<JLO 22-0473; supplementary material>

**Table 1.** The characteristics of the included studies

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Study | Year | Design | Treated patients (*n*) | Sex (m/f) | Age (years, mean ± SD or median (range)) | T-classification (T1/T2) | Control patients (*n*) | Sex (m/f) | Age (years, mean ± SD or median (range)) | T-classification (T1/T2) | Tracer for sentinel node biopsy | Nation | Outcomes |
| Fan *et al*.,20 2014 | 2014 | Retrospective cohort study | 30 | 21/9 | 48 | 17/13 | 52 | 30/22 | 52 | 27/25 | Lymphoscintigraphy, methylene blue | China | Disease-free survival (10 years), overall survival (3, 5, 10 years) |
| Chung *et al*.,21 2015 | 2015 | Prospective cohort study | 40 | 19/21 | 48.8 ± 14.1 | 29/11 | 21 | 6/15 | 55.9 ± 10.4 | 10/11 | Lymphoscintigraphy, hand-held gamma probe | Korea | Disease-free survival (10 years), disease-specific survival (10 years), overall survival (10 years) |
| de Carvalho *et al*.,22 2016 | 2016 | Retrospective cohort study | 30 | 25/5 | 58.86 | 8/22 | 22 | 18/4 | 58.1 | 6/16 | Lymphoscintigraphy, SPECT-CT scan | Brazil | Disease-free survival (10 years) |
| Hernando *et al*.,23 2016 | 2016 | Prospective cohort study | 32 | 23/9 | 65.8 (45–81) | 17/15 | 41 | 28/13 | 66.7 (40–90) | 19/22 | Lymphoscintigraphy | Spain | Disease-free survival (5 years), overall survival (5 years), disease-specific survival (5 years) |
| Seferin *et al*.,31 2018 | 2018 | Prospective cohort study | 35 | 24/11 | 59.8 ± 10.4 | 27/8 | 35 | 28/7 | 61.9 ± 11.4 | 13/22 | Lymphoscintigraphy with SPECT-CT, hand-held gamma probe | Brazil | Disease-free survival (5 years), overall survival (5 years), disease-specific survival (10 years) |
| Cramer *et al*.,24 2019 | 2018 | Retrospective cohort study | 240 | 133/107 | NA | 170/70 | 8088 | 4745/3343 | NA | 4039/4049 | Not specified | USA | Overall survival (3 years) |
| Moya-Plana *et al*.,25 2018 | 2018 | Prospective cohort study | 179 | 151/78 | 56 (26–86) (total) | 119/110 (total) | 50 |  |  |  | SPECT-CT, lymphoscintigraphy with a hand-held gamma probe | France | Disease-free survival (5 years), overall survival (5 years) |
| Sundaram & Subramanyam,26 2019 | 2019 | Prospective cohort study | 28 | 42/16 | 33–65 (total) | T1 (25), T2 (26), T3 (7) (total) | 30 |  |  |  | Lymphoscintigraphy, hand-held gamma probe | India | Disease-free survival (5 years) |
| den Toom *et al*.,27 2020 | 2020 | Retrospective cohort study | 371 | 250/237 | 63 (55–69) | 335/153 | 184 | 212/178 | 62 (53–70) | 136/254 | Lymphoscintigraphy with SPECT-CT, hand-held gamma probe | Netherlands | Disease-free survival (5 years), disease-specific survival (3, 5 years) |
| Garrel *et al*.,28 2020 | 2020 | Randomised, controlled trial | 140 | 88/52 | 60.8 ± 12.0 | 88/52 | 139 | 101/38 | 59.1 ± 10.9 | 91/52 | Lymphoscintigraphy with transoral radiotracer injection | France | Disease-free survival (3, 5, 10 years), disease-specific survival (3, 5, 10 years), overall survival (3, 5, 10 years) |
| Hasegawa *et al*.,29 2021 | 2021 | Randomised, controlled trial | 134 | 89/45 | 63 (90–21) | 26/108 | 137 | 90/47 | 63 (85–28) | 25/112 | Lymphoscintigraphy, hand-held gamma probe with or without single-photon emission computed tomography | Japan | Disease-free survival (3 years), overall survival (3 years) |
| Park *et al*.,30 2022 | 2022 | Retrospective cohort study | 91 | 59/32 | 51.27 ± 13.86 | 73/18 | 120 | 70/50 | 54.52 ± 13.34 | 138/73 | Lymphoscintigraphy, hand-held gamma probe | Korea | Disease-free survival (5 years), overall survival (5 years) |

m = male; f = female; SD = standard deviation; SPECT-CT = single-photon emission computed tomography–computed tomography; NA = not available

**Table 2.** Methodological quality of the included studies: Risk of Bias in Non-Randomized Studies of Interventions

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Study | Confounding | Selection of  participants | Classification of  interventions | Deviations from  interventions | Missing  data | Measurement of  outcomes | Selection of  results |
| Fan *et al*.,20 2014 | Low | Serious | Low | Low | Low | Low | Low |
| Chung *et al*.,21 2015 | Low | Low | Low | Low | Low | Low | Low |
| de Carvalho *et al.*,22 2016 | Moderate | Moderate | Low | Low | Low | Low | Low |
| Hernando *et al*.,23 2016 | Moderate | Low | Low | Low | Low | Low | Low |
| Seferin *et al*.,31 2018 | Low | Low | Low | Low | Low | Low | Low |
| Cramer *et al*.,24 2019 | Low | Low | Low | Low | Low | Low | Low |
| Moya-Plana *et al*.,25 2018 | Moderate | Moderate | Low | Low | Low | Low | Low |
| Sundaram & Subramanyam,26 2019 | Moderate | Moderate | Low | Low | Low | Low | Low |
| den Toom *et al*.,27 2020 | Moderate | Moderate | Moderate | Low | Low | Low | Low |
| Park *et al*.,30 2022 | Serious | Moderate | Moderate | Low | Low | Low | Low |

**Table 3.** Methodological quality of the included studies: Risk of Bias 2

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Parameter | Randomisation | Deviations from interventions | Missing data | Measurement of outcomes | Selection of results |
| Garrel *et al*.,28 2020 | Low | Low | Low | Low | Low |
| Hasegawa *et al*.,29 2021 | Low | Low | Low | Low | Low |