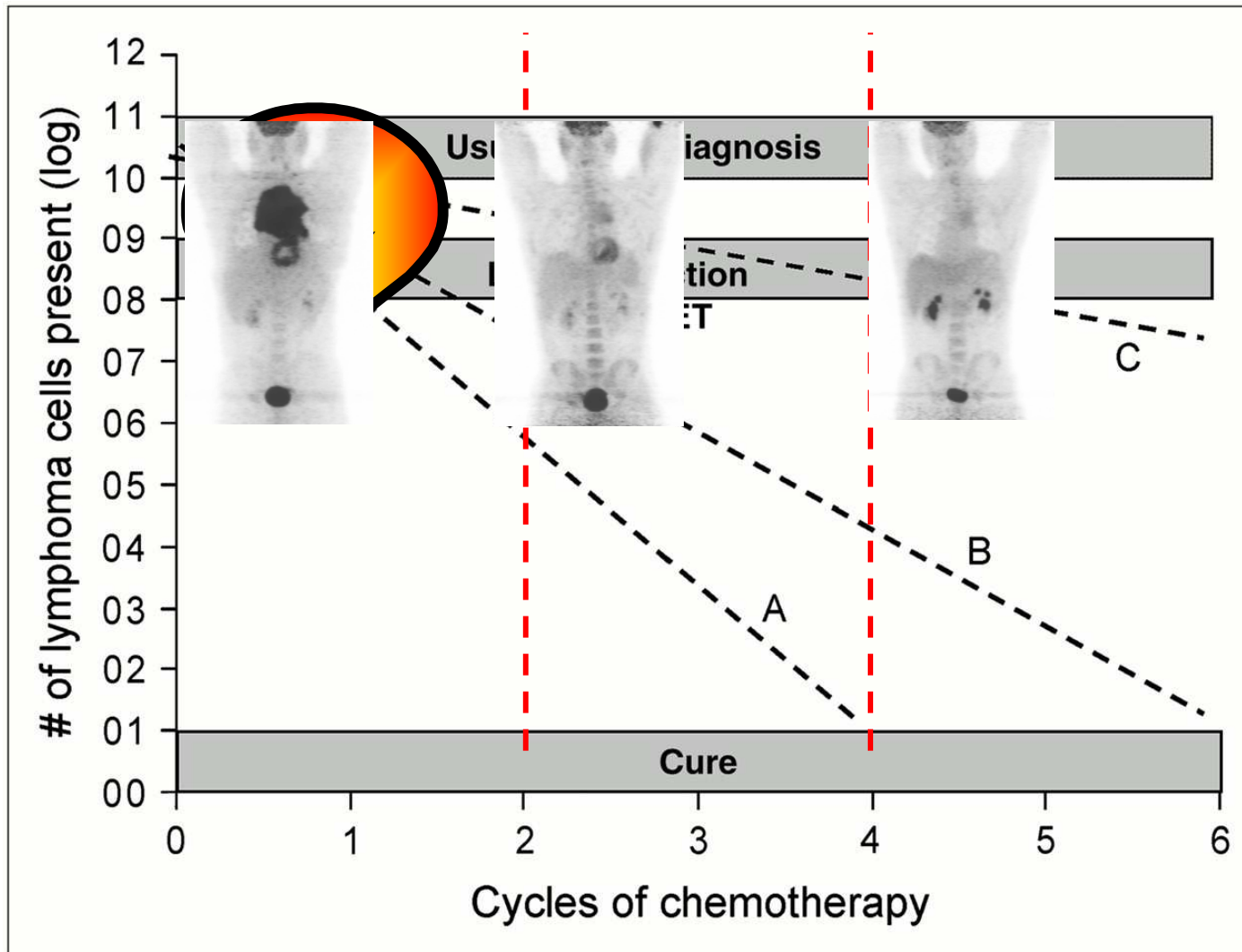
- **Chemosensitivity (histological confirmation invalid)**

Performed at end treatment

- **Curability**

Different units of measurement

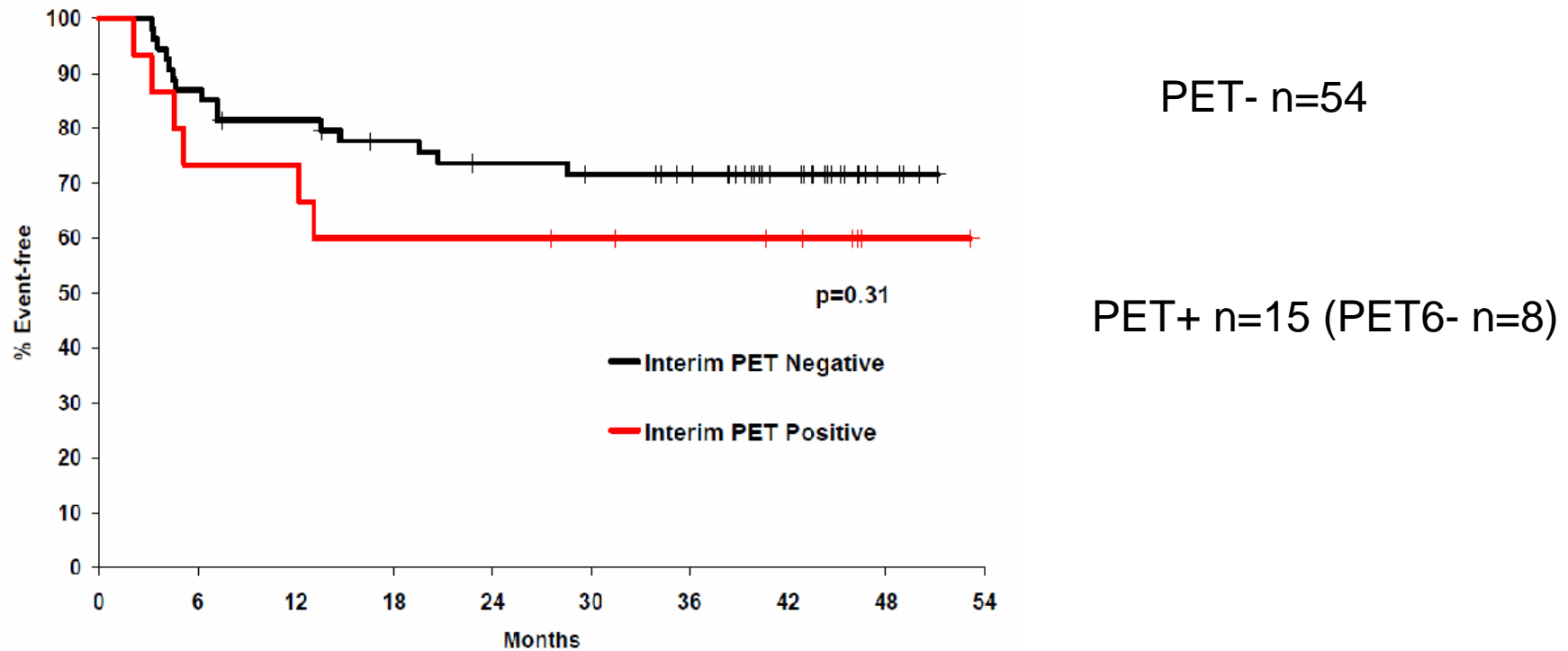
Interim PET (DLBCL)



Interim PET (continued) Epratuzumab+R-CHOP (ER-CHOP)

PET2, n= 69

Figure 3a. Event-free survival based on interim PET (PET2) results



Positivity if residual uptake at PET2 > liver, One reader

Micallef, Blood 2011, on line

What is the threshold of residual metabolic activity?

- Which level (4/5, Δ SUV value)?
- What type of criteria (Qualitative or Quantitative, Deauville score or Δ SUV)?

Analysis of PET2 positive

From the data given in the discussion
12/15 PET+ could be reviewed

PET2+, n=12	CR	Prog	
$\Delta\text{SUV}_{\text{max}} > 65\%$			9
$\Delta\text{SUV}_{\text{max}} \leq 65\%$	1	2	3

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Questions?

- **Is there any evidence that early PET (one or two cycles) has a prognostic role in DLBCL?**
- **Should we report early PET qualitatively or quantitatively in DLBCL?**
- **Is the histological confirmation the “gold standard” reference for patients with mid-treatment (4 cycles) positive PET?**
- **Is interim PET feasible in multicenter clinical trials?**
- **Could we change treatment on interim PET results?**

The debate!

