

PD MED: Some Preliminary Findings

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Patient Demographics

		Early (N=875)	Later (N=267)
Mean age (years)		70	73
(Range)		(35 – 94)	(48 – 91)
% Male		64%	63%
Duration of PD (years)		0.7	6.2
(Range)		(0 – 9.9)	(0.03 – 21.2)
Hoehn & Yahr	1-1.5	404 (46%)	23 (9%)
	2	269 (31%)	75 (28%)
	≥ 2.5	202 (23%)	169 (63%)

Planned Treatment – Early Disease

- 78% of clinician's willing to randomise to MAOBI
 - Oral Selegiline (74%)
 - Sub-lingual Selegiline (19%)
 - Rasagiline (5%)
 - Other/Unknown (2%)

- Planned dopamine agonist
 - Ropinirole (54%)
 - Pramipexole (20%)
 - Bromocriptine (8%)
 - Cabergoline (7%)
 - Pergolide (6%)
 - Piribedil (3%)
 - Lisuride (0.2%)
 - Other/Unknown (1.8%)

MAOBI Prescribing – Early Disease

	2001	2002	2003	2004	2005	2006*
Oral Selegiline	49%	72%	75%	84%	79%	64%
Sub-lingual Selegiline	51%	27%	22%	13%	8%	8%
Rasagiline	0%	0%	0%	1%	11%	26%

* Data for first quarter of 2006 only and based on just 39 patients

Dopamine Agonist Prescribing – Early Disease

	2001	2002	2003	2004	2005	2006*
Ropinirole	41%	43%	50%	58%	65%	45%
Pramipexole	10%	17%	19%	14%	27%	50%
Bromocriptine	9%	14%	9%	11%	1%	0%
Cabergoline	15%	11%	11%	3%	3%	2%
Pergolide	23%	9%	4%	5%	2%	0%

* Data for first quarter of 2006 only and based on just 44 patients

Later Disease – Treatment on at Randomisation

- Treatment patients on when developed motor complications
 - LD alone (65%)
 - Dopamine agonist (19%)
 - MAOBI (16%)

Planned Treatment – Later Disease

■ Planned MAOBI

- Oral Selegiline (53%)
- Sub-lingual Selegiline (26%)
- Rasagiline (8%)
- Other/Unknown (13%)

■ Planned Dopamine Agonist

- Ropinirole (35%)
- Pramipexole (30%)
- Cabergoline (17%)
- Pergolide (7%)
- Bromocriptine (2%)
- Piribedil (1%)
- Other/Unknown (8%)

■ Planned COMTI

- Entacapone (93%)
- Tolcapone (0.5%)
- Stalevo (1.5%)
- Other/Unknown (5%)

MAOBI Prescribing – Later Disease

	2001	2002	2003	2004	2005	2006*
Oral Selegiline	50%	48%	65%	55%	51%	22%
Sub-lingual Selegiline	50%	43%	29%	25%	12%	11%
Rasagiline	0%	0%	0%	0%	20%	67%

* Data for first quarter of 2006 only and based on just 9 patients

Dopamine Agonist Prescribing – Later Disease

	2001	2002	2003	2004	2005	2006*
Ropinirole	20%	22%	44%	41%	41%	43%
Pramipexole	23%	16%	25%	31%	48%	43%
Cabergoline	37%	30%	11%	13%	2%	14%
Pergolide	17%	14%	8%	0%	0%	0%
Bromocriptine	3%	5%	3%	2%	0%	0%

* Data for first quarter of 2006 only and based on just 7 patients

Data Analysis

- Mean change in PDQ-39 over time
 - Mobility and Overall Score
 - By early and later disease
 - NOT by allocated treatment
- Mean change in EuroQoL over time
- Event data – motor complications, dementia, mortality
- SF-36 Carer Data

Number of Assessments

	Early	Later
Baseline	863	264
6 months	709	190
1 year	585	160
2 years	374	91
3 years	202	61
4 years	82	23

Mean (SD) Baseline PDQ-39 & EuroQoL

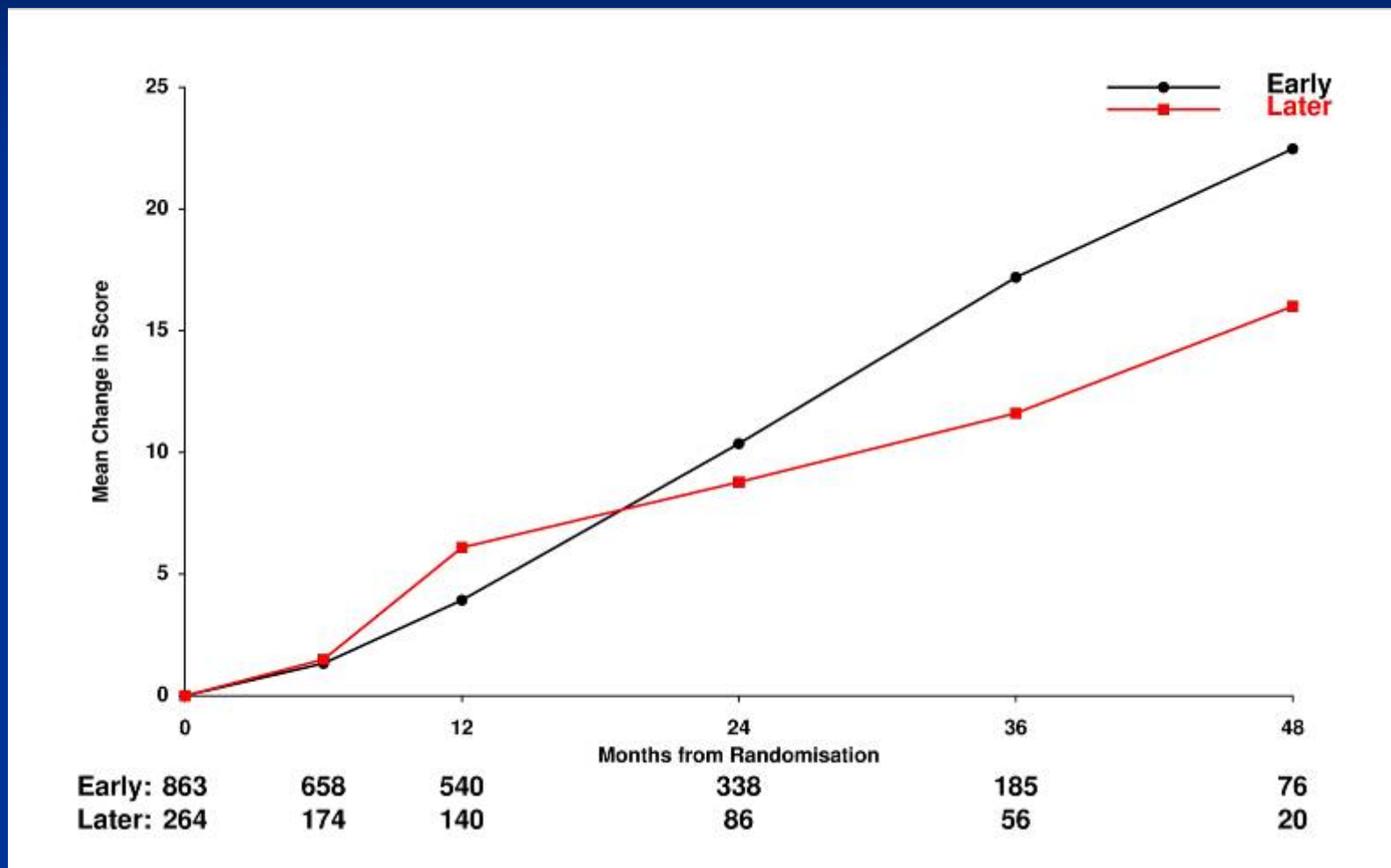
	Early	Later
Mobility	31 (26.28) (Range = 0 – 100)	54 (28.24) (Range = 0 – 100)
Overall	23 (13.78) (Range = 0 – 74)	33 (14.85) (Range = 4 – 75)
EuroQoL	0.64 (0.25) (Range = -0.36 – 1)	0.49 (0.28) (Range = -0.24 – 1)

PDQ-39: Ranges from 0 (Good) – 100 (Bad)

EuroQoL: Ranges -0.59 (Bad) – 1 (Perfect Health)

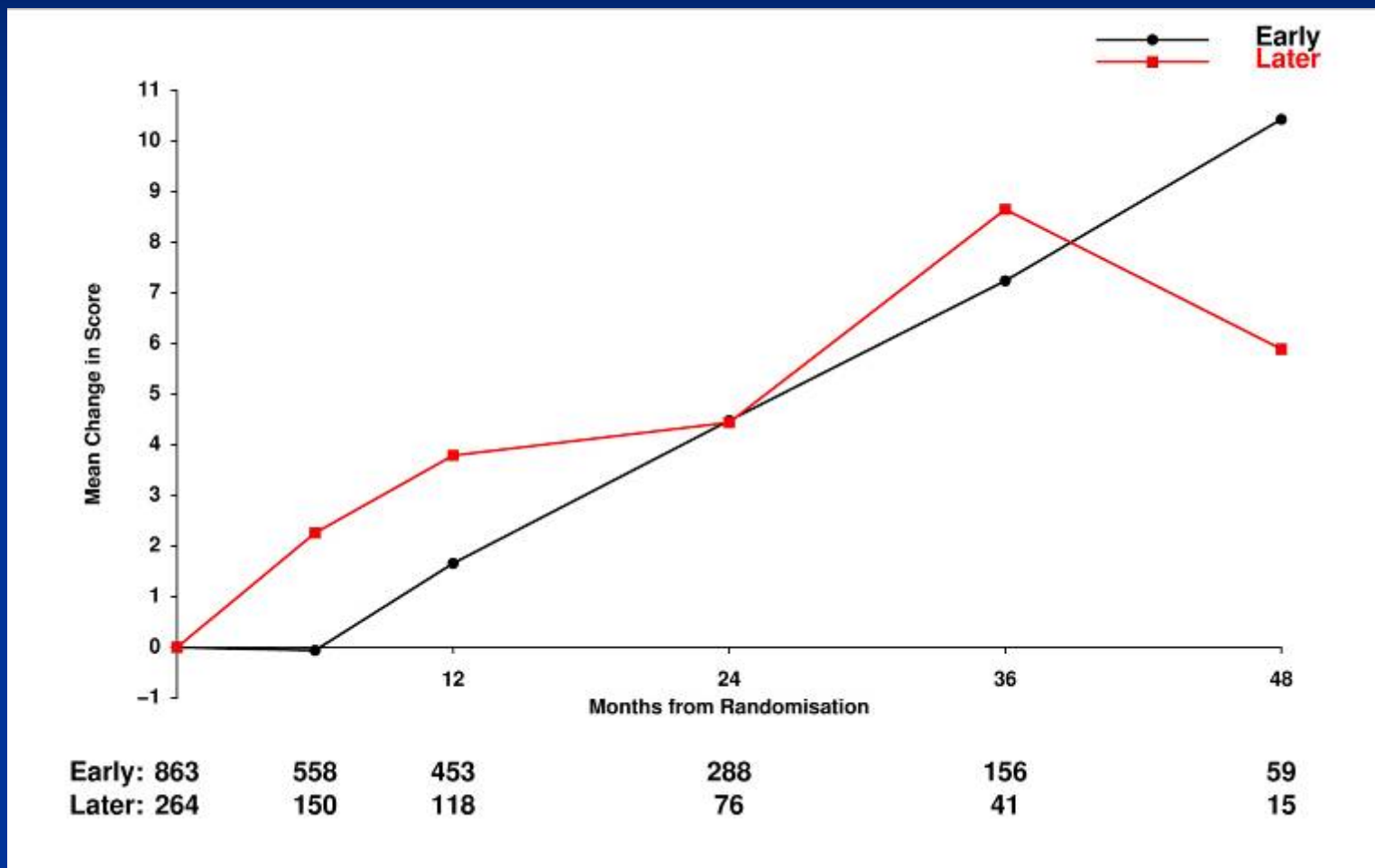
SD = Standard Deviation

Mean Change in Mobility Score



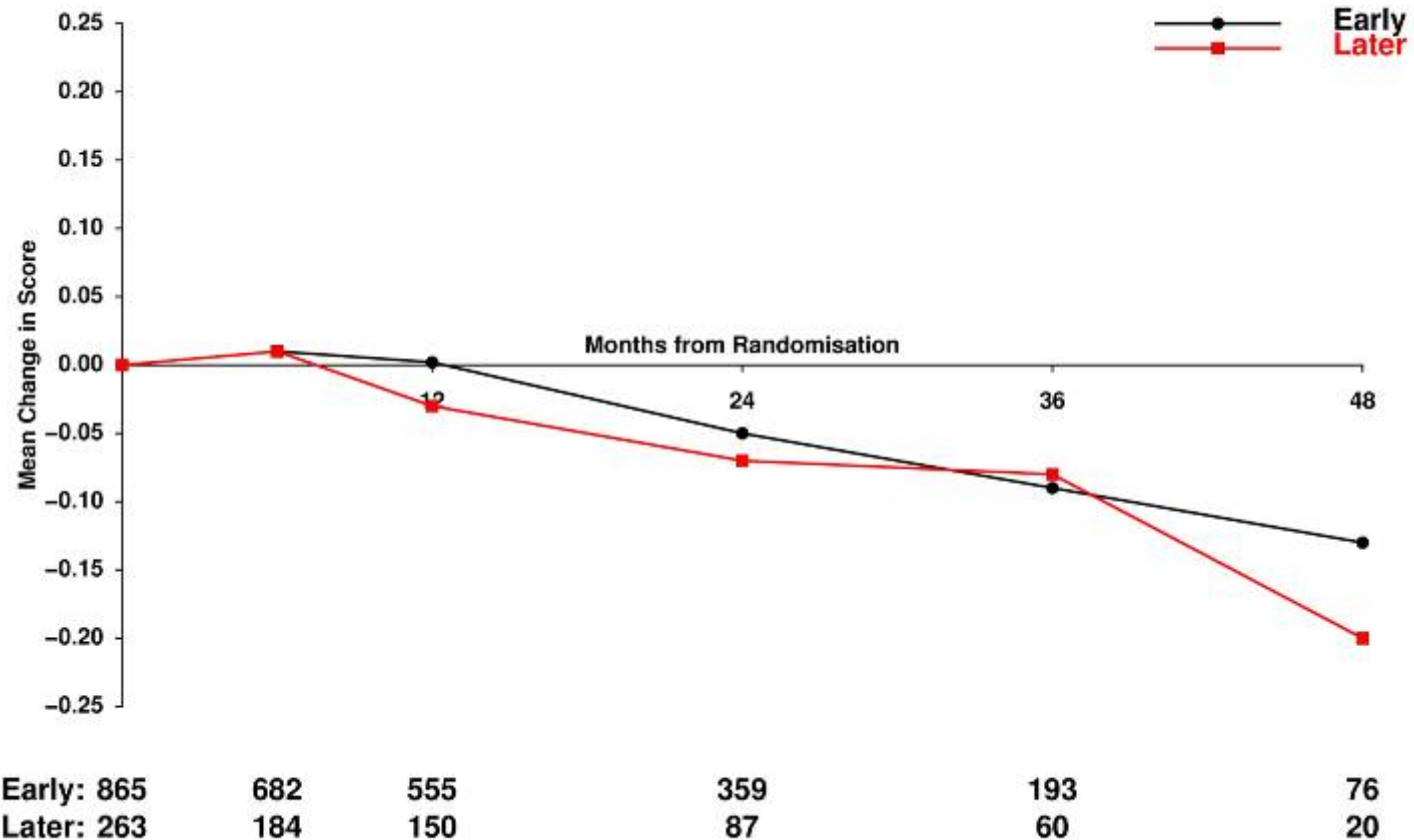
Positive change = Worsening Mobility Score

Mean Change in Overall Score



Positive change = Worsening Overall Score

Mean Change in EuroQoL



Negative change = Worsening in EuroQoL Score

Mean Scores at Baseline – Other PDQ-39 Domains

Domain	Early	Later
Mobility	31 (0 – 100)	54 (0 – 100)
ADL	32 (0 – 100)	45 (0 – 100)
Emotional Well-Being	24 (0 – 92)	32 (0 – 100)
Stigma	21 (0 – 100)	28 (0 – 100)
Social Support	5 (0 – 92)	10 (0 – 100)
Cognition	23 (0 – 94)	34 (0 – 100)
Communication	13 (0 – 92)	24 (0 – 92)
Bodily Discomfort	34 (0 – 100)	42 (0 – 100)
Overall Score	23 (0 – 74)	33 (4 – 75)

PDQ-39: Ranges from 0 (Good) – 100 (Bad)

Mean Change between Baseline & 1 Year in Domains of PDQ-39

Domain	Early	Later
Mobility	3.93	6.09
Activities of Daily Living	-0.73	3.03
Emotional Well-Being	-0.07	2.67
Stigma	-0.61	1.15
Social Support	2.92	3.17
Cognition	6.92	6.05
Communication	2.85	6.06
Bodily Discomfort	0.39	0
Overall Score	1.66	3.79

Positive change = Worsening from Baseline

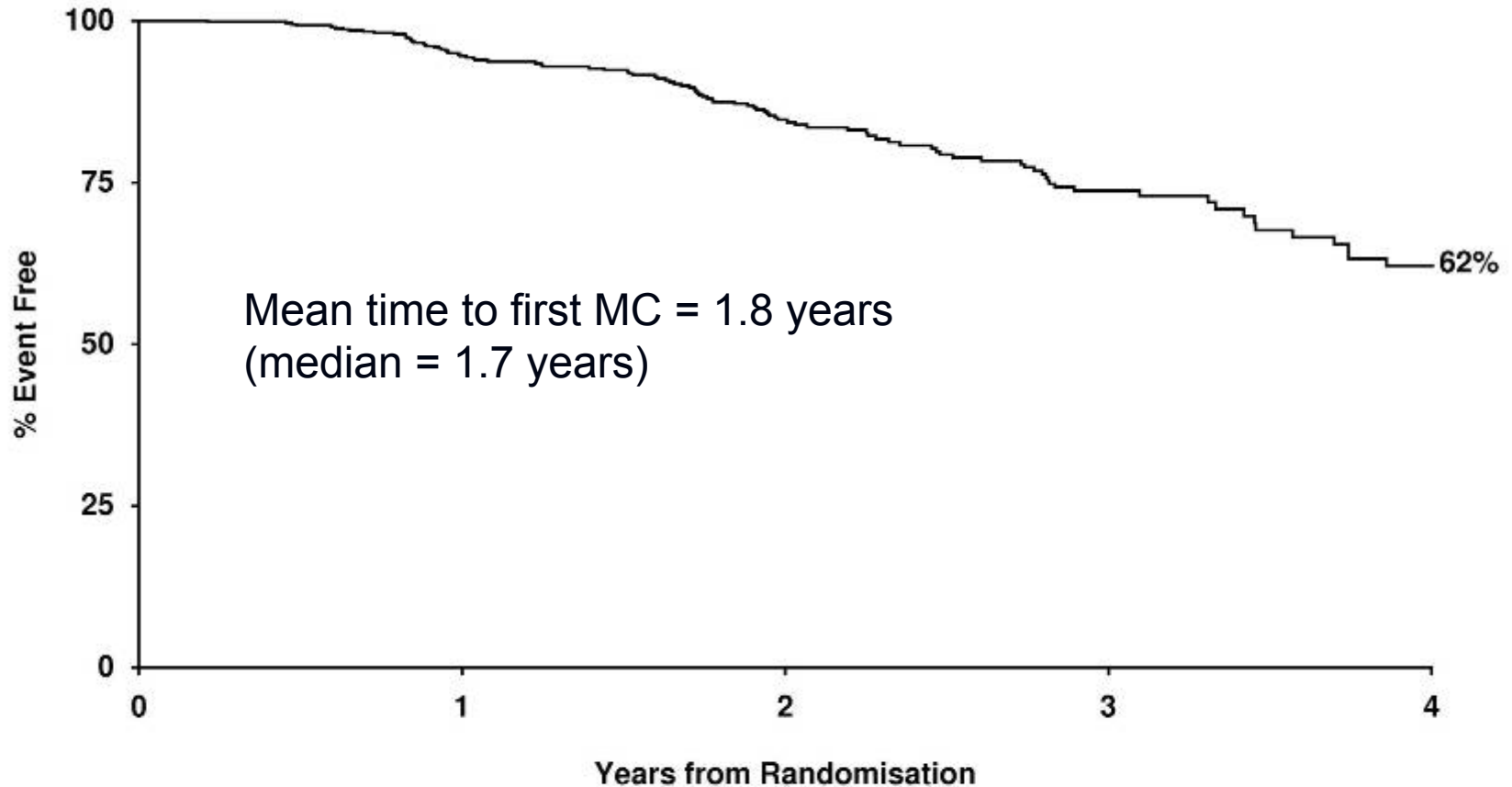
Early Disease – Follow-up

- Of 603 (69%) patients who have completed at least one follow-up assessment
 - 102 patients have developed motor complications
 - 59 motor fluctuations
 - 28 dyskinesia
 - 13 both
 - 2 not stated
 - 20 patients have developed dementia
 - 14 patients have been institutionalised
 - 7 nursing and 7 residential homes
 - 57 patients have died

Later Disease – Follow-up

- Of 185 (69%) patients who have completed at least one follow-up assessment
 - 23 patients have developed dementia
 - 17 patients have been institutionalised
 - 7 nursing and 10 residential homes
 - 2 patients have been considered for surgery
 - 34 patients have died

Time to First Motor Complication (Early Patients Only)



At risk:
Patients 875

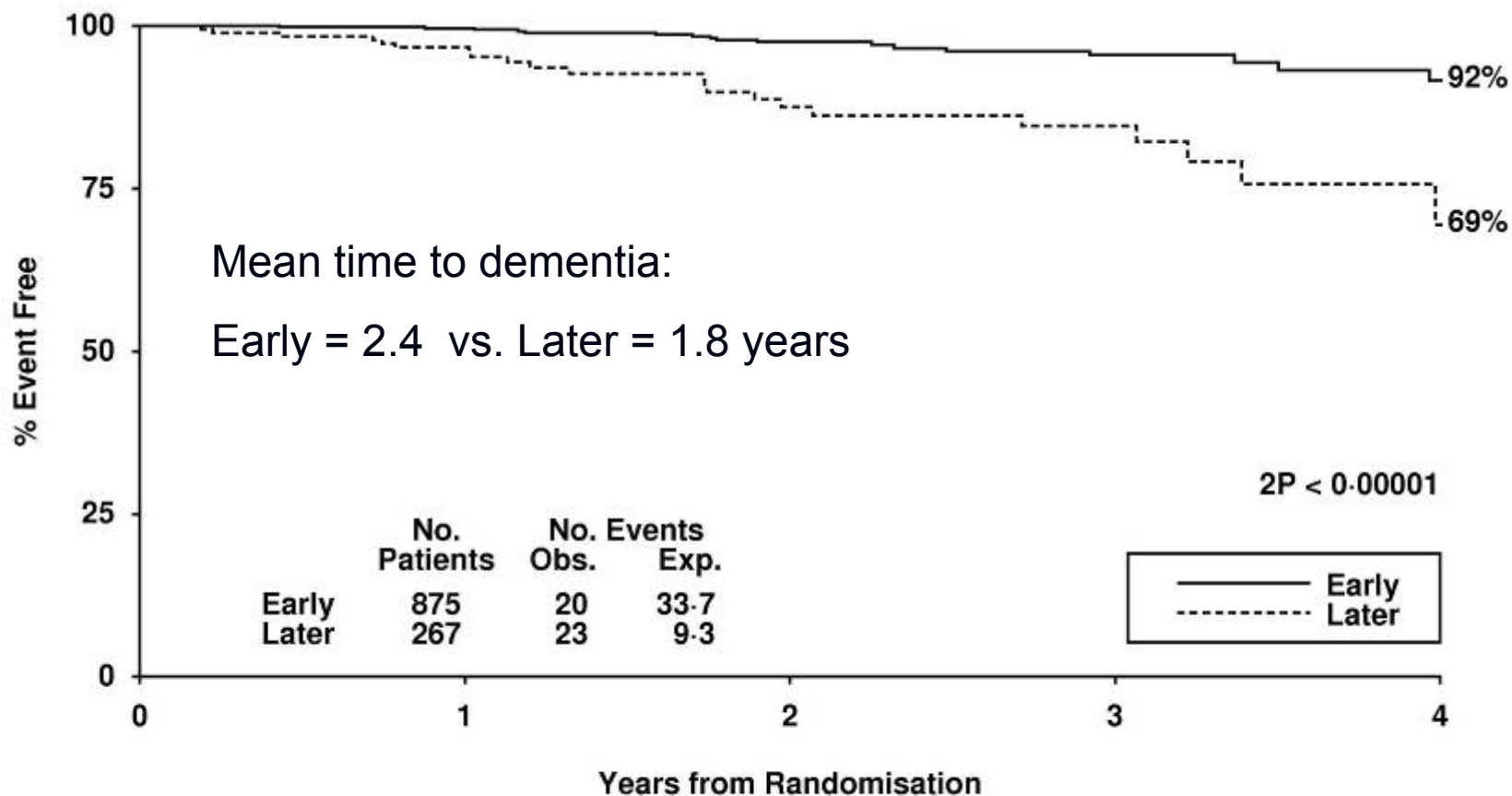
467

240

115

34

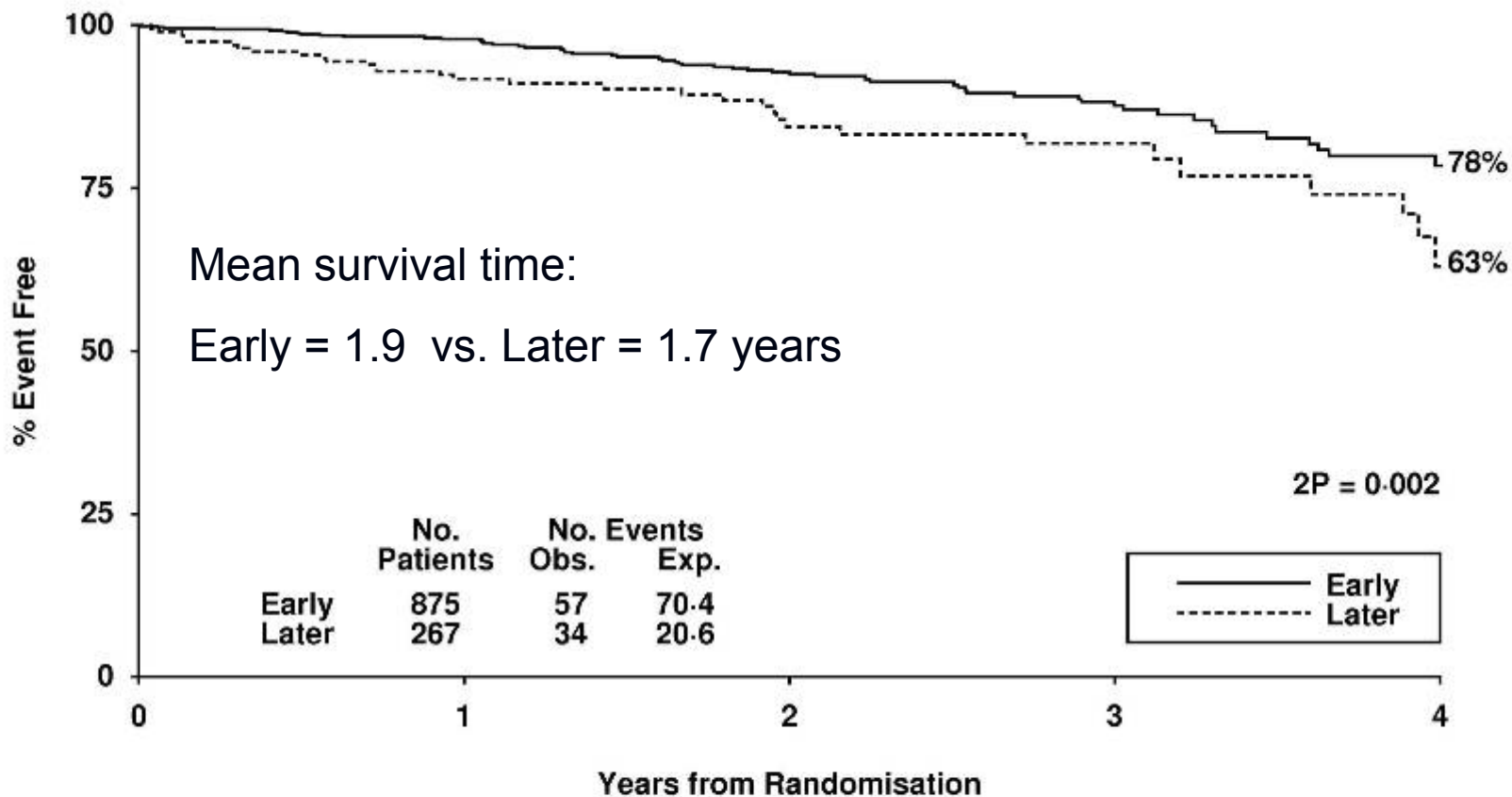
Time to Dementia by Disease Stage



At risk:

Early	875	490	275	146	43
Later	267	140	70	39	9

Time to Death by Disease Stage



At risk:

Early	875	506	291	160	47
Later	267	148	77	45	12

Cause of Death

■ 57 deaths in early disease

- Pneumonia and Myelodysplastic syndrome
- Bronchopneumonia (n=3)
- MI/Heart Failure (n=3)
- Respiratory failure (n=2)
- Stroke (n=3)
- Cancer (n=7)
- Pulmonary embolism and Renal failure
- Acute renal failure
- Ruptured spleen
- Lewy body dementia
- PD
- Infection (n=4)
- Acute aneurysm
- Murdered

- 27 not stated/unknown

■ 34 deaths in later disease

- Pneumonia (n=7)
- MI/Heart Failure (n=5)
- Cancer (n=3)
- PD (n=2)
- Intracranial bleeding
- Blood clot
- Infection

- 14 not stated/unknown

Patients' Carers in PD MED

- Little work has gone into researching the effect of anti-PD treatment on carer's attitudes, stress or physical and psychological morbidity
 - Assessed using SF-36 (validated measure of health status)
 - 8 domains
- 66% of patients in PD MED have a regular carer
 - 66% of patients in early PD MED
 - 69% of patients in later PD MED

Mean Scores at Baseline – SF-36 Domains

Domain	Early	Later
Physical Function	76 (0 - 100)	70 (0 - 100)
Role Limit Due to Physical Probs	78 (0 - 100)	69 (0 - 100)
Role Limit Due to Emotional Probs	82 (0 - 100)	72 (0 - 100)
Social Functioning	84 (0 - 100)	76 (0 - 100)
Mental Health	77 (4 - 100)	72 (20 - 100)
Energy/Vitality	63 (0 - 100)	55 (5 - 100)
Pain	76 (0 - 100)	71 (11 - 100)
General Health Perception	70 (0 - 100)	63 (10 - 100)

SF-36: Ranges from 0 (Bad) – 100 (Good)

Mean Scores between Baseline & 1 Year Domains in SF-36

Domain	Early	Later
Physical Function	-2.05	-2.91
Role Limit Due to Physical Probs	-2.64	-2.69
Role Limit Due to Emotional Probs	-1.18	-1.89
Social Functioning	-1.11	-0.87
Mental Health	-0.62	-2.41
Energy/Vitality	-3.30	-3.99
Pain	-3.40	-5.64
General Health Perception	-2.30	-2.72

Negative scores = Deterioration from Baseline

Final Points

- PD MED accruing a lot of interesting data
- Provide unique opportunity to investigate which class of drug provides the most benefit with the least side-effects (and is cost-effective)
- Important that patient's and clinician's return the annual forms to BCTU