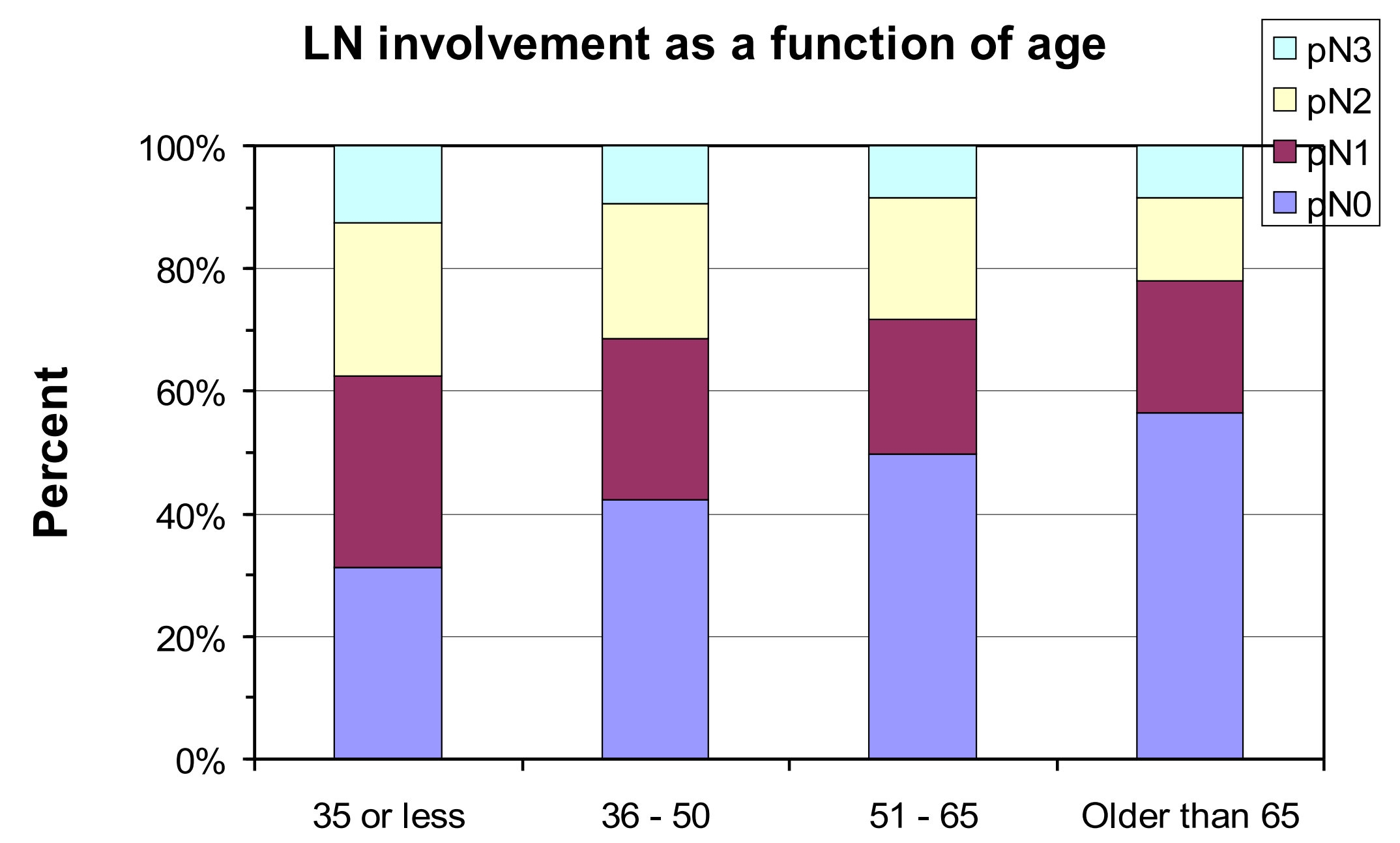


Prognostic factors for chest wall recurrences after total mastectomy for breast cancer.

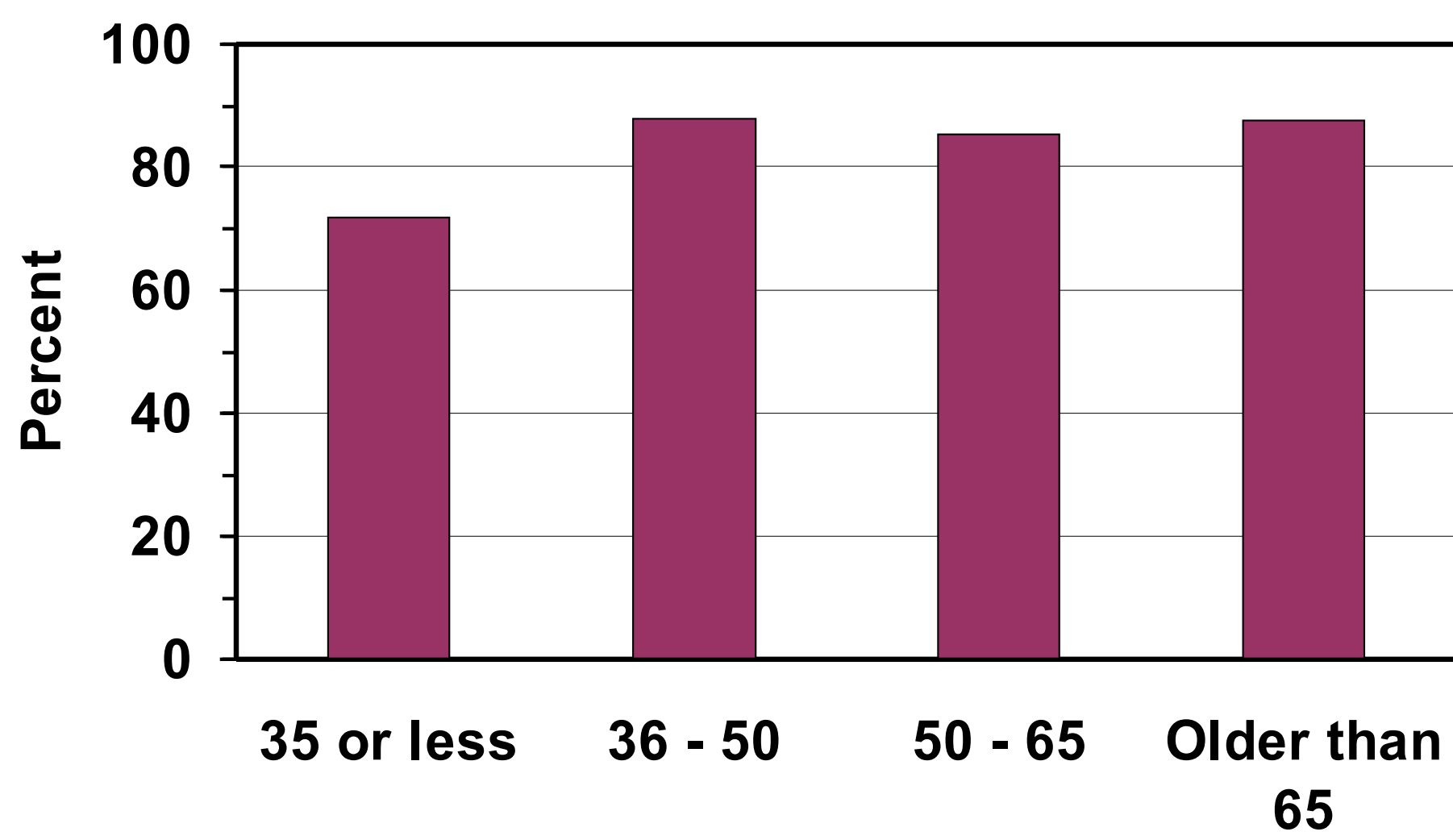
Adel Courdi, Cécile Ortholan, Rémy Largillier, Aurélie Ginot, Inès Raoust, Michel Lallement, Jean-Marc Ferrero and Jean-Christophe Machiavello.
Centre A. Lacassagne, Nice, France.

Between 1973 and 2004, 2106 patients were treated with total mastectomy and axillary lymph node (LN) dissection for invasive breast adenocarcinoma. Chest wall irradiation (RT) was given to 48.5% of patients, regional LN RT to 47.1% and chemotherapy to 35.1%. The median follow-up was 118 months (172 months in censored patients). Chest wall local recurrence (LR) was assessed with the Kaplan-Meier method and the influence of prognostic factors, with particular emphasis to the age factor, was studied using the Logrank test.



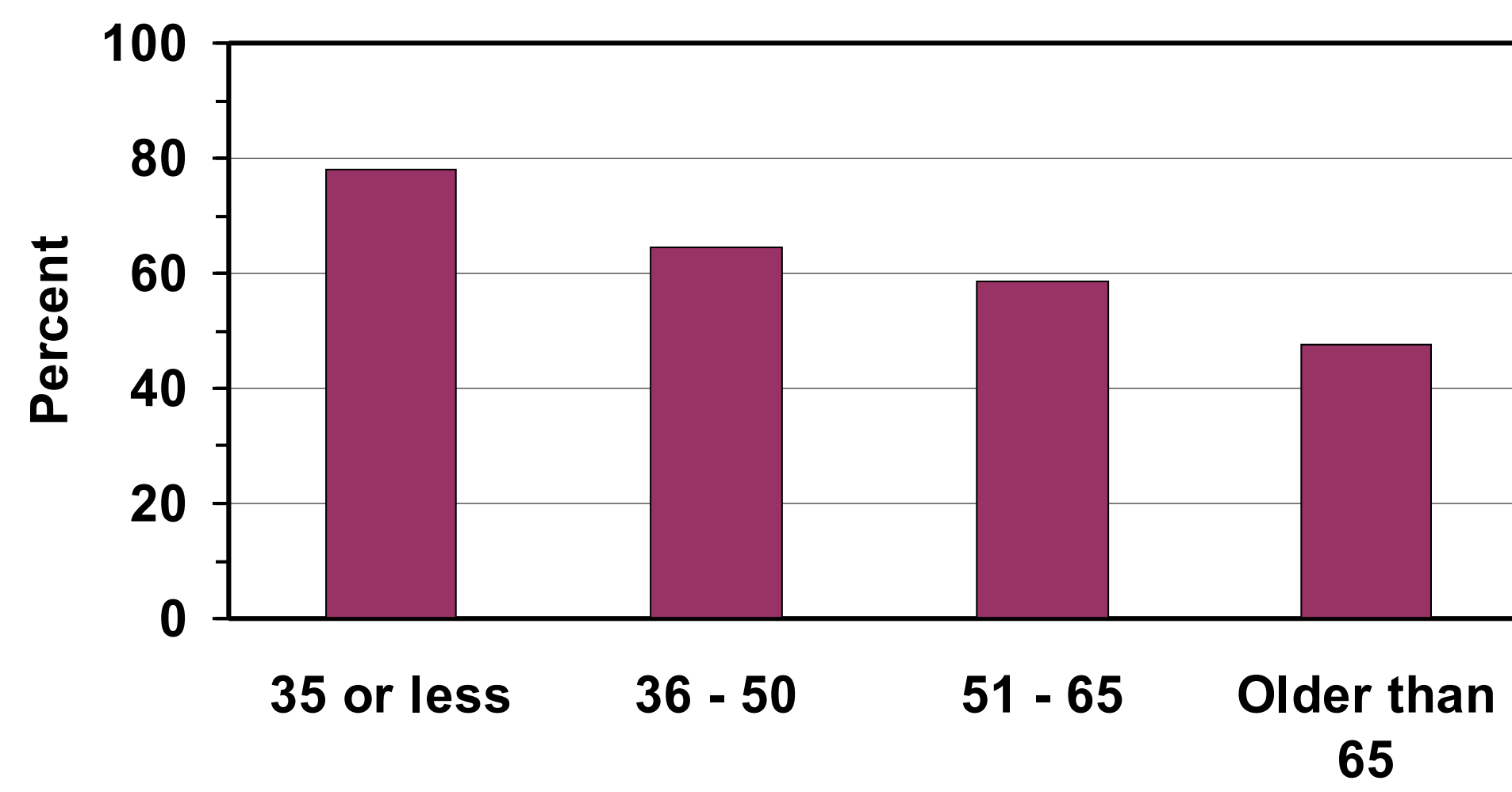
Negative LN were encountered in 31% of patients aged 35 or less
42 % in patients 36 - 50
50 % in patients 51 - 65
57 % in older patients
 $p < 0.0001$

Hormone receptors positivity as a function of age



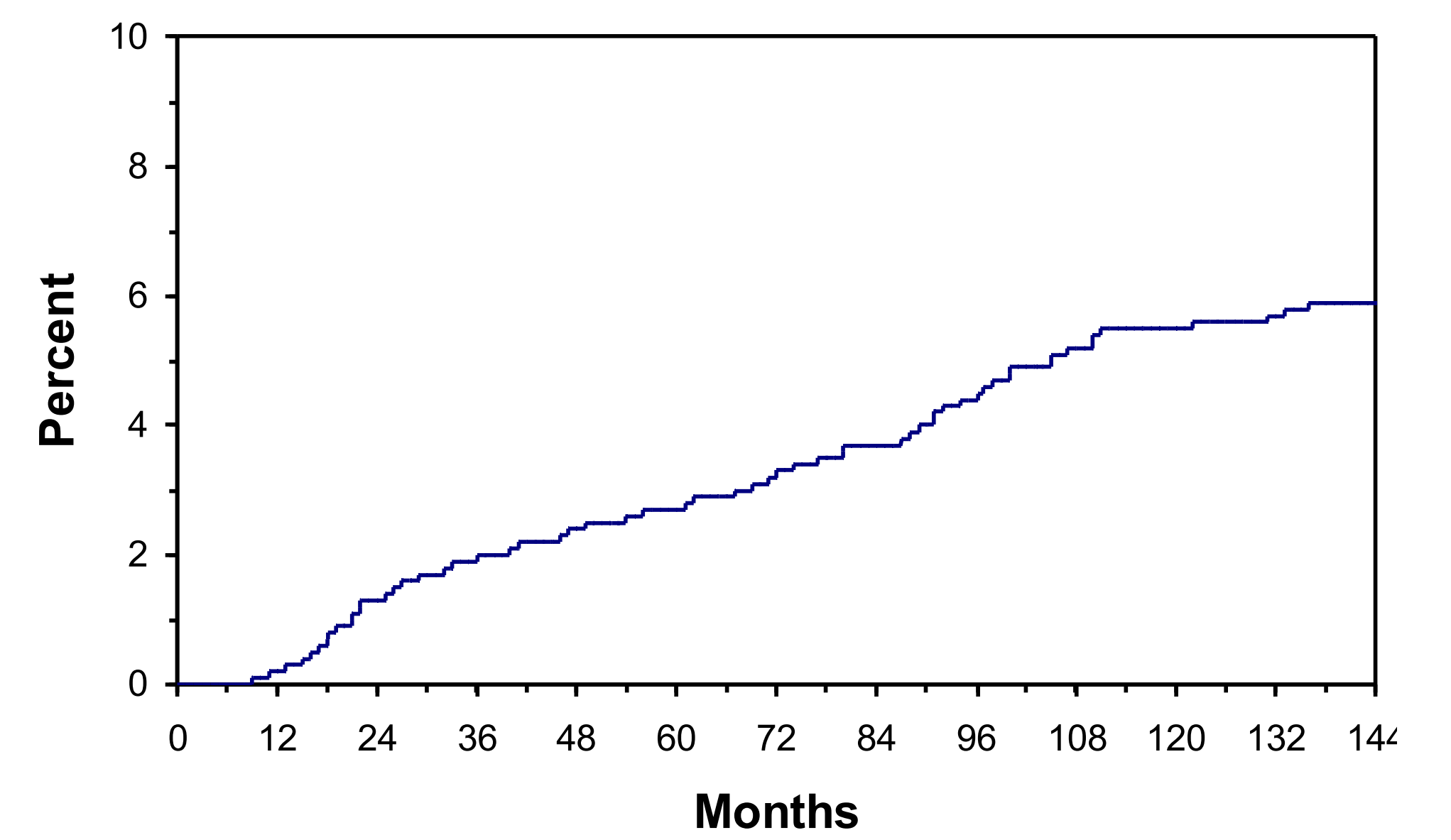
The frequency of hormone receptors was 72% for patients 35 or less, vs 85 - 88% for older patients ($p = 0.038$)

Frequency of radiotherapy as a function of age



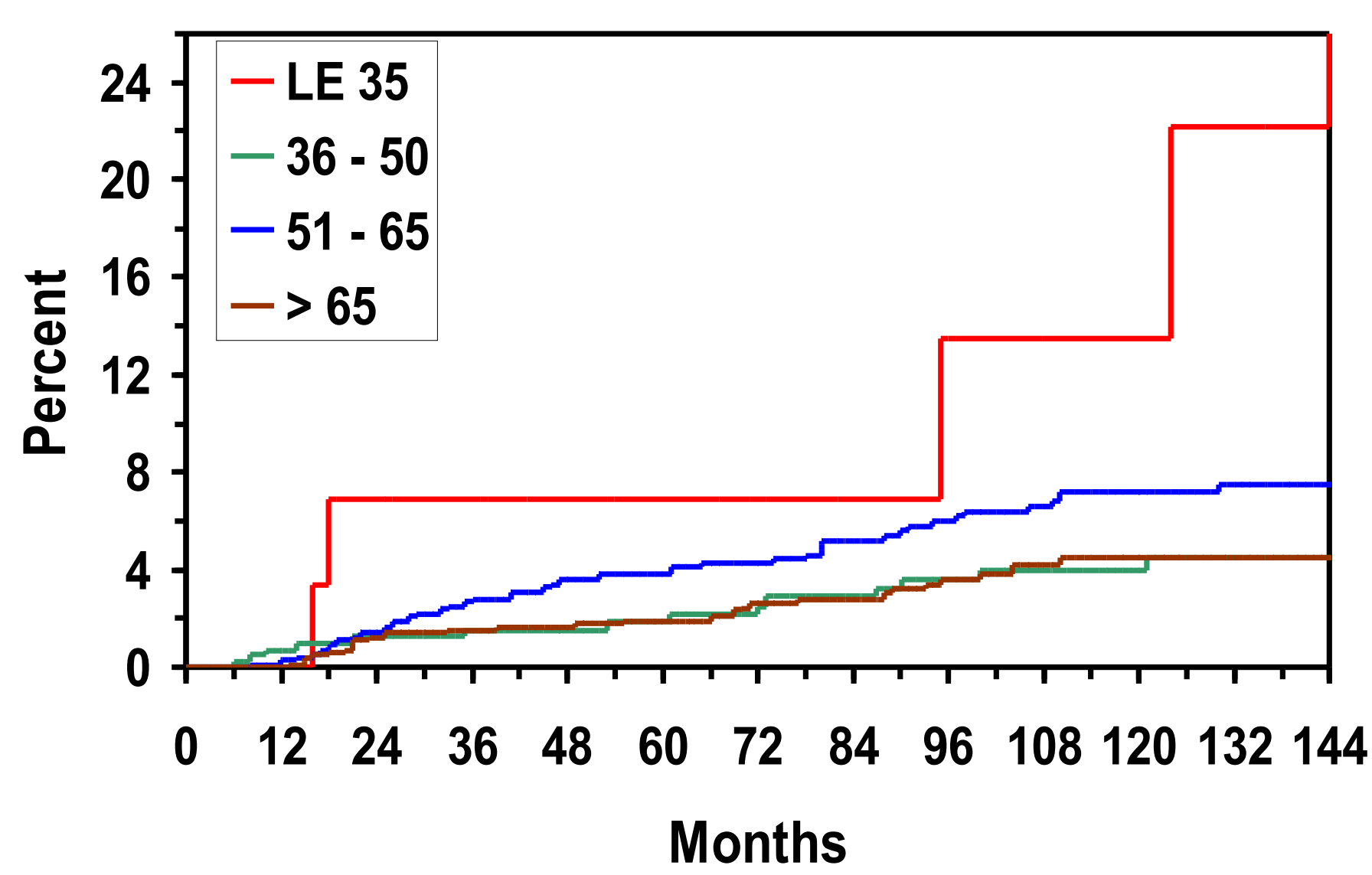
Chest wall radiotherapy was given at a higher frequency in young patients ($p < 0.0001$)

Local recurrence rate



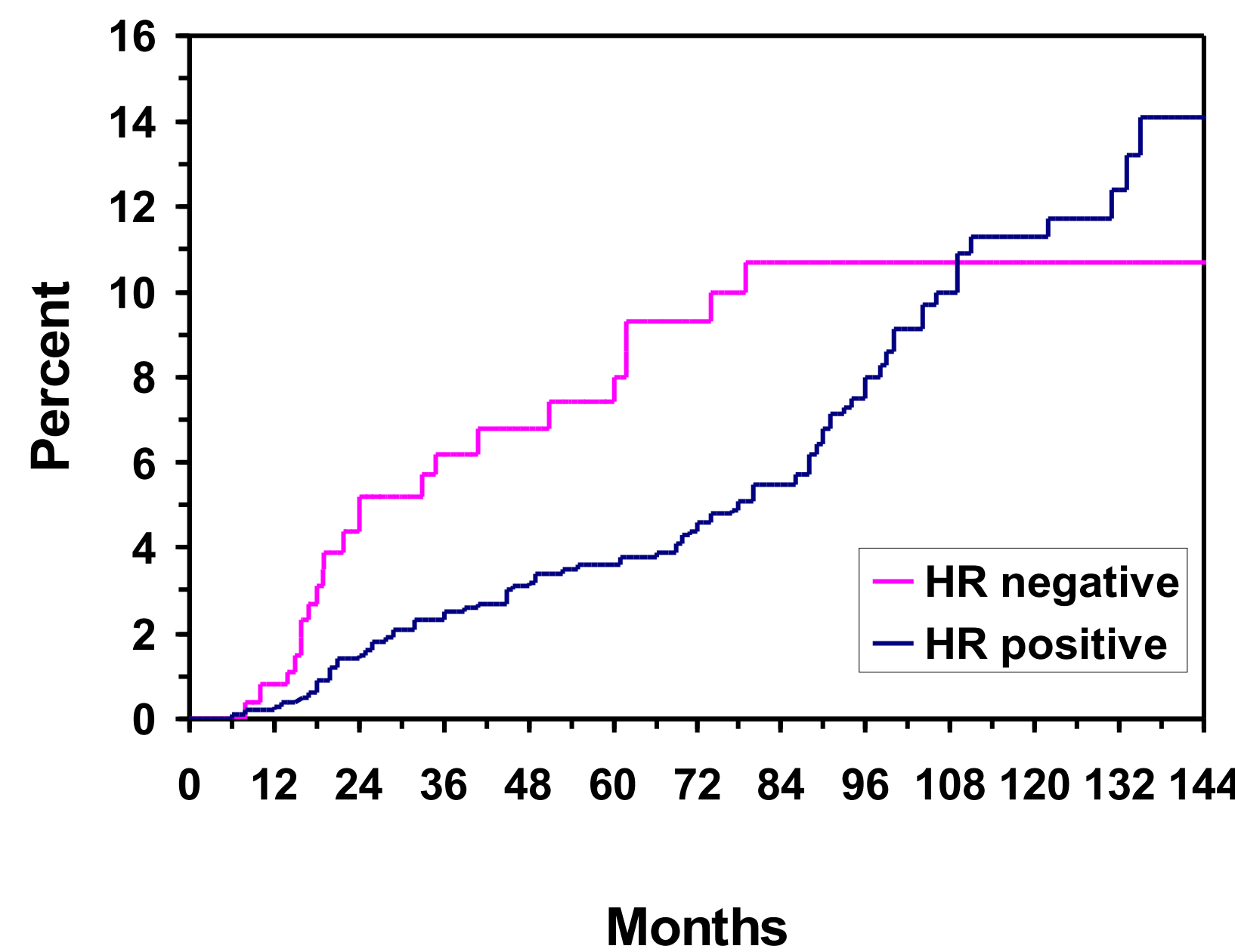
The 5-year and 10-year LR rates were 2.7% and 5.5% respectively

Local recurrence rate vs age



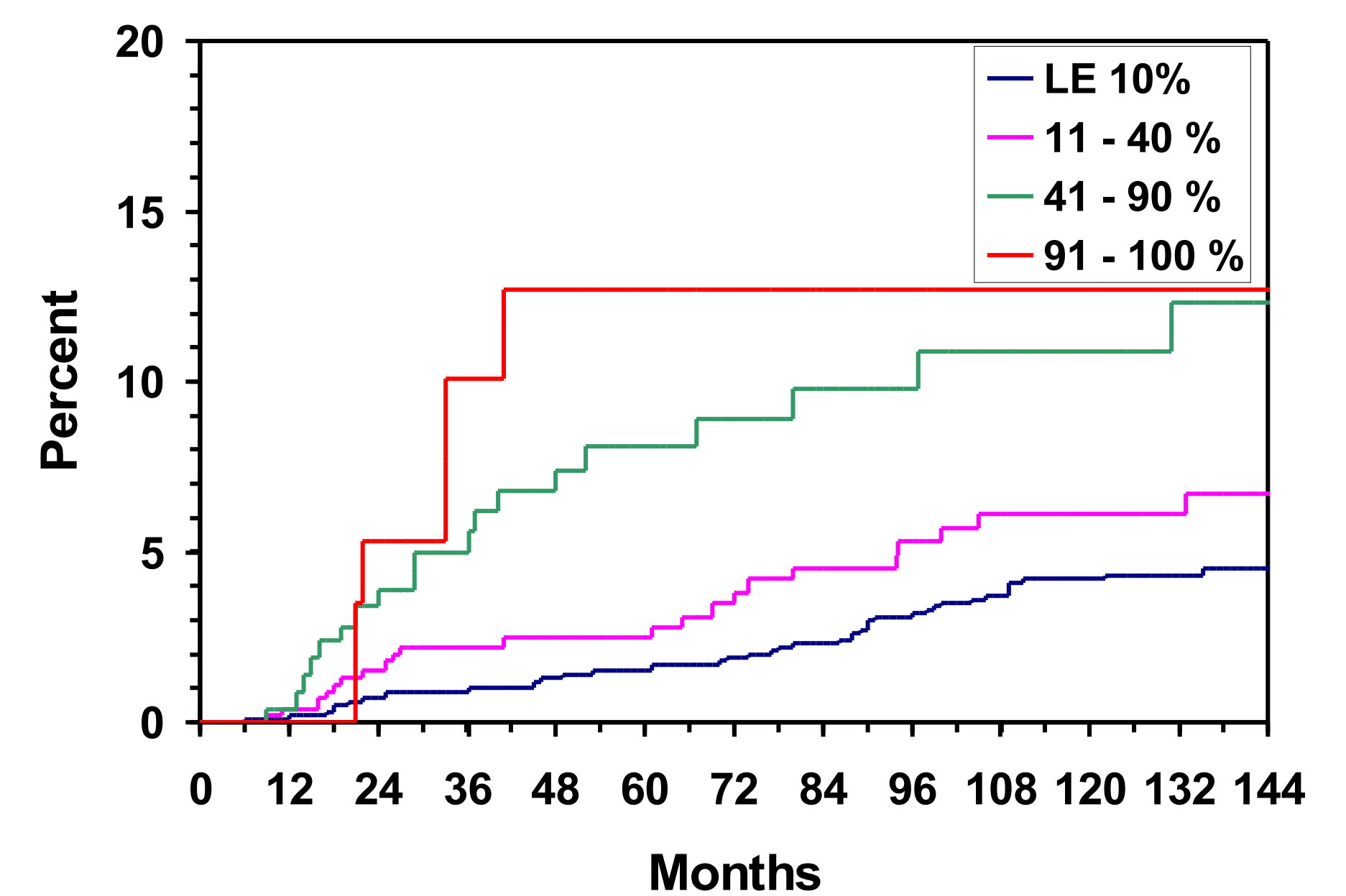
The 10-year LR was 13.7% for patients 35 or less, 4.1% for those 35-50, 7.3% for 50-65 and 4.5% for older patients ($p = 0.0009$)

Local recurrence vs hormone receptors



For HR-negative tumours, the 5- and 10-year LR were 8.0% and 10.7%. They were respectively 3.6% and 11.3% for HR-positive or ND tumours ($p = 0.0009$). Patients with negative HR recurred early.

Local recurrence vs N ratio



The N ratio is the percent positive LN. The 5-year LR was 1.5% for LN 10% or less, 2.5% for LN ratio 11-40%, 8.1% for LN ratio 41-90%, and 12.7% for higher LN ratio ($p < 0.0001$).

LN status as a function of age ($p = 0.0001$)

	N0	N1	N2	N3	%
35 or less	31	31	25	13	100
36 - 50	42	26	22	10	100
51 - 65	50	22	20	8	100
older	57	21	14	8	100

Hormone receptors as a function of age ($p = 0.038$)

	Negative	Positive or ND	%
35 or less	28	72	100
36 - 50	12	88	100
51 - 65	15	85	100
older	13	87	100

Multivariate analysis

The lymph node ratio was introduced as a continuous variable

	Hazard ratio	Significance
Negative hormone receptors	1.91 (1.23 - 2.98)	$p = 0.0044$
Age 35 or less	3.06 (1.20 - 7.82)	$p = 0.02$
Lymph node ratio	1.4% per % positive LN (0.8 - 2.0)	$p < 0.0001$

Message

As for LR after conservative surgery, patients 35 years old or less are at a significantly high risk of chest wall LR after total mastectomy, despite being given radiotherapy more often than older patients. In addition to the presence of a high percentage of positive LN and negative HR, other factors should be looked for to explain the high LR rates in these young patients.