

Supplementary Materials: Hashimoto's Thyroiditis Does Not Influence the Malignancy Risk in Nodules of Category III in the Bethesda System

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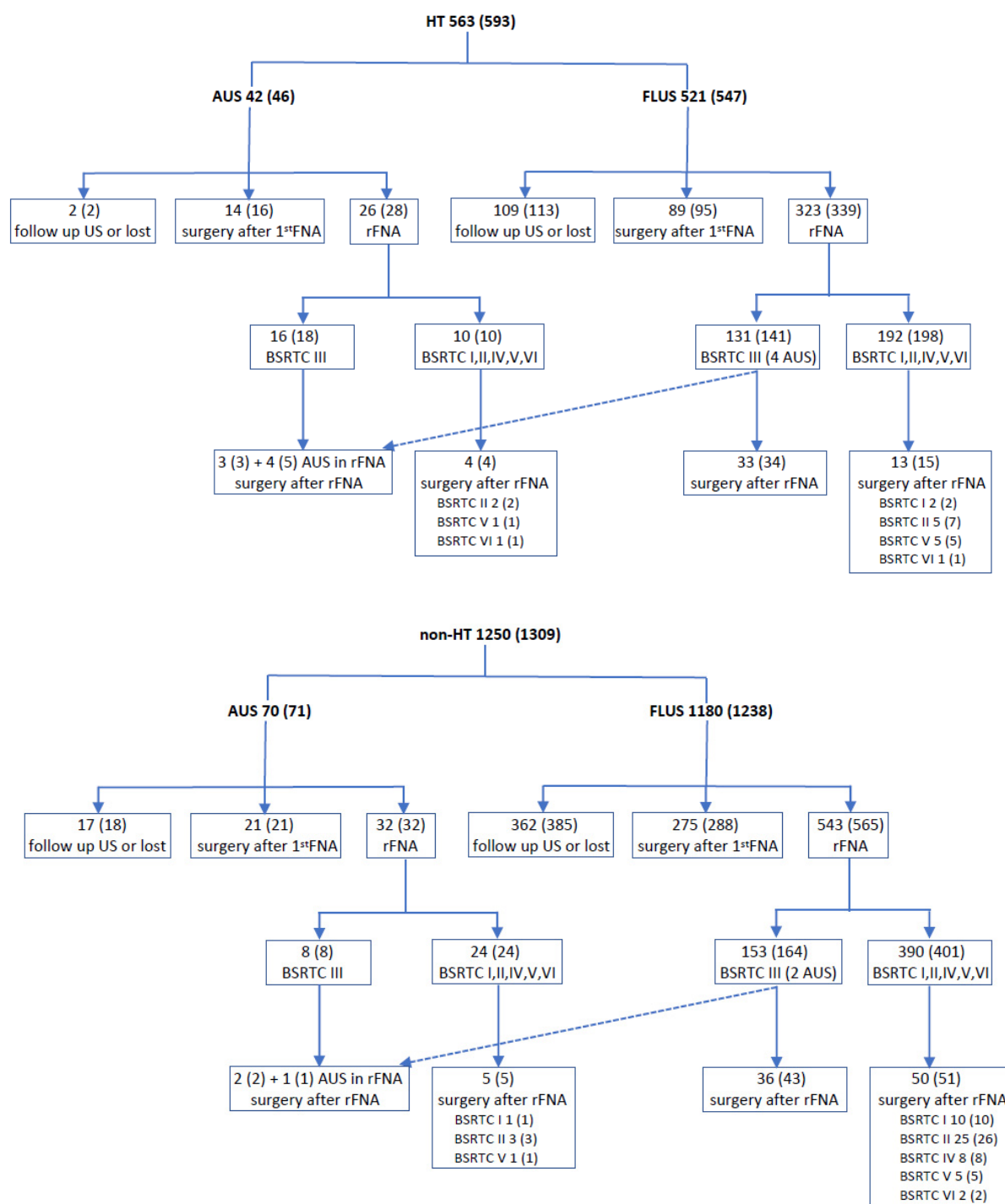


Figure S1. Distribution of surgically treated patients and their nodules between examined groups regarding their rFNA (repeat FNA) status and the initial diagnosis (FLUS vs. AUS). Numbers of analyzed nodules were given in parentheses.

Table S1. Results of repeat FNA of nodules in HT and non-HT groups.

| category of repeat FNA | No/% of nodules with repeat FNA | | |
|------------------------|---------------------------------|---------------|---------|
| | HT 367 | non-HT 597 | p |
| I | 24/6.5 | 79/13.2 | 0.0011 |
| II | 176/48.0 | 329/55.1 | 0.0309 |
| III | 159/43.3 | 172/28.8 | <0.0001 |
| IV | 0/0.0 | 8/1.3 | 0.0627 |
| V | 6/1.6 | 7/1.2 | 0.5456 |
| VI | 2/0.5 | 2/0.3 | 0.9812 |

Table S2. Results of repeat FNA of nodules in HT and non-HT groups for AUS and FLUS nodules separately

| category of repeat FNA | No/% of nodules with repeat FNA | | | | | |
|------------------------|---------------------------------|-------------|---------|-----------|-------------|---------|
| | HT | | | non-HT | | |
| | AUS 28 | FLUS 339 | p | AUS 32 | FLUS 565 | p |
| I | 1/3.6 | 23/6.8 | 0.7923 | 4/12.5 | 75/13.3 | 0.8868 |
| II | 7/25.0 | 169/49.9 | 0.0114 | 19/59.4 | 310/54.9 | 0.6180 |
| III | 18/64.3 | 141/41.6 | 0.0199 | 8/25.0 | 164/29.0 | 0.6246 |
| AUS | 14/50.0 | 6/1.8 | <0.0001 | 4/12.5 | 2/0.3 | <0.0001 |
| FLUS | 4/14.3 | 135/39.8 | 0.0074 | 4/12.5 | 162/28.7 | <0.0745 |
| IV | - | - | | - | 8/1.4 | 0.9104 |
| V | 1/3.6 | 5/1.5 | 0.9478 | 1/3.1 | 6/1.1 | 0.8322 |
| VI | 1/3.6 | 1/0.3 | 0.3535 | - | 2/0.3 | 0.2167 |

Table S3. Risk of malignancy (RoM) of nodules in HT and non-HT groups with AUS and FLUS nodules analyzed in three sets of nodules: (A) the whole examined cohort, (B) only nodules without repeat FNA, and (C) only nodules with category III in repeat FNA. RoM was evaluated as a range with its lower limit defined by the number of cancers to the total number of nodules (A1, B1 and C1) and its upper limit defined by the number of cancers to the number of operated nodules (A2, B2 and C2).

Nodules were regarded as an AUS nodule when AUS was diagnosed in at least one FNA (first or repeat one)

| Set of nodules and RoM range limit | Risk of malignancy (RoM) [%] (number of nodules with cancer) | | | | | | | | | | | |
|---|--|--------------|--------|--------------|--------------|---------|--------------|--------------|---------|--------------|--------------|---------|
| | All | | | HT | | | non-HT | | | All | | |
| | HT | non-HT | p | AUS | FLUS | p | AUS | FLUS | p | AUS | FLUS | p |
| A1 – lower limit all nodules HT: 593, non-HT: 1309 | 5.1 (30) | 4.5 (59) | 0.5976 | 23.5 (12) | 3.3 (18) | <0.0001 | 16.4 (12) | 3.8 (47) | <0.0001 | 19.4 (24) | 3.7 (65) | <0.0001 |
| A2 – upper limit operated nodules HT: 172, non-HT: 411 | 17.4 (30) | 14.4 (59) | 0.3447 | 42.9 (12) | 12.5 (18) | 0.0001 | 41.4 (12) | 12.3 (47) | <0.0001 | 42.1 (24) | 12.4 (65) | <0.0001 |
| B1– lower limit all nodules without repeat FNA HT: 226, non-HT: 712 | 8.0 (18) | 5.5 (39) | 0.1727 | 33.3 (6) | 5.8 (12) | <0.0001 | 17.9 (7) | 4.8 (32) | 0.0004 | 22.8 (13) | 5.0 (44) | <0.0001 |
| B2 – upper limit nodules operated without repeat FNA HT: 111, non-HT: 309 | 16.2 (18) | 12.6 (39) | 0.3429 | 37.5 (6) | 12.6 (12) | 0.0125 | 33.3 (7) | 11.1 (32) | 0.0031 | 35.1 (13) | 11.5 (44) | 0.0001 |
| C1– lower limit all nodules with category III in repeat FNA HT: 159, non-HT: 172 | 4.4 (7) | 4.7 (8) | 0.9135 | 17.4 (4) | 2.2 (3) | 0.0063 | 20.0 (2) | 3.7 (6) | 0.1093 | 18.2 (6) | 3.0 (9) | 0.0001 |
| C2 – upper limit nodules operated after category III in repeat FNA HT: 42, non-HT: 46 | 16.7 (7) | 17.4 (8) | 0.9281 | 50.0 (4) | 8.8 (3) | 0.0223 | 66.7 (2) | 14.0 (6) | 0.1233 | 54.5 (6) | 11.7 (9) | 0.0004 |

Table S4. Comparison of the incidence of particular types of cancer HT and non-HT groups.

| Type of malignancy [number/%] | all 87 | | HT 28 | | non-HT 59 | |
|----------------------------------|-----------|---------|----------|---------|--------------|---------|
| | HT | non-HT | AUS | FLUS | AUS | FLUS |
| | 28 | 59 | 10 | 18 | 12 | 47 |
| PTC | 19/67.9 | 33/55.9 | 7/70.0 | 12/66.7 | 10/83.3 | 23/48.9 |
| NIFTP | 1/3.6 | - | - | 1/5.6 | - | - |
| FTC | 3/10.7 | 8/13.6 | 1/10.0 | 2/11.1 | - | 8/17.0 |
| FT-UMP | 1/3.6 | 3/5.1 | - | 1/5.6 | - | 3/6.4 |
| HTC | - | 7/11.9 | - | - | - | 7/14.9 |
| PDTC | - | 1/1.7 | - | - | - | 1/2.1 |
| ATC | 1/3.6 | 2/3.4 | - | 1/5.6 | 1/8.3 | 1/2.1 |
| MTC | 2/7.1 | 2/3.4 | 1/10.0 | 1/5.6 | - | 2/4.3 |
| ML | 1/1.7 | | 1/10.0 | - | - | - |
| ANG | - | 1/1.7 | - | - | 1/8.3 | - |
| PC | - | 1/1.7 | - | - | - | 1/2.1 |
| ST | -- | 1/1.7 | - | - | - | 1/2.1 |

PTC—papillary thyroid carcinoma, NIFTP - non-invasive follicular thyroid neoplasm with papillary like nuclear features, FTC follicular thyroid carcinoma, FT-UMP—follicular tumor of uncertain malignant potential, HTC—Hurthle cell thyroid carcinoma, PDTC—poorly differentiated thyroid carcinoma, ATC—anaplastic thyroid carcinoma, MTC—medullary thyroid carcinoma, ML – malignant lymphoma, ANG—angiosarcoma, PC—parathyroid carcinoma, ST—secondary tumor