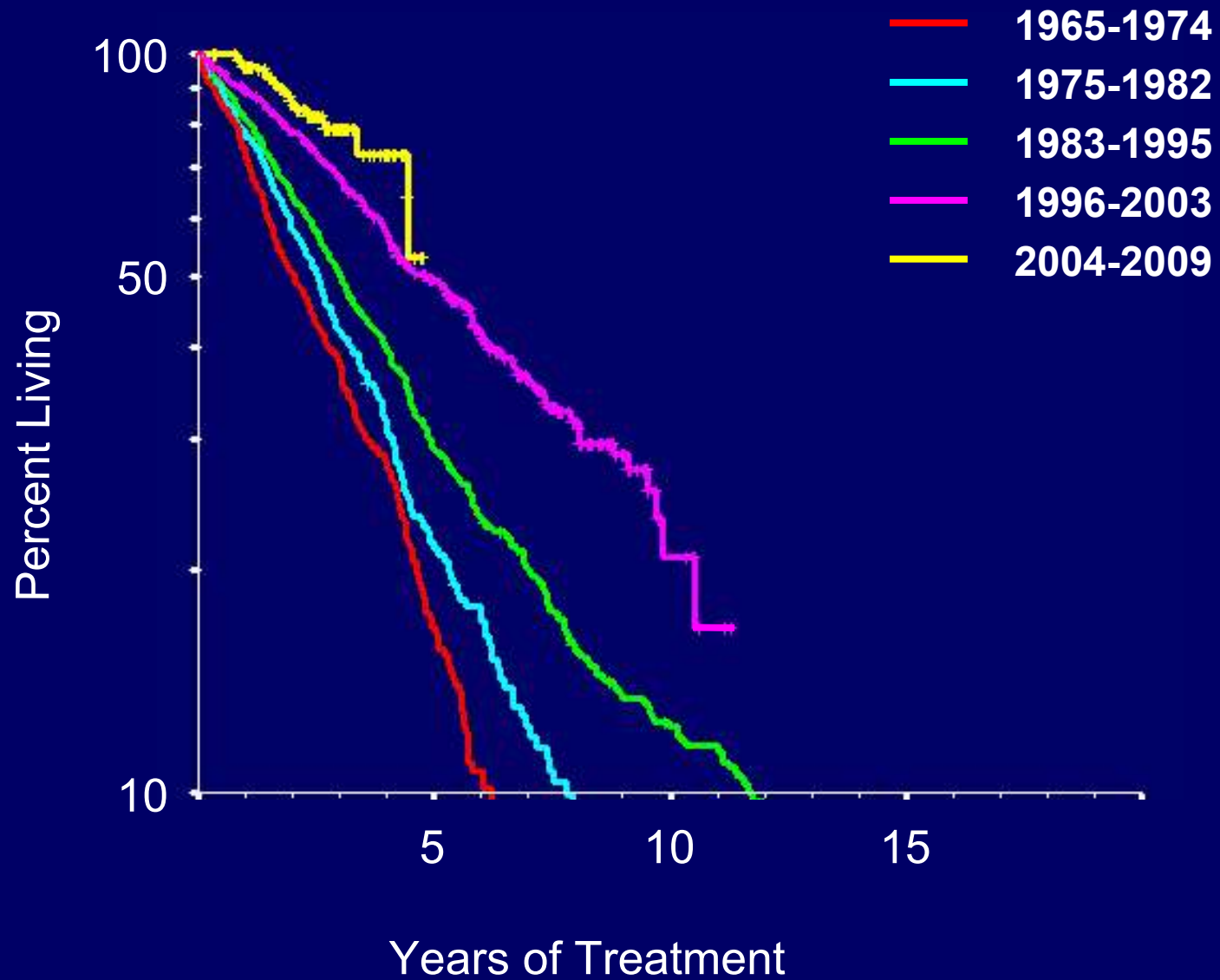


Survival in Myeloma

n=1717



International Staging System for Multiple Myeloma

Stage I

Serum B₂M <3.5 mg/L **and** serum albumin ≥ 3.5 g/dL

Stage II

Serum B₂M <3.5 mg/L **and** serum albumin <3.5 g/dL

or

Serum B₂M 3.5 – 5.5 mg/L

Stage III

Serum B₂M >5.5 mg/L

Criteria of Response

- **Partial Remission**

 - >50% reduction serum myeloma protein

 - >90% reduction Bence Jones protein

 - Marrow plasma cells < 10 %

- **Complete remission**

 - Negative serum/urine immunofixation

 - Marrow plasma cells <5%

Patients

No. patients	794 (1987-2008)
Age (median)	54 (20-65)
Sex	Males 63%
ISS Stage (%)	
I	307 (41)
II	216 (29)
III	224 (30)

Eligibility

- Age ≤ 65 years
- Measurable myeloma protein
 - Serum peak ≥ 0.2 g/dl **and/or**
 - BJP > 50 mg/day
- HDT + ASC < 12 months

Treatment of Multiple Myeloma (MDACC)

<u>Primary Rx*</u>	<u>No.</u>	<u>% Early HDT</u>
D (87-00)	569	43
TD (01-04)	137	79
BTD or BLD (03-08)	88	86

* D: High-dose dexamethasone TD: Thalidomide + D

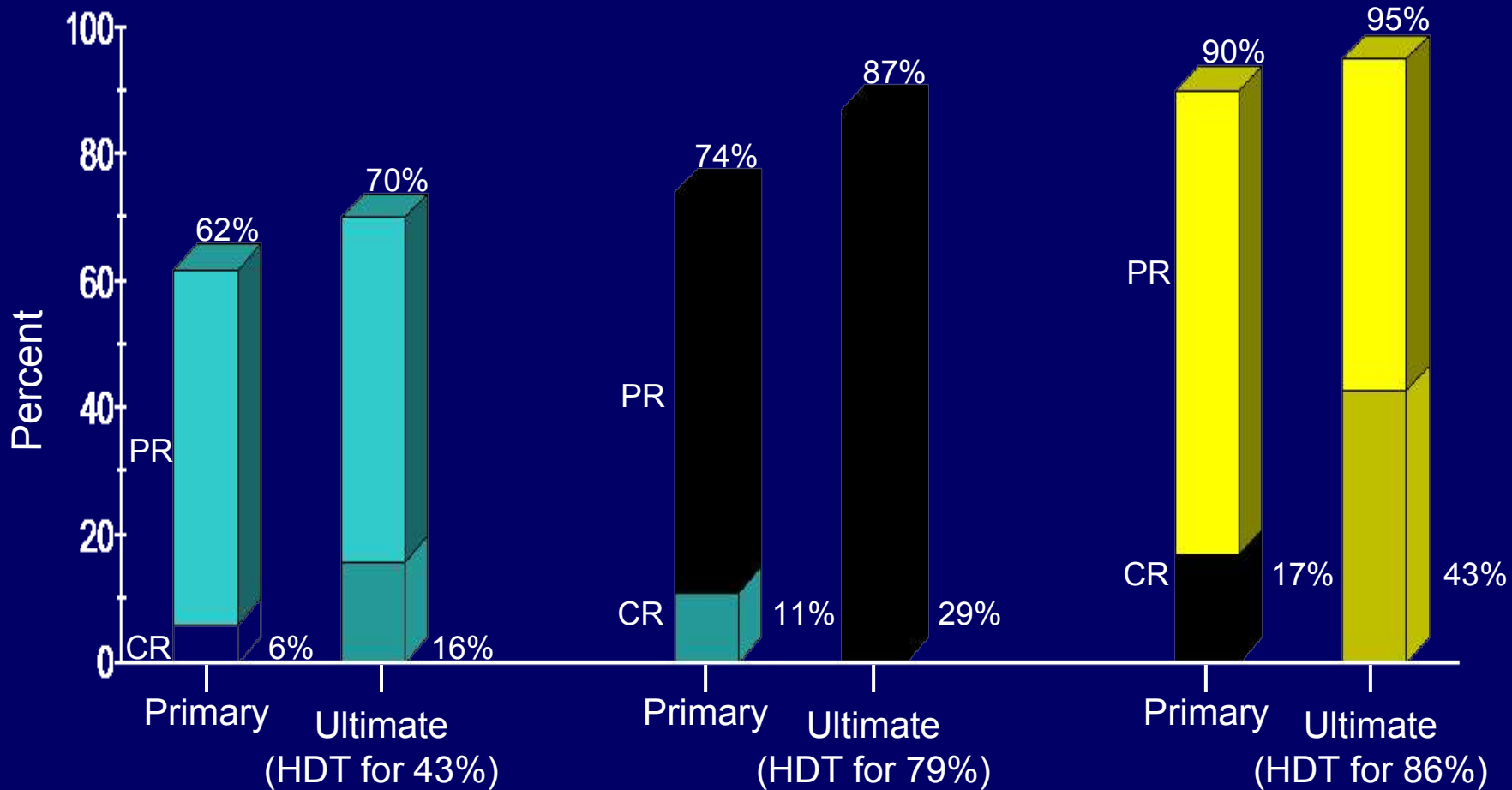
BTD or BLD: Boromycin + (thalidomide or lenalidomide) + D

Response Rates

Dexa

Thal/Dexa

BTD/BLD



Time to CR

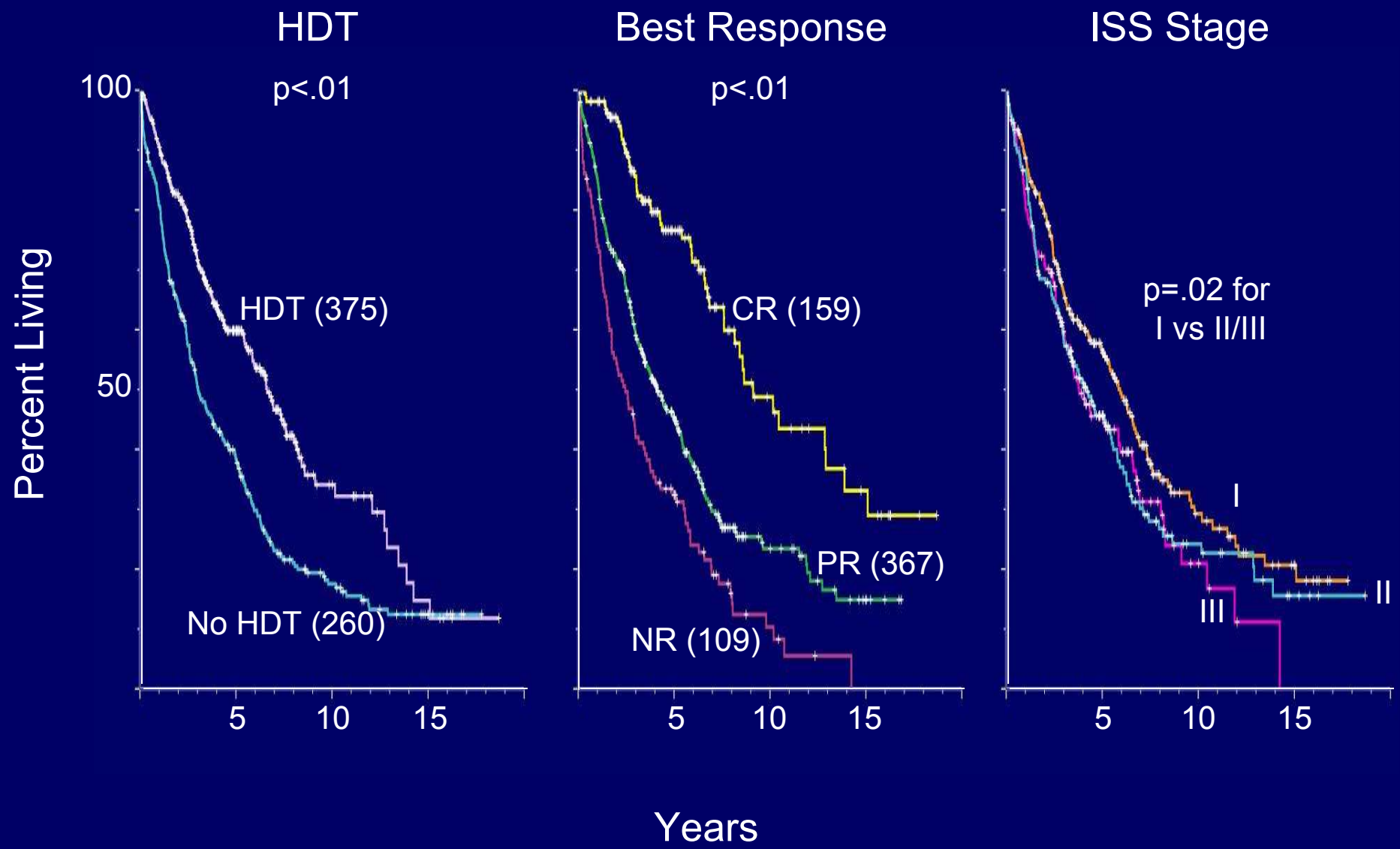
	<u>No.</u>	<u>Median Months</u>	<u>Range</u>
Primary CR	65	2.9	(0.7-10.6)
CR after HDT	104	2.8	(0.2-12)

All PR and CR < 18 months

Survival by Landmark 18 Months

131 earlier deaths:	<u>N (%)</u>
NR	82 (63)
PR	45 (34)
CR	4 (3)

Survival (Landmark 18 Months)



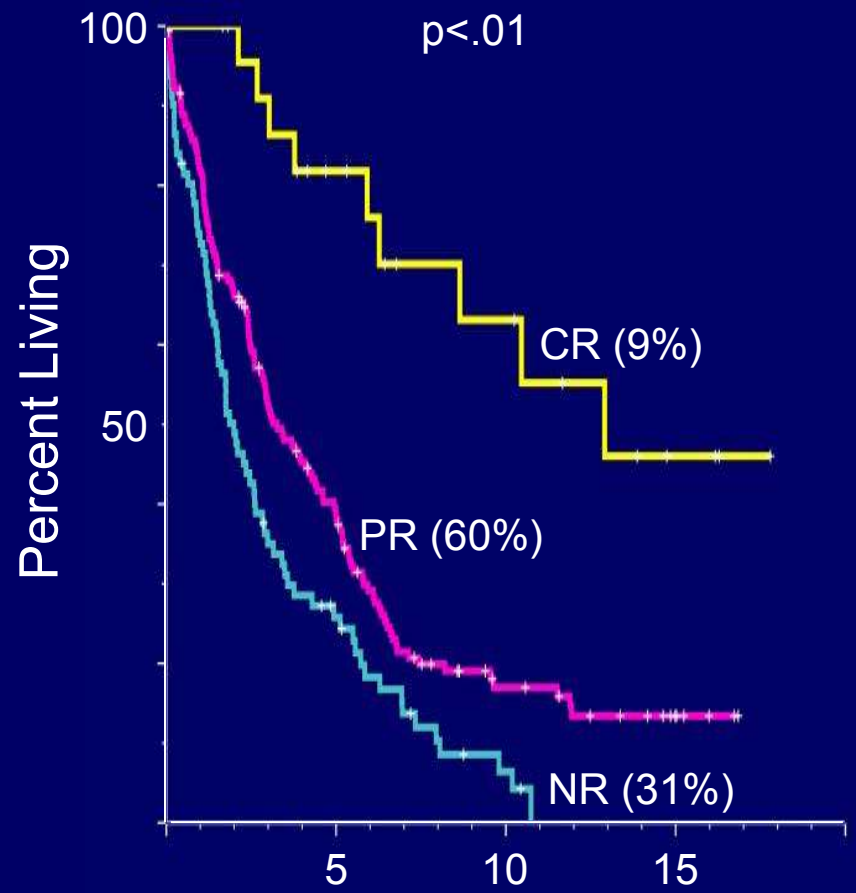
Median Survival (years)

	<u>PR</u>	<u>CR*</u>	<u>p</u>
Child	3.3	7.4	<.01
Lahuerta	5.2	>6.0	<.01
O'shea	3.9	>5.0	<.01
Wang	4.4	9.7	<.01

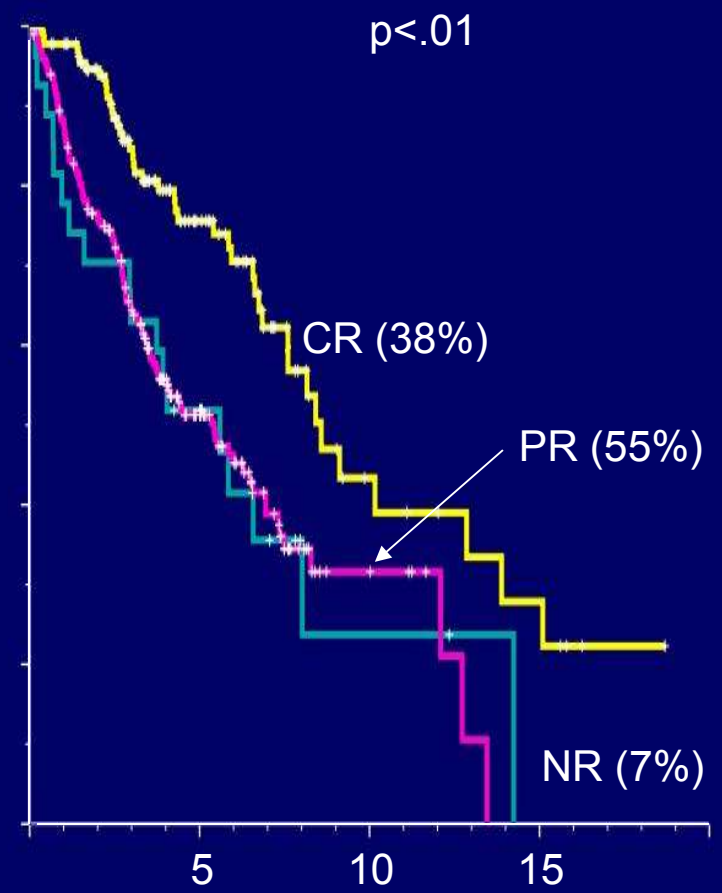
* Different patients, rx, and landmarks. All CR are IFE negative.

Survival (Landmark 18 Months)

Chemo alone

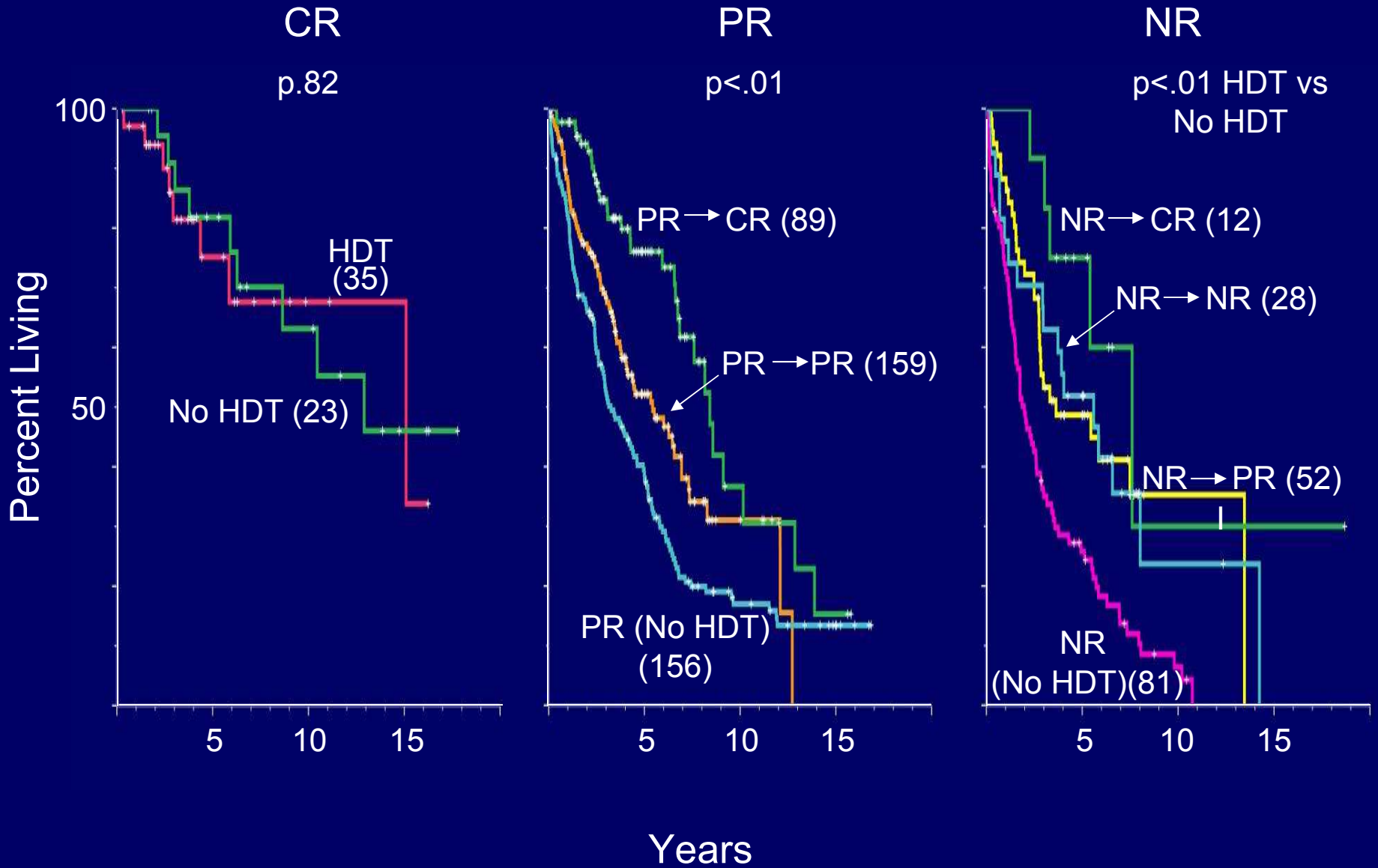


Chemo + HDT



Years

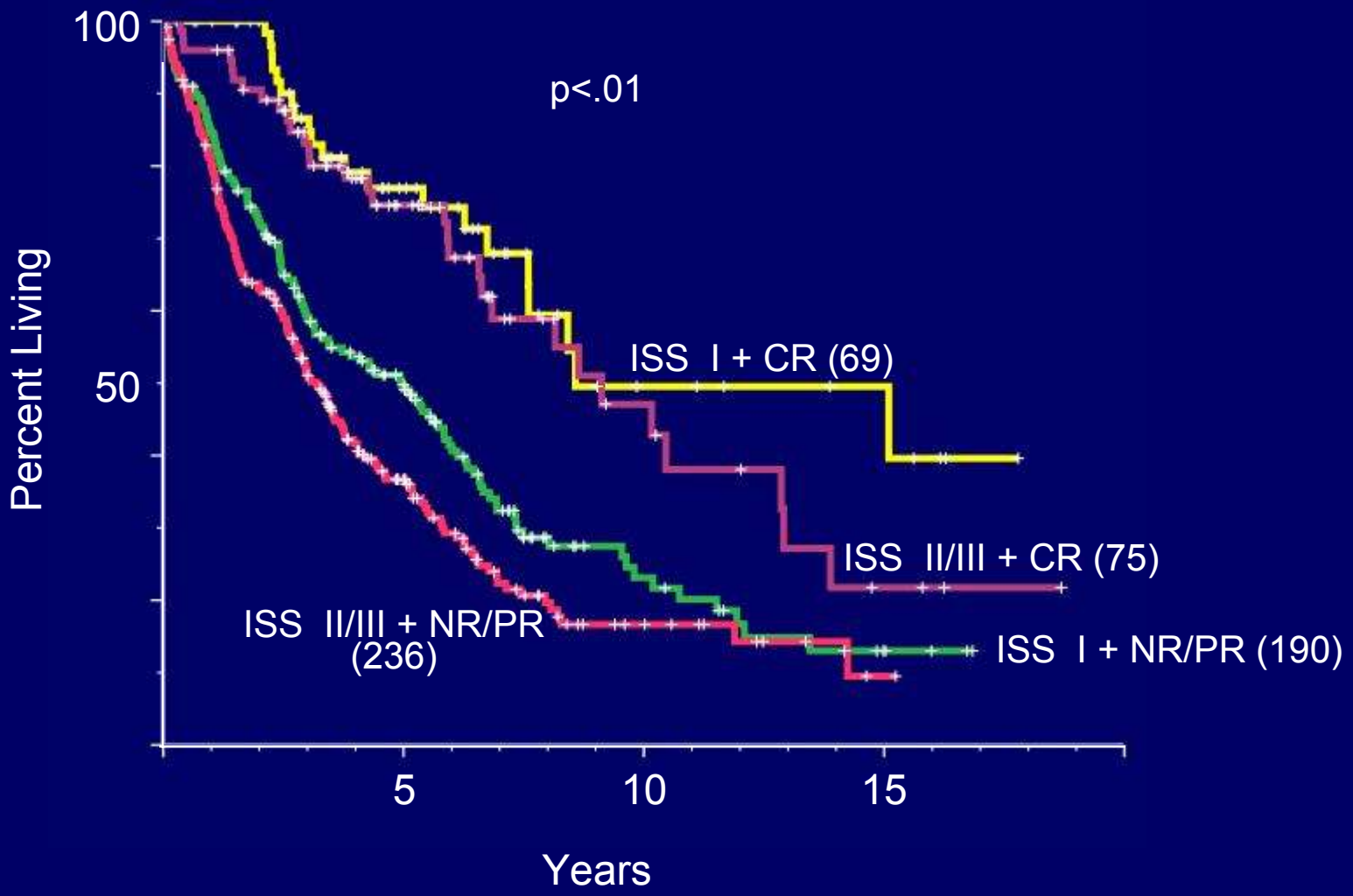
Survival (Landmark 18 Months)



Multivariate Analysis for Survival (Landmark 1 Year)

	<u>Hazard Ratio</u>	<u>95% CI</u>	<u>p</u>
CR vs NR	0.30	0.21 – 0.44	<.001
PR vs NR	0.69	0.54 – 0.87	< .01
Stage I vs II/III	0.68	0.55 – 0.84	< .001
HDT vs no HDT	0.71	0.56 – 0.91	< .01

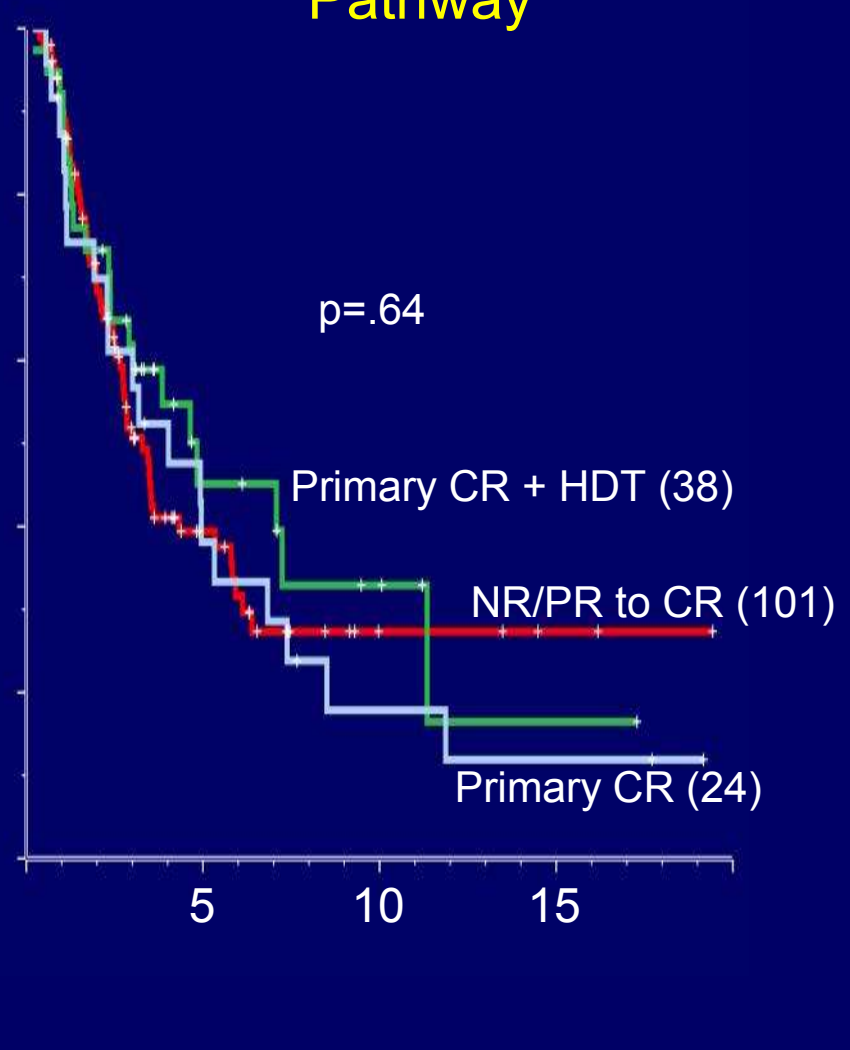
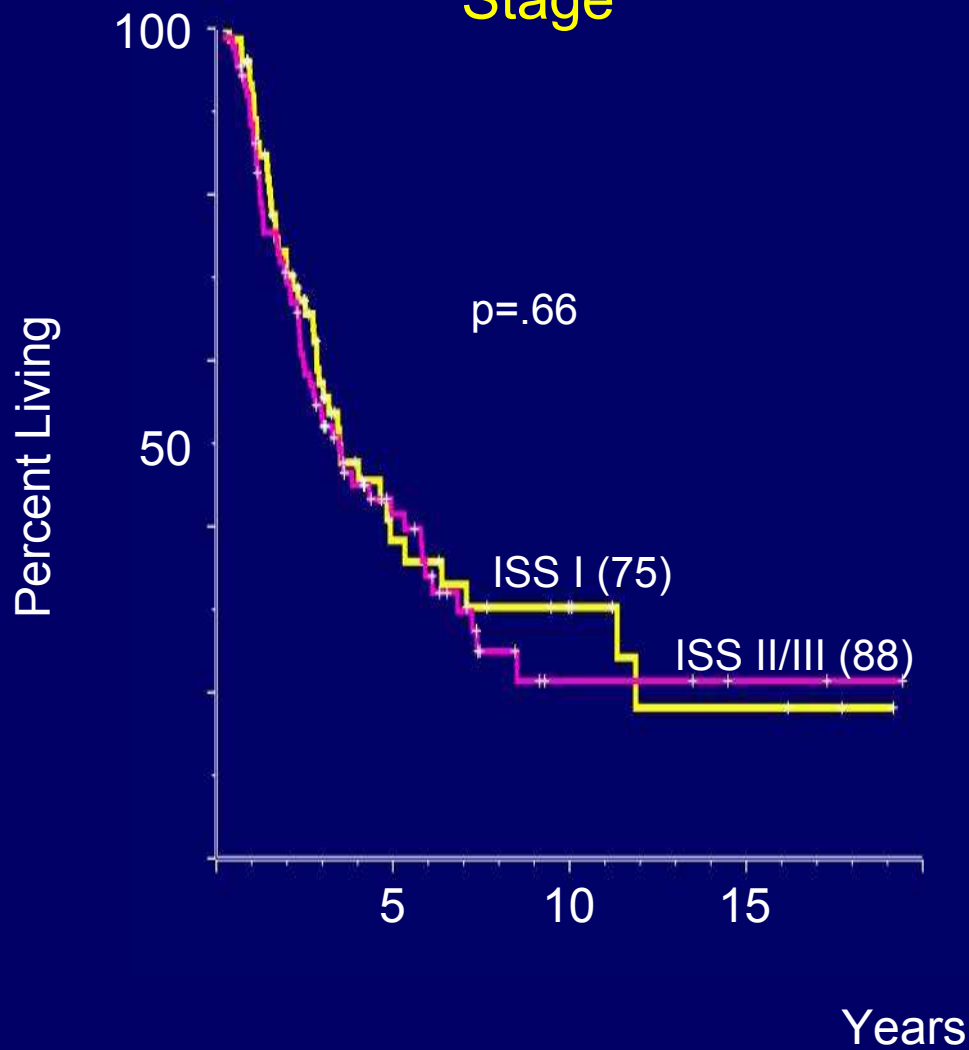
Survival (Landmark 18 Months)



Duration of Complete Remission

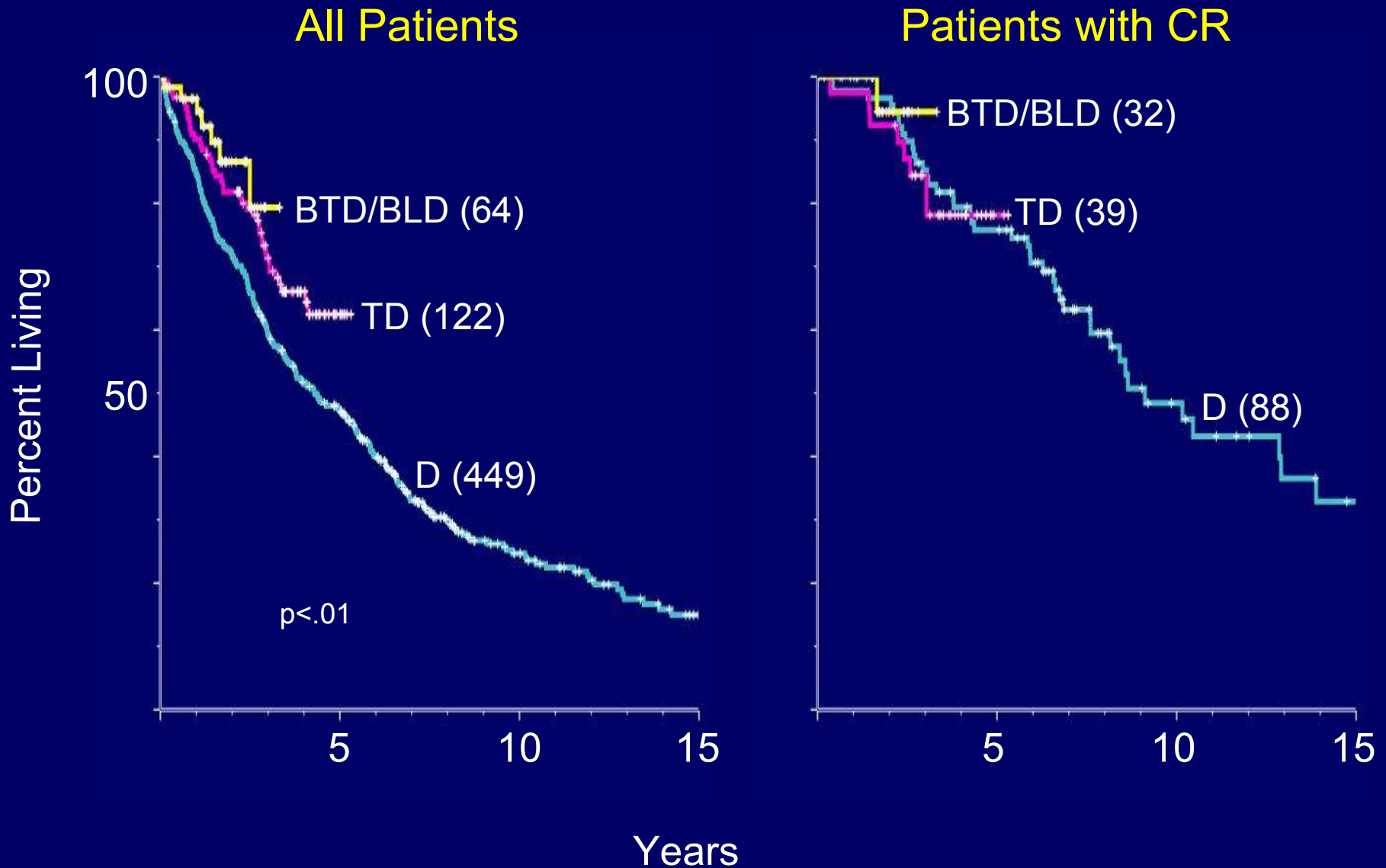
Stage

Pathway



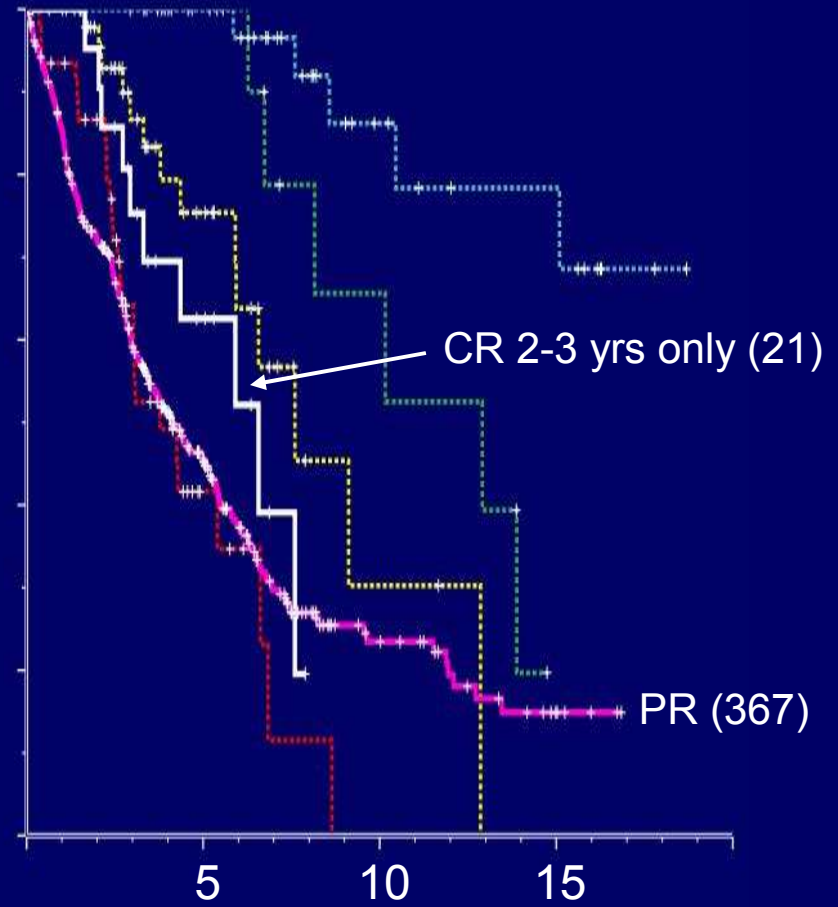
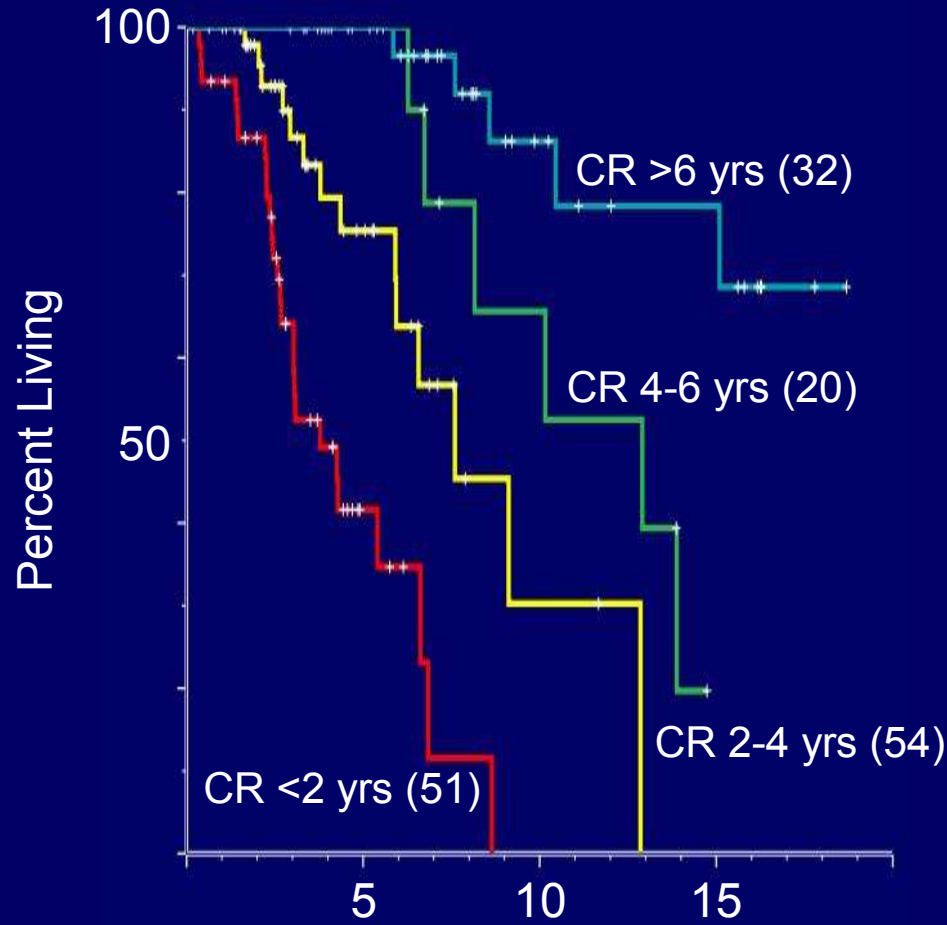
Survival by Treatment

(Landmark 18 months)



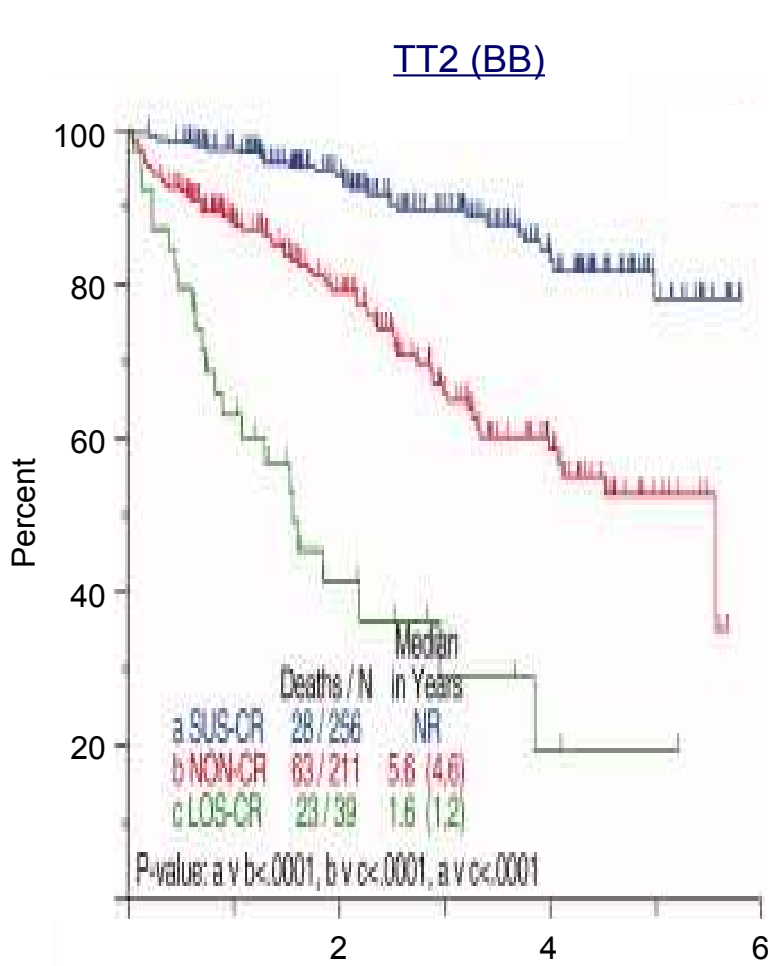
Survival by CR Duration (Landmark 18 Months)

$p < .01$

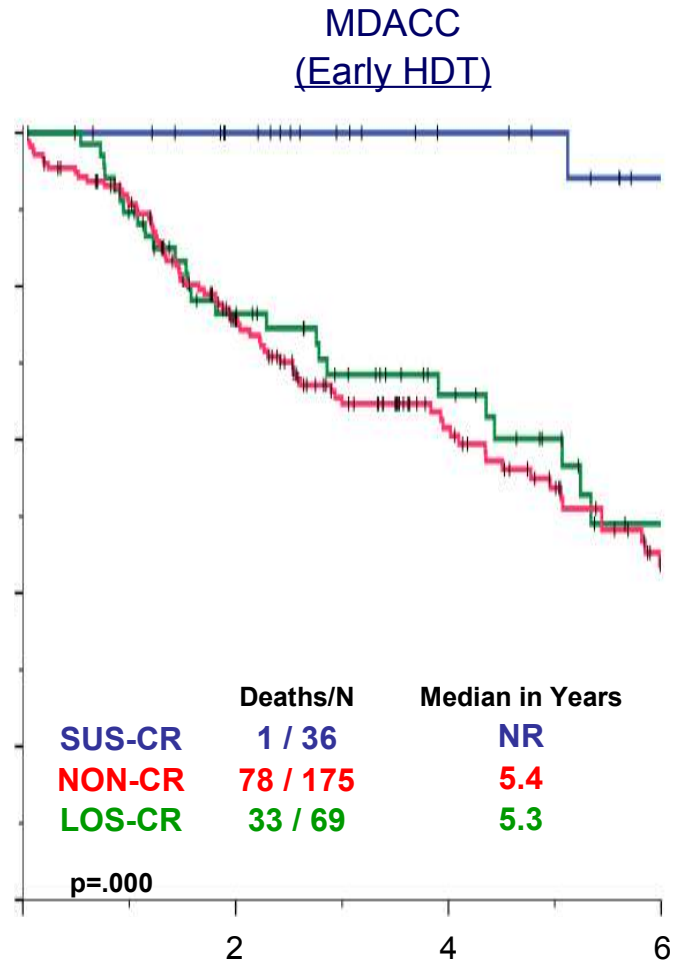


Years

Complete Remission in Myeloma



Years from 3 yrs from Enrollment



Survival >10 Years

	<u>Total No.</u>	<u>No. >10 yrs(%)</u>
No. patients	387	63 (16)
Best response (%)		
CR	45	25 (56)
PR	201	31 (15)
NR	141	7* (5)

* NR to later PR in 6/7

CR >10 Years (1987-1997)

No. patients	11	
Stage I	7	
CR to primary rx	7	
+ consolidation HDT	4	
PR/NR $\xrightarrow{\text{HDT}}$ CR	4	
Relapse	2	(11.3, 11.9 yrs)
Sustained CR	9	(median 16.2 yrs)
“Cure fraction”	9/387	(2%)

Conclusions

- CR major early endpoint for long survival
- Higher frequency of CR with new drugs and early HDT
- Long survival even with PR
- Potential “cure fraction” if CR >10 years