Supplemental Table S1. Baseline Characteristics of the Included Studies

Included analysis	Study	Country (hospital)	Study period	Study design (using study model for cost-effectiveness analysis)	Inclusion criterion of tumor size, cm	Follow-up US	Average age	No. of female patients (%)
Disease progression	Molinaro et al. (2020) [7]	Italy (University hospital of Pisa)	2014–2018	Prospective observational study	PTC ≤1.3	Every 6 mo for the first 2 yr and then yearly	44±15	72 (77.0)
Disease progression	Sanabria (2020) [8]	Colombia (Head and Neck Cancer Center in Medellin)	2015–NA	Prospective	PTC ≤1.5	Frequency: NA	Mean 50.6±16.3 yr in the AS group	85 (83.0) in the AS group
Disease progression	Nagaoka et al. (2021) [9]	Japan Multicenter (Cancer Institute Hospital& Nippon Medical School Hospital)	1995–2019	Retrospective analysis using prospective cohort study	PTC ≤1.0	Every 6 or 12 mo	Mean 53.1±12.7 yr	495 (86.7)
Disease progression/ Surgical complication	Ho et al. (2022) [10]	USA (Cedars-Sinai Medical Center)	2014–2021	Prospective Non-randomized trial	PTC ≤2.0	Every 6 mo for the first 2 yr, then every 12 mo thereafter if no growth	Median 46.8 (IQR, 36.6–58.0)	169 (76.1)
Disease progression	Lee et al. (2022) [11]	Korea Multicenter (Seoul National University Hospital, Seoul National University Bundang Hospital, National Cancer Center)	2016–2021	Prospective cohort study	PTC ≤1.0	Every 6 mo the first 2 yr and yearly thereafter	Median 48 yr Mean 49.3±11.8 yr in the AS group 46.3±10.5 yr in the IS group	919 (78.1)
Disease progression	Tuttle et al. (2022) [12]	USA (Memorial Sloan Kettering Cancer Center)	NA	Prospective cohort (n=394)+ Retrospective study (n=89)	PTC ≤1.5	Every 6 mo for the first 2 yr and yearly for the next 3 yr, and then approximately every 2 yr	Median 52 yr Mean 52±15 yr	372 (77.0)
Disease progression	Ito et al. (2023) [13]	Japan Kuma Hospital	2005–2019	Retrospective	PTC ≤1.0	NA	Median 58 yr	2,352 (87.0)
Surgical outcome	Sasaki et al. (2023) [15]	Japan Kuma Hospital	2005–2019	Retrospective	PTC ≤1.0	NA	In the DS group, median 53 yr at diagnosis and 55 yr at surgery In the IS group, median 55 yr	In the DS group, 213 (88.0) In the IS group, 1,546 (88.9)
Surgical outcome	Hwang et al. (2023) [16]	Korea Multicenter (Seoul National University Hospital, Seoul National University Bundang Hospital, National Cancer Center)	2016–2020	Prospective	PTC ≤1.0	Every 6 mo the first 2 yr and yearly thereafter	In the DS group, mean 47.9±10.6 yr at diagnosis In the IS group, mean 46.3±10.5 yr	In the DS group, 97 (73.5) In the IS group, 308 (80.2)

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Supplemental Table S1. Continued

Included analysis	Study	Country (hospital)	Study period	Study design (using study model for cost-effectiveness analysis)	Inclusion criterion of tumor size, cm	Follow-up US	Average age	No. of female patients (%)
Quality of life	Jeon et al. (2019) [18]	Korea Asan Medical Center	2016–2017	Cross-sectional	PTC ≤1.0	NA	In the AS group, 50.3±10.6 yr In the surgery group (lobectomy), 51.0±10.4 yr	In the AS group, 29 (67.0) In the surgery group (lobectomy), 126 (85.0)
Quality of life	Kong et al. (2019) [19]	Korea Multicenter (Seoul National University Hospital, Seoul National University Bundang Hospital, National Cancer Center)	2016–2018	Longitudinal	PTC ≤1.0	Every 6 mo the first 2 yr and yearly thereafter	In the AS group, 47.3±11.7 yr In the surgery group, 45.6±10.5 yr	In the AS group, 143 (74.5) In the surgery group, 167 (82.3)
Quality of life	Nakamura et al. (2020) [17]	Japan Kuma Hospital	2019	Cross-sectional	PTC ≤1.0	NA	In the AS group, 58.6±12.5 yr In the surgery group, 58.4±13.1 yr	In the AS group, 264 (88.6) In the surgery group, 47 (96.0)
Quality of life	Yoshida et al. (2020) [20]	Japan Tokyo Women's Medical University	2016–2017	Cross-sectional	PTC ≤1.0	NA	In the AS group, median 61 yr In the surgery group, median 62.5 yr	In the AS group, 16 (80.0) In the surgery group, 22 (73.3)
Quality of life	Kazusaka et al. (2023) [21]	Japan Multicenter (Cancer Institute Hospital& Nippon Medical School Hospital)	2019	Cross-sectional	PTC ≤1.0	NA	In the AS group, 58.2±11.9 yr at survey In the surgery group, 54.2±12.5 yr at survey	In the AS group, 218 (87.6) In the surgery group, 27 (84.4)
Cost-effectiveness	Lang et al. (2015) [22]	China (Hong Kong)	20 yr follow-up	A decision tree model using TreeAge Software Pro version 2013	PTC ≤1.0	Every 6 mo	NA	NA
Cost-effectiveness	Oda et al. (2017) [27]	Japan	10 yr follow-up	NA	PTC ≤1.0	6 mo later and once a year thereafter	NA	NA
Cost-effectiveness	Venkatesh et al. (2017) [23]	USA	20 yr follow-up (from surgery cohort between 1985 and 2017)	A Markov State-transition decision analysis model	PTC ≤1.0	Every 12 mo in both AS and surgery groups	NA	NA

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Supplemental Table S1. Continued

Included analysis	Study	Country (hospital)	Study period	Study design (using study model for cost-effectiveness analysis)	Inclusion criterion of tumor size, cm	Follow-up US	Average age	No. of female patients (%)
Cost-effectiveness	Lin et al. (2020) [24]	Australia	Median 13.4 mo (0–267.9) follow-up	NA	PTC ≤1.0	6 mo, and then biannually in the AS group and annually in hemithyroidectomy group	NA	NA
Cost-effectiveness	Youssef et al. (2022) [25]	USA	20 yr follow-up	A Markov State-transition decision analysis model	PTC ≤1.5	Every 12 mo in both AS and surgery groups	NA	NA
Cost-effectiveness	Kim et al. (2022) [26]	Korea	10- and 20- yr follow-up	Created model with 4 scenarios	PTC ≤1.0	In the AS group, every 6 mo with at the initial 2 yr, and then every year In the surgery group, every 12 mo at the first 5 yr, 2-yr intervals for 5–10 yr, and then every 3–5 yr after 10 yr	NA	NA

US, ultrasonography; PTC, papillary thyroid cancer; NA, not applicable; AS, active surveillance; IQR, interquartile range; IS, immediate surgery; DS, delayed surgery.