### Supplementary Table 1. Diagnostic performance of the number of suspicious LNs on axillary US in predicting a heavy nodal burden

| Diagnostic value | Heavy nodal burden (3 or more) | 2 suspicious LNs on US | 1 suspicious LN on US |
|------------------|-------------------------------|-----------------------|----------------------|
|                  | 3 or more suspicious LNs on US | 24/81 (29.6)          | 37/81 (45.7)         |
|                  | 3 or more suspicious LNs on US | 315/323 (97.5)        | 72/323 (22.3)        |
| Sensitivity      | 37/81 (45.7)                  | 20/81 (24.7)          | 37/314 (11.8)        |
| Specificity      | 285/323 (88.2)                | 24/62 (38.7)          | 46/90 (51.1)         |
| PPV              | 315/323 (97.5)                | 20/28 (71.4)          | 285/342 (83.3)       |
| NPV              | 309/404 (76.5)                | 315/376 (83.8)        | 83/404 (20.5)        |
| Accuracy         | 83/404 (20.5)                 | 309/404 (76.5)        | 315/376 (83.8)       |

Values are presented as number (%).

LN, lymph node; US, ultrasonography; PPV, positive predictive value; NPV, negative predictive value.

### Supplementary Table 2. Results of multivariate analysis: significant findings in the FNAB-positive group (n=64)

| Variable                  | Odds ratio | 95% CI     | P-value |
|---------------------------|------------|------------|---------|
| No. of suspicious LNs     |            |            |         |
| 1                         | 1 (reference) |            |         |
| 2                         | 3.77       | 3.69–3.84  | <0.001  |
| 3 or more                 | 2.78       | 2.67–2.90  | <0.001  |
| Mean cortical thickness   | 0.50       | 0.48–0.51  | <0.001  |
| Hilar compression         |            |            |         |
| None                      | 1 (reference) |            |         |
| Compression               | 2.22       | 2.19–2.25  | <0.001  |
| Loss                      | 37.70      | >999.99    | <0.001  |
| Extranodal extension      | >999.99    | 0.001–999.99 | <0.001  |
| Subtype                   |            |            |         |
| ER-, PR-positive          | 2.33       | 2.30–2.36  | <0.001  |
| HER2-positive             | 0.96       | 0.94–0.99  | <0.001  |
| Tri-negitive              | 1 (reference) |            |         |

Values are presented as number (%).

FNAB, fine-needle aspiration biopsy; CI, confidence interval; LN, lymph node; ER, estrogen receptor; PR, progesterone receptor; HER2, human epidermal growth factor receptor 2.

### Supplementary Table 3. Results of multivariate analysis: significant findings in the FNAB-negative group (n=17)

| Variable                  | Odds ratio | 95% CI     | P-value |
|---------------------------|------------|------------|---------|
| No. of suspicious LNs     |            |            |         |
| 1                         | 1 (reference) |            |         |
| 2                         | 3.77       | 3.69–3.84  | <0.001  |
| 3 or more                 | 2.78       | 2.67–2.90  | <0.001  |
| Mean cortical thickness   | 0.50       | 0.48–0.51  | <0.001  |
| Hilar compression         |            |            |         |
| None                      | 1 (reference) |            |         |
| Compression               | 1.58       | 1.54–1.62  | <0.001  |
| Loss                      | 37.70      | >999.99    | <0.001  |
| Extranodal extension      | >999.99    | 0.001–999.99 | <0.001  |
| Subtype                   |            |            |         |
| ER-, PR-positive          | 2.33       | 2.30–2.36  | <0.001  |
| HER2-positive             | 0.96       | 0.94–0.99  | <0.001  |
| Tri-negitive              | 1 (reference) |            |         |

Values are presented as number (%).

FNAB, fine-needle aspiration biopsy; CI, confidence interval; LN, lymph node; N/A, not available; ER, estrogen receptor; PR, progesterone receptor; HER2, human epidermal growth factor 2.

*P-value from Firth analysis.

a) P-value from Firth analysis.