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Title: Selection bias assessment

Description:

Selection bias assessment in the training set

| Characteristics | Included<br>n=142<br>n (%) | Excluded<br>n=67<br>n (%) | Selection bias<br>P-value<br>(two-sided) |          |            |           |         |
|-----------------|----------------------------|---------------------------|--|----------|------------|-----------|---------|
|                 |                            |                           |  | Age      |            |           | 0.6987* |
|                 |                            |                           |  | ≤ 55 yrs | 143 (51.3) | 22 (32.8) |         |
| > 55 yrs        | 136 (48.8)                 | 45 (67.2)                 |  |          |            |           |         |
| Missing         | Ó                          | 0                         |  |          |            |           |         |
| Median          | 64 yrs (SD 12.6)           | 63.7 yrs (SD 13.7)        |  |          |            |           |         |
| Min Max.        | 31 - 89 yrs                | 34 - 95 yrs               |  |          |            |           |         |
| Tumor diameter  | •                          | •                         | 0.3909*                                  |          |            |           |         |
| ≤ 2 cm          | 126 (94.0)                 | 60 (93.8)                 |  |          |            |           |         |
| > 2 cm          | 8 (6.0)                    | 4 (6.3)                   |  |          |            |           |         |
| Missing         | `8                         | `3 ´                      |  |          |            |           |         |
| Median          | 1.2 cm (SD 0.50)           | 1.23 cm (SD 0.47)         |  |          |            |           |         |
| Min Max.        | 0.3 - 2.9 cm               | 0.3 - 2.6 cm              |  |          |            |           |         |
| Tumor grade     |                            |                           | 0.0247**                                 |          |            |           |         |
| Grade 1         | 74 (53.2)                  | 43 (68.3)                 |  |          |            |           |         |
| Grade 2         | 61 (43.9)                  | 16 (25.4)                 |  |          |            |           |         |
| Grade 3         | 4 (2.9)                    | 4 (6.4)                   |  |          |            |           |         |
| Missing         | `3                         | 4                         |  |          |            |           |         |

<sup>\*</sup>Wilcoxon rank sum test; \*\*Fisher's exact test

No significant differences were found between the included and excluded subjects with respect to age or tumor size. However, tumor grade tended to be higher among the included subjects than the excluded subjects.

Selection bias assessment in the validation set

| Characteristics | Included<br>n=279<br>n (%) | Excluded<br>n=118<br>n (%) | Selection bias<br>P-value<br>(two-sided) |
|-----------------|----------------------------|----------------------------|--|
|                 |                            |                            |  |
| ≤ 55 yrs        | 143 (51.3)                 | 22 (32.8)                  |  |
| > 55 yrs        | 136 (48.8)                 | 45 (67.2)                  |  |
| Missing         | 0                          | 0                          |  |
| Median          | 55 yrs (SD 11.7)           | 58 yrs (SD 12.1)           |  |
| Min Max.        | 29 - 87 yrs                | 27 - 86 yrs                |  |
| Tumor diameter  |                            |                            | 0.0235*                                  |
| ≤ 2 cm          | 168 (60.2)                 | 82 (69.5)                  |  |
| > 2 cm          | 111 (39.8)                 | 36 (30.5)                  |  |
| Median          | 2 cm (SD 0.85)             | 2 cm (SD 0.87)             |  |
| Min Max.        | 0.0 <sup>#</sup> - 3.0 cm  | 0.0 <sup>#</sup> - 3.0 cm  |  |
| Tumor grade     |                            |                            | 0.179**                                  |
| Grade 1         | 60 (21.5)                  | 28 (28.9)                  |  |
| Grade 2         | 166 (59.5)                 | 57 (58.8)                  |  |
| Grade 3         | 53 (19.0)                  | 12 (12.4)                  |  |
| Missing         | 0                          | 21                         |  |

<sup>\*</sup>Wilcoxon rank sum test; \*\*Fisher's exact test; # tumors were impalpable

No significant differences between included and excluded patients were found with respect to age or tumor grade. We found a somewhat larger proportion of patients with tumor size greater than 2 cm among the included patients than among the excluded patients.