

Is young age an independent adverse prognostic factor in carcinoma breast? A single institute retrospective comparative study from South India



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Aim of the study:

To analyse whether young age is an independent adverse factor for breast cancer prognosis

Materials and Methods:

Patients with nonmetastatic carcinoma breast who had registered in our hospital during the year 2012 were included in the study. Their clinical, pathological, surgical and adjuvant treatment details were collected from the medical record library. Their follow up data were collected till 31st July 2019. Median follow up was 82 months.

Statistical analysis

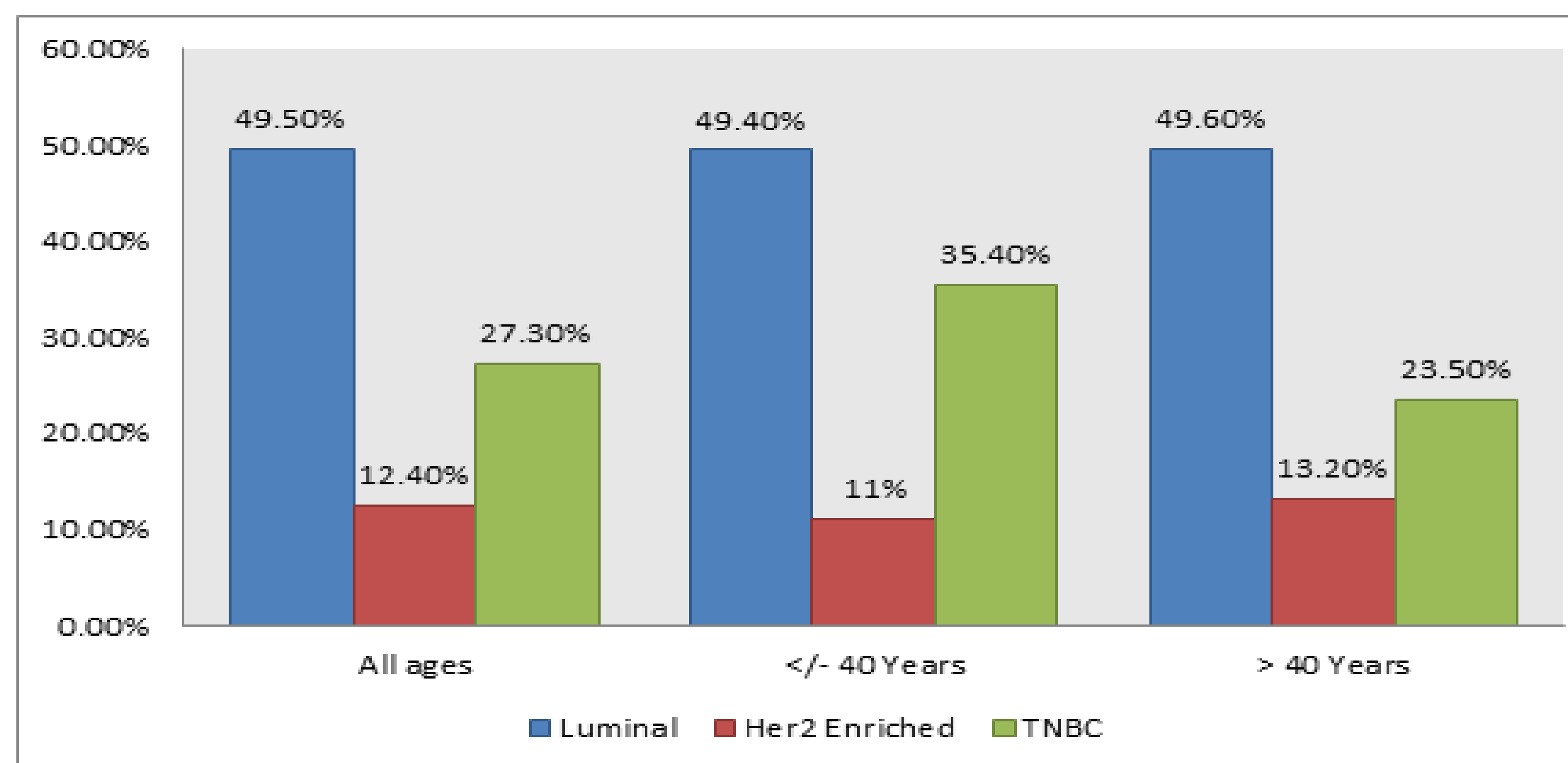
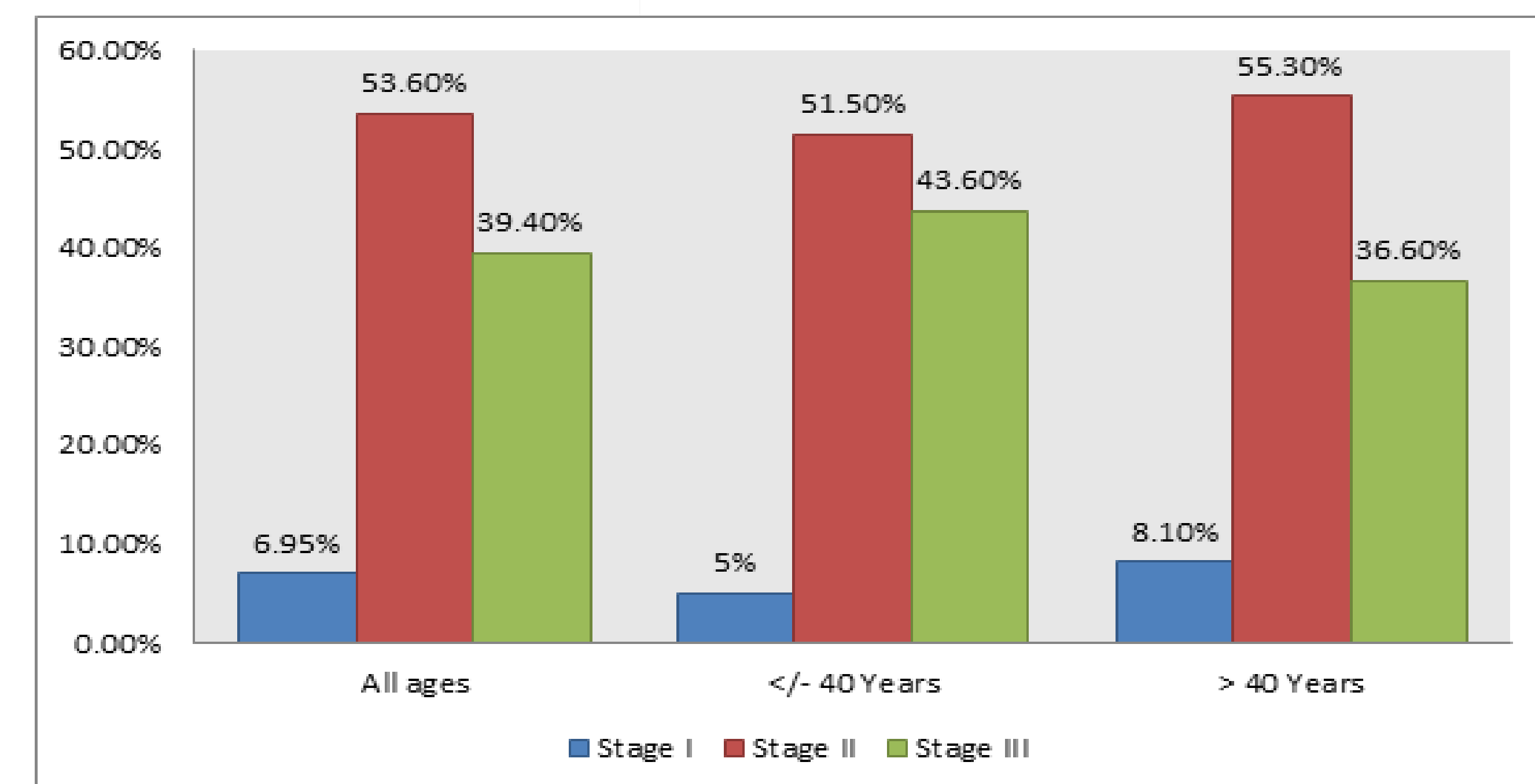
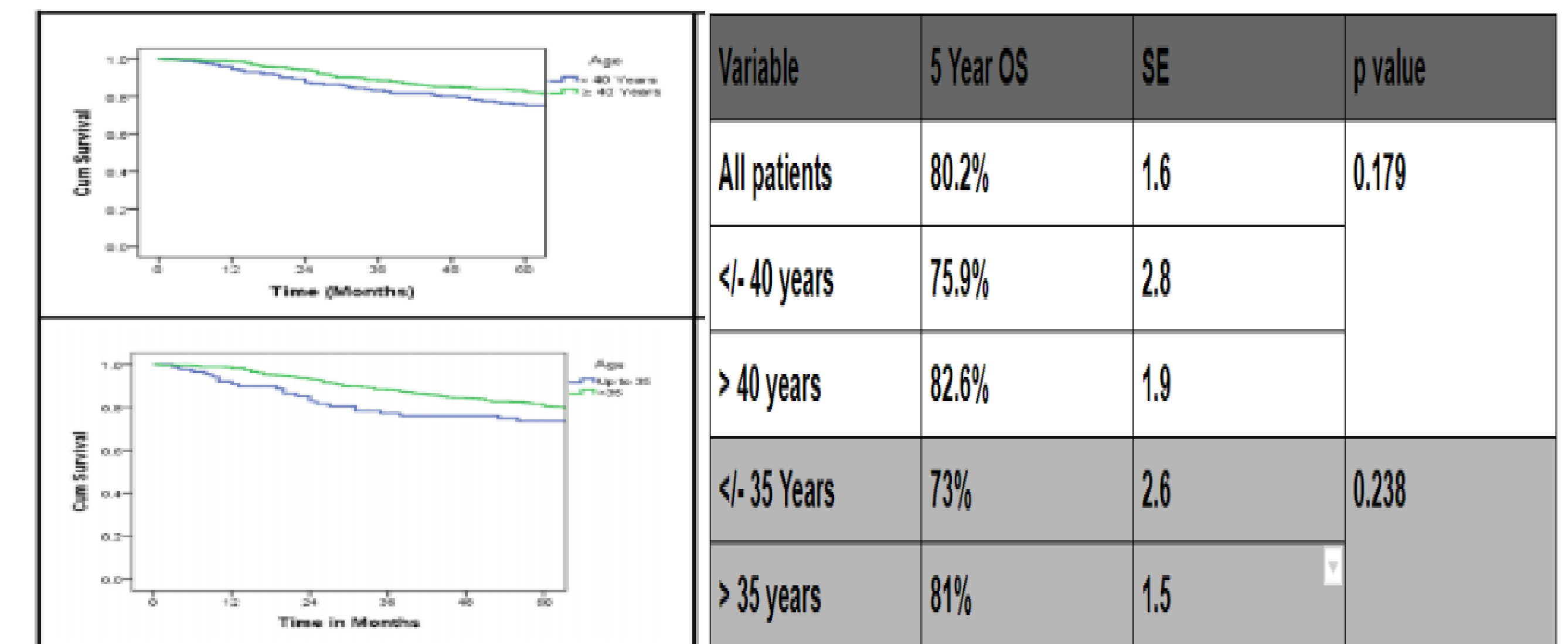
K M plot was employed for survival analysis. Survival comparison was done using the log-rank test. Cox regression analysis was done for assessing the risk

Results:

1611 were curatively treated patients were included. Median age at diagnosis was 51.3 years (18 - 90). 281 were young breast cancer patients (**17.44%**). 92 patients were below 35 years (5.7%). 63% incidence was in the age group 41-60. 20 patients in the young group (8.2%) had a family history of breast cancer. All curatively treated young breast cancer and double the number(1:2 ratio)of older patients were included in final analysis, which included 731 patients (245 <40 and 486 in > 40).

| Variables | All patients-731 | </- 40 (245) | > 40 (486) | P value |
|-------------|------------------|--------------|-------------|--------------|
| T1 | 125 (22.6%) | 47 (22%) | 78 (23%) | 0.001 |
| T2 | 316 (57.1%) | 108 (50%) | 210 (62%) | |
| T3 | 82 (14.8%) | 51 (23.7%) | 31 (9.1%) | |
| T4 | 30 (5.4%) | 9 (4.2) | 21 (6.1%) | |
| N0 | 260 (46.9%) | 104 (47.5%) | 157 (46.6%) | 0.644 |
| N1 | 141 (25.4%) | 53 (24.2%) | 88 (26.1%) | |
| N2 | 83 (14.9%) | 37 (16.9%) | 46 (13.6%) | |
| N3 | 70 (12.6%) | 25 (11.4%) | 46 (13.6%) | |
| Grade 2 | 102 (15%) | 32 (14.2%) | 70 (15.5%) | 0.093 |
| Grade 3 | 571 (84.1%) | 192 (85%) | 379 (83.7%) | |
| LVI | 54 (10.6%) | 16 (9.1%) | 38 (11.3%) | 0.431 |
| ECS | 116 (22.7%) | 32 (18.0%) | 84 (25.1%) | 0.065 |
| Stage 1 | 38 (6.9%) | 11 (5%) | 27 (8.1%) | 0.174 |
| Stage 2 | 297 (53.6%) | 113 (51.4%) | 184 (55.3%) | |
| Stage 3 | 218 (39.4%) | 96 (43.6%) | 122 (46.6%) | |
| NACT | 193 (32.7%) | 68 (31.3%) | 125 (33.0%) | 0.13 |
| PCR | 55 (28.5%) | 21 (30.9%) | 34 (37.2%) | 0.588 |
| BCS | 87 (14.9%) | 53 (23.7%) | 34 (9.4%) | 0.001 |
| ER Positive | 341 (51.1%) | 112 (48.5%) | 229 (52.5%) | 0.321 |
| PR Positive | 322 (46.7%) | 105 (45.5%) | 217 (47.3%) | 0.616 |
| HR Neg | 306 (41.9%) | 110 (47.6%) | 196 (42.6%) | 0.211 |
| Her 2 +ve | 161 (23.5%) | 50 (21.8%) | 111 (24.3%) | 0.199 |

| Age group | < 40 | > 40 | Total | P value |
|-----------------------|-------------|-------------|-------------|---------|
| Recurrence | 76 (31.0%) | 119 (25.5%) | 195 (27.7%) | 0.059 |
| Local | 8 (2.9%) | 18 (4.2%) | 26 (4.1%) | 0.232 |
| Regional | 13 (5.3%) | 22 (5.2%) | 35 (5.3%) | 0.964 |
| Distant | 74 (30.2%) | 108 (25.3%) | 182 (27.3%) | 0.204 |
| Lung | 34 (45.9%) | 56 (51.9%) | 90 (49.5%) | 0.434 |
| Alive with no disease | 151 (63.7%) | 273 (57.2%) | 424 (59.1%) | 0.126 |
| Alive With disease | 24 (10%) | 35 (7.3%) | 59 (8.2%) | |
| Died due to disease | 61 (24.8%) | 94 (19.5%%) | 155 (21.3%) | |



Conclusions:

- ❖ The proportion of young patients in Kerala (India) is higher than western data.
- ❖ There is no difference in survival in young patients.
- ❖ Non significant drop in DFS observed because of aggressive tumour biology
- ❖ Young age as such is not an independent prognostic factor.