

Supplementary Table S2

Relation of the HER2 immunohistochemistry results and the clinicopathological characteristics of the tumors

|                       | † HER2 IHC 0 |         | HER2 IHC 1+ |         | HER2 IHC 2+ |         | HER2 IHC 3+ |          | p       | CI of OR |         |
|-----------------------|--------------|---------|-------------|---------|-------------|---------|-------------|----------|---------|----------|---------|
| Tumor characteristics | n            | %       | n           | %       | n           | %       | n           | %        |         | Lower    | Upper   |
| Tumor type            |              |         |             |         |             |         |             |          |         |          |         |
| Primary               | 21           | (70.00) | 14          | (77.78) | 27          | (81.82) | 8           | (88.89)  | 0.678   | 0.009    | 3.413   |
| Recurrent             | 9            | (30.00) | 4           | (22.22) | 6           | (18.18) | 1           | (11.11)  |         |          |         |
| Stage                 |              |         |             |         |             |         |             |          |         |          |         |
| pTa                   | 15           | (50.00) | 8           | (44.44) | 18          | (54.55) | 1           | (11.11)  | 0.032*  | 1.027    | 381.370 |
| pT1                   | 15           | (50.00) | 10          | (55.56) | 14          | (42.42) | 8           | (88.89)  |         |          |         |
| pTis                  | 0            | (0.00)  | 0           | (0.00)  | 1           | (3.03)  | 0           | (00.0)   |         |          |         |
| Grade                 |              |         |             |         |             |         |             |          |         |          |         |
| 1                     | 10           | (33.33) | 4           | (22.22) | 6           | (18.18) | 0           | (00.0)   | <0.001# | 3.447    | 231.954 |
| 2                     | 16           | (53.33) | 12          | (66.67) | 22          | (66.67) | 2           | (22.22)  |         |          |         |
| 3                     | 4            | (13.33) | 2           | (11.11) | 5           | (15.15) | 7           | (77.78)  |         |          |         |
| Low grade             | 19           | (63.33) | 14          | (77.78) | 14          | (42.42) | 0           | (00.0)   | <0.001  | 2.485    | inf     |
| High grade            | 11           | (36.67) | 4           | (22.22) | 19          | (57.58) | 9           | (100.00) |         |          |         |
| Tumor size            |              |         |             |         |             |         |             |          |         |          |         |
| <3 cm                 | 25           | (83.33) | 14          | (77.78) | 23          | (69.70) | 6           | (66.67)  | 0.683   | 0.240    | 8.506   |
| ≥3 cm                 | 5            | (16.67) | 4           | (22.22) | 10          | (30.30) | 3           | (33.33)  |         |          |         |
| Multiplicity          |              |         |             |         |             |         |             |          |         |          |         |
| Solitary              | 27           | (90.00) | 15          | (83.33) | 28          | (84.85) | 9           | (100.00) | 0.594   | 0.000    | 3.782   |
| Multiple              | 3            | (10.00) | 3           | (16.67) | 5           | (15.15) | 0           | (0.00)   |         |          |         |
| Recurrence            |              |         |             |         |             |         |             |          |         |          |         |
| Yes                   | 16           | (53.33) | 14          | (77.78) | 22          | (66.67) | 2           | (22.22)  | 0.027   | 1.077    | 64.502  |
| No                    | 14           | (46.67) | 4           | (22.22) | 11          | (33.33) | 7           | (77.78)  |         |          |         |
| Progression to T2     |              |         |             |         |             |         |             |          |         |          |         |
| Yes                   | 5            | (16.67) | 1           | (5.56)  | 6           | (18.18) | 2           | (22.22)  | 0.626   | 0.099    | 6.734   |
| No                    | 25           | (83.33) | 17          | (94.44) | 27          | (81.82) | 7           | (77.78)  |         |          |         |

| Tumor characteristics | Heterogeneous for HER2 overexpression |         | Non-heterogeneous for HER2 overexpression |         | p      | CI of OR |       |
|-----------------------|---------------------------------------|---------|---|---------|--------|----------|-------|
|                       | n                                     | %       | n   | %       |        | Lower    | Upper |
| Tumor type            |                                       |         |   |         |        |          |       |
| Primary               | 35                                    | (85.37) | 35  | (71.43) | 0.133  | 0.730    | 8.223 |
| Recurrent             | 6                                     | (14.63) | 14  | (28.57) |        |          |       |
| Stage                 |                                       |         |   |         |        |          |       |
| pTa                   | 18                                    | (43.90) | 24  | (48.98) | 0.831* | 0.339    | 2.136 |
| pT1                   | 22                                    | (53.66) | 25  | (51.02) |        |          |       |
| pTis                  | 1                                     | (2.44)  | 0   | (0.00)  |        |          |       |
| Grade                 |                                       |         |   |         |        |          |       |
| 1                     | 6                                     | (14.63) | 14  | (28.57) | 0.793# | 0.249    | 2.579 |
| 2                     | 26                                    | (63.41) | 26  | (53.06) |        |          |       |
| 3                     | 9                                     | (21.95) | 9   | (18.37) |        |          |       |
| Low grade             | 14                                    | (34.15) | 33  | (67.35) | 0.003  | 0.095    | 0.659 |
| High grade            | 27                                    | (65.85) | 16  | (32.65) |        |          |       |

