

Figure S1. Transition between (A) ATC and non-tumorous thyroid tissue, as well as between (B) PDTC and non-tumorous tissue. The tumor is indicated with black arrows. (C) ATC was negative for Tg, which was positive in follicular cells and follicles (asterisks). (D) PDTC and the adjacent normal follicles (white arrows) were positive for Tg. Magnification, x400. (E) A case of ATC negative for MLH1 is shown (case 15); the adjacent normal tissue including lymphocytes (stars) was positive for MLH1 (magnification, x200). (F) PDTC cells and normal follicular cells (asterisks) were positive for MLH1 (magnification, x400). (G) ATC and lymphocytes (stars) were positive for MLH1 (magnification, x200). (H) PDTC cells and normal follicular cells (asterisks) were positive for MSH2 (magnification, x400). ATC, anaplastic thyroid carcinoma; PDTC, poorly differentiated thyroid carcinoma; H&E, hematoxylin and eosin; Tg, thyroglobulin; MLH1, mutL homolog 1; MSH2, mutS homolog 2.

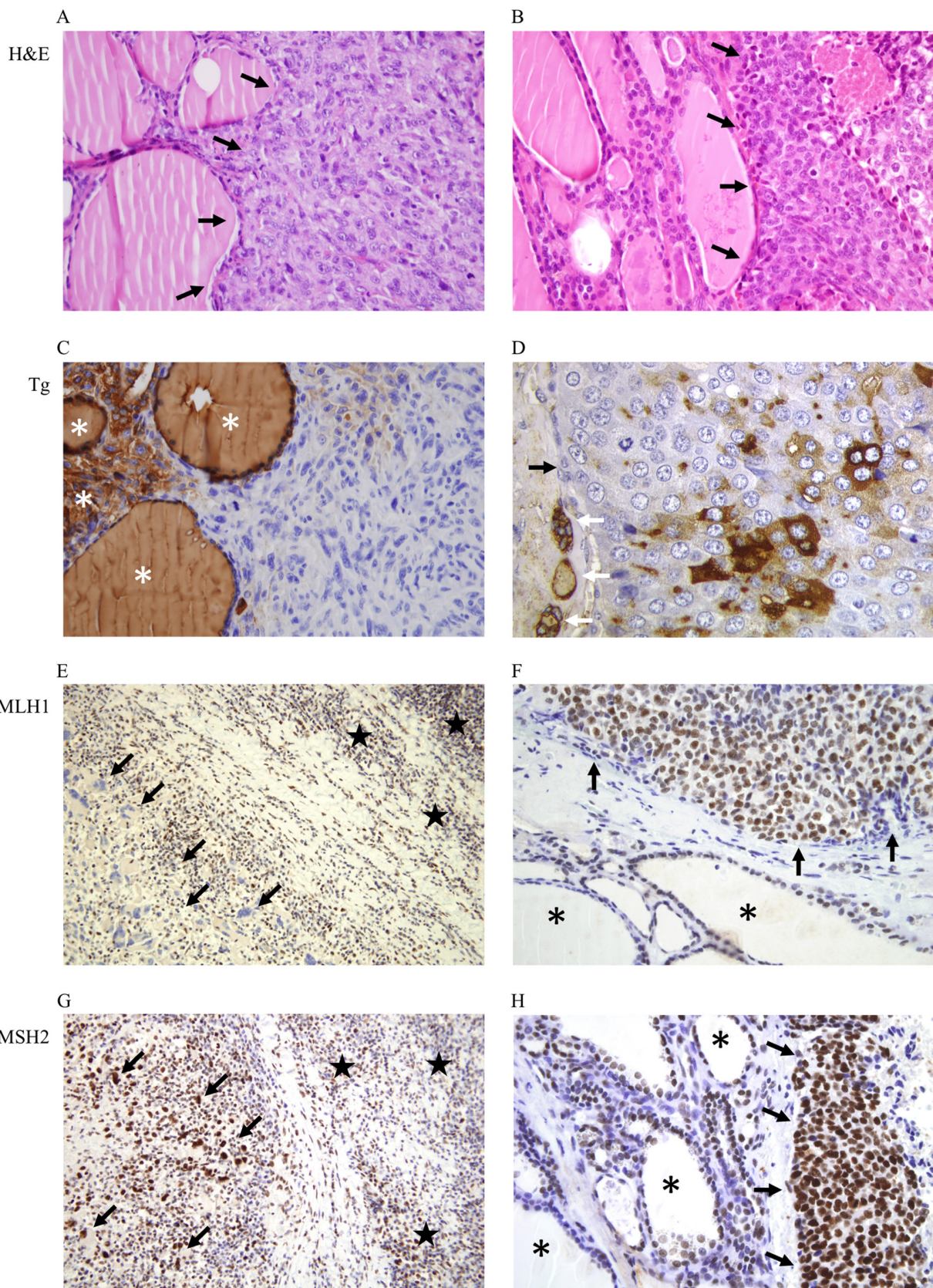


Figure S2. Transition between ATC and non-tumorous thyroid tissue (left column), as well as between PDTC and non-tumorous tissue (right column). The tumor is indicated with black arrows. Positivity for MSH6 in (A) ATC and the adjacent lymphocytes (stars) and follicular cells (magnification, x200), (B) PDTC and in normal cells, including lymphocytes and follicular cells (magnification, x400). (C) One case of ATC (case 15) was negative for PMS2, which was positive in the adjacent normal tissue (star) and in (D) PDTC (magnification, x400). There was no positivity for CT at magnification (E) x200 and (F) x400. (G) Strong positivity for p53 was found in ATC cells but not in follicles (asterisks) (magnification, x400). (H) PDTC was negative for p53 (magnification, x400). ATC, anaplastic thyroid carcinoma; PDTC, poorly differentiated thyroid carcinoma; H&E, hematoxylin and eosin; CT, calcitonin; MSH6, mutS homolog 6; PMS2, PMS1 homolog 2.

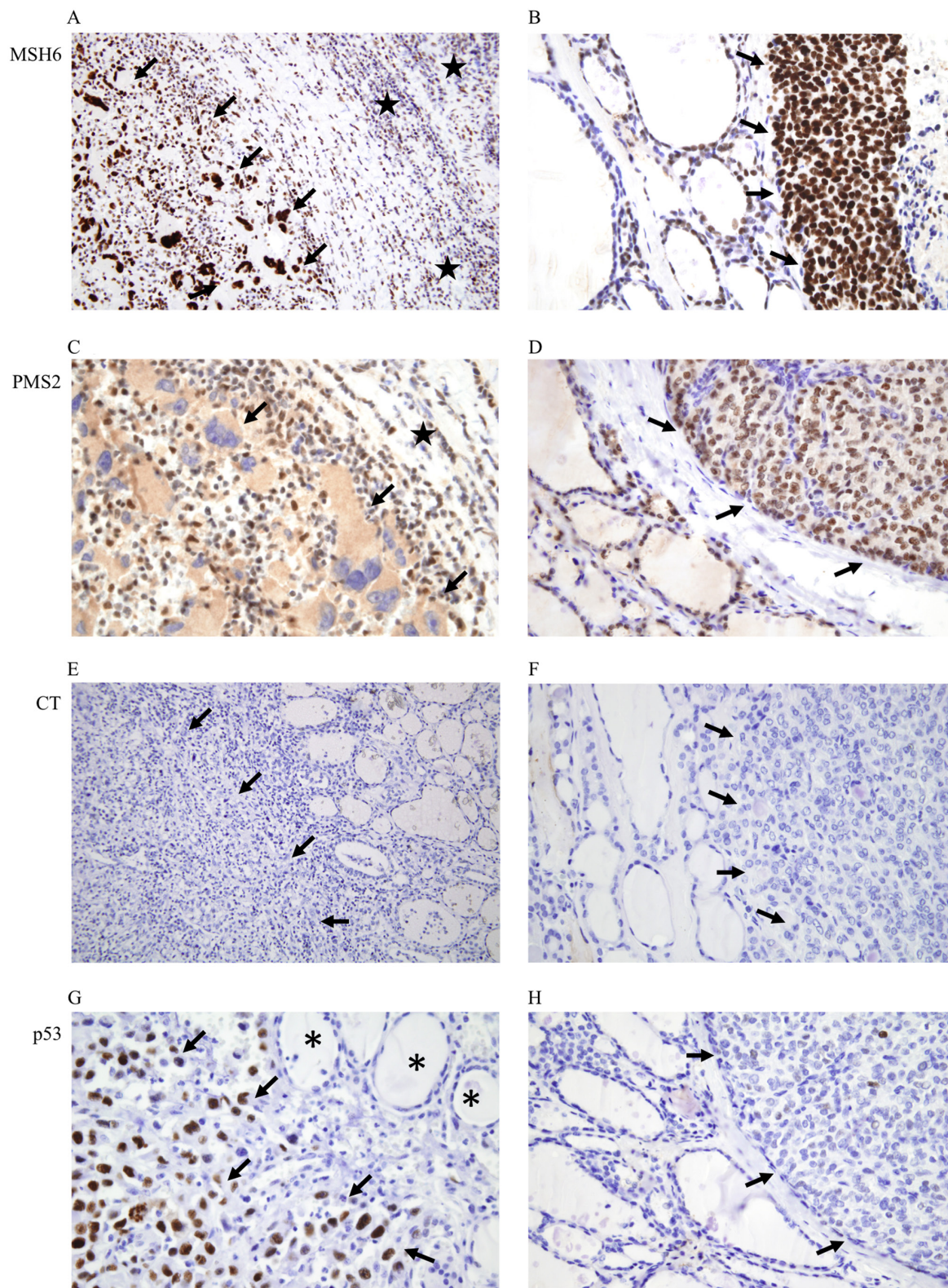


Figure S3. Transition between ATC and non-tumorous thyroid tissue (left column), as well as between PDTC and non-tumorous tissue (right column). The tumor is indicated with black arrows. (A) PD-L1 positivity was limited to ATC cells; (B) there was no PD-L1 reactivity in the PDTC nor in the adjacent non-tumorous thyroid tissue (magnification, x400). The images show positivity for (C) CD3, (E) CD4 (weak) and (G) CD68 limited to ATC. There was no evidence of positivity for (D) CD3, (F) CD4 or (H) CD8 in the PDTC or in the adjacent non-tumorous tissue. Magnification, x200 (except in F, x400). ATC, anaplastic thyroid carcinoma; PDTC, poorly differentiated thyroid carcinoma; PD-L1, programmed death ligand 1.

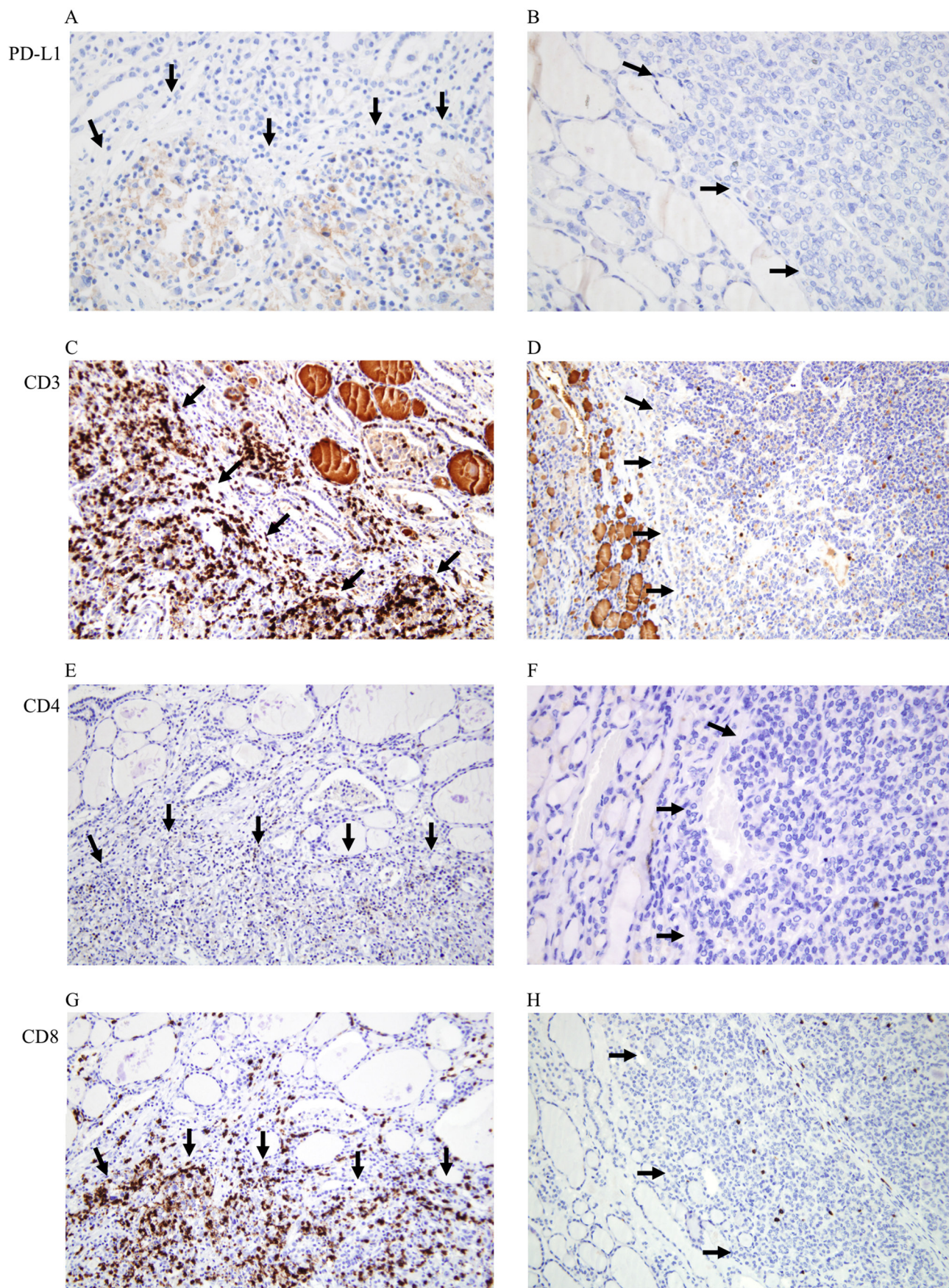


Figure S4. Transition between ATC and non-tumorous thyroid tissue (left column), as well as between PDTC and non-tumorous tissue (right column). The tumor is indicated with black arrows. There was variable positivity for (A) CD20, (C) CD68 and (E) S100 in ATC. (D) There were also some scattered CD68-positive cells in PDTC. There was no evidence of positivity for (B) CD20, (D) CD68 or (F) S100 in normal tissue. Magnification, x200. ATC, anaplastic thyroid carcinoma; PDTC, poorly differentiated thyroid carcinoma.

