**Supplementary Table 1: The inclusion and exclusion criteria.**

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| **Inclusion criteria#** | **Exclusion criteria\*** |
| (1) maximum nodule diameter exceeding 2 cm;  (2) reported pressure symptoms or cosmetic problems;  (3) cytologic confirmation of benignancy on US-guided fine needle aspiration (FNA) cytologic examinations;  (4) nodules showing no malignant features (taller than wide, spiculated margins, markedly hypoechoic, micro- or macrocalcifications) on US;  (5) solid portion ≥10%;  (6) serum levels of thyroid hormone, thyrotropin, and calcitonin within normal limits;  (7) refusal of or ineligibility for surgery  (8) underwent hydrodissection. | (1) follicular nodules; pregnancy or lactation;  (2) preexisting vocal cord palsy;  (3) severe coagulation abnormalities;  severe heart or lung disease and inability to tolerate treatment;  (4) missing postoperative 1-month follow-up information. |

# Patients should fulfill all the following criteria

\*Patients that met any single of the following conditions