**Supplementary Table 1.** The search string used for each key questions

1. **Preoperative workup**

**A1.** **Which test is helpful to evaluate the extent of the primary tumor in patients with locally invasive DTC for surgery?**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| DB | no. | Search Query | Search result 2021.09.16 | Note |
| PubMed | #1 | "Adult"[Mesh] | 7,560,696 |  |
| #2 | "Adult"[TW] OR "Adults"[TW] OR "adults"[TW] OR "grown-ups"[TW] OR "grownup"[TW] OR "grownups"[TW] | 6,120,632 |  |
| #3 | "Middle Aged"[Mesh] | 4,561,879 |  |
| #4 | "Middle Aged"[TW] OR "Middle Age"[TW] | 4,579,778 |  |
| #5 | "Aged"[Mesh] | 3,290,549 |  |
| #6 | "Aged"[TW] OR "Elderly"[TW] OR "senior citizen"[TW] OR "senium"[TW] | 5,708,406 |  |
| #7 | "Aged, 80 and over"[Mesh] | 974,164 |  |
| #8 | "Oldest Old"[TW] OR "Nonagenarians"[TW] OR "Nonagenarian"[TW] OR "Octogenarians"[TW] OR "Octogenarian"[TW] OR "Centenarians"[TW] OR "Centenarian"[TW] OR "very old"[TW] | 13,159 |  |
| #9 | "Frail Elderly"[Mesh] | 12,903 |  |
| #10 | "Frail Elderly"[TW] OR "Elderly, Frail"[TW] OR "Frail Elders"[TW] OR "Elder, Frail"[TW] OR "Elders, Frail"[TW] OR "Frail Elder"[TW] OR "Functionally-Impaired Elderly"[TW] OR "Elderly, Functionally-Impaired"[TW] OR "Functionally Impaired Elderly"[TW] OR "Frail Older Adults"[TW] OR "Adult, Frail Older"[TW] OR "Adults, Frail Older"[TW] OR "Frail Older Adult"[TW] OR "Older Adult, Frail"[TW] OR "Older Adults, Frail"[TW] | 15,473 |  |
| #11 | "older age"[TW] OR "aging"[TW] OR "ageing"[TW] OR "older adult\*"[TW] OR "older people"[TW] OR "older persons"[TW] OR "elder\*"[TW] OR "geriatric\* "[TW] OR "senior\*"[TW] OR "pensioner\*"[TW] OR "veteran\*"[TW] | 881,773 |  |
| #12 | #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 | 8,735,559 | P1 - Adult |
| #13 | "Thyroid Neoplasms"[Mesh] | 55,582 |  |
| #14 | "Thyroid Neoplasms"[TW] OR "Neoplasm, Thyroid"[TW] OR "Thyroid Neoplasm"[TW] OR "Neoplasms, Thyroid"[TW] OR "Thyroid Carcinoma"[TW] OR "Carcinoma, Thyroid"[TW] OR "Carcinomas, Thyroid"[TW] OR "Thyroid Carcinomas"[TW] OR "Cancer of Thyroid"[TW] OR "Thyroid Cancers"[TW] OR "Thyroid Cancer"[TW] OR "Cancer, Thyroid"[TW] OR "Cancers, Thyroid"[TW] OR "Cancer of the Thyroid"[TW] OR "Thyroid Adenoma"[TW] OR "Adenoma, Thyroid"[TW] OR "Adenomas, Thyroid"[TW] OR "Thyroid Adenomas"[TW] OR "thyroid tumor"[TW] OR "thyroid gland tumor"[TW] OR "thyroid gland tumour"[TW] OR "thyroid tumour"[TW] OR "thyroidal tumor"[TW] OR "thyroidal tumour"[TW] OR "tumor, thyroid gland"[TW] OR "tumour, thyroid gland"[TW] | 65,391 |  |
| #15 | "differentiated thyroid cancer"[TW] OR "differentiated thyroid cancers"[TW] OR "differentiated thyroid carcinoma"[TW] OR "differentiated thyroid carcinomas"[TW] OR "DTC"[TW] OR "WDTC"[TW] OR "well differentiated thyroid cancer"[TW] OR "well differentiated thyroid cancers"[TW] OR "well differentiated thyroid carcinoma"[TW] OR "well differentiated thyroid carcinomas"[TW] OR "well differentiated thyroid cancer"[TW] | 10,578 |  |
| #16 | #13 OR #14 OR #15 |  | P2 - patients with locally advanced thyroid cancer |
| #17 | "Neoplasm Metastasis"[Mesh] | 212,103 |  |
| #18 | "Neoplasm Metastasis"[TW] OR "Neoplasm Metastases"[TW] OR "Metastases, Neoplasm"[TW] OR "Metastasis, Neoplasm"[TW] OR "Metastase"[TW] OR "Metastases"[TW] OR "Metastasis"[TW] OR "lateral neck metastasis"[TW] OR "neck metastasis"[TW] | 480,569 |  |
| #19 | "Lymphatic Metastasis"[Mesh] | 92,940 |  |
| #20 | "Lymphatic Metastasis"[TW] OR "Lymphatic Metastases"[TW] OR "Lymph Node Metastasis"[TW] OR "Lymph Node Metastases"[TW] OR "Metastasis, Lymph Node"[TW] | 121,504 |  |
| #21 | #17 OR #18 OR #19 OR #20 | 490,939 | P3 - neck metastasis |
| #22 | "preoperative workup"[TW] OR "workupvmedical checkup"[TW] | 903 |  |
| #23 | "Biopsy"[Mesh] | 293,392 |  |
| #24 | "Biopsy"[TW] OR "Biopsies"[TW] OR "bioptic diagnosis"[TW] OR "bioptical diagnosis"[TW] OR "rebiopsy"[TW] | 532,689 |  |
| #25 | "Pathology, Molecular"[Mesh] | 2,321 |  |
| #26 | "Pathology, Molecular"[TW] OR "Molecular Pathologies"[TW] OR "Molecular Pathology"[TW] OR "Pathologies, Molecular"[TW] OR "Diagnostic Molecular Pathology"[TW] OR "Diagnostic Molecular Pathologies"[TW] OR "Molecular Pathologies, Diagnostic"[TW] OR "Molecular Pathology, Diagnostic"[TW] OR "Pathologies, Diagnostic Molecular"[TW] OR "Pathology, Diagnostic Molecular"[TW] OR "Molecular Diagnostics"[TW] OR "Diagnostic, Molecular"[TW] OR "Diagnostics, Molecular"[TW] OR "Molecular Diagnostic"[TW] OR "gene expression assay kit"[TW] OR "gene expression test kit"[TW] OR "genetic assay kit"[TW] OR "genetic test kit"[TW] OR "molecular diagnostic test kit"[TW] OR "molecular test"[TW] | 27,941 |  |
| #27 | "Endoscopy"[Mesh] | 373,679 |  |
| #28 | "Endoscopy"[TW] OR "Surgical Procedures, Endoscopic"[TW] OR "Procedure, Endoscopic Surgical"[TW] OR "Procedures, Endoscopic Surgical"[TW] OR "Surgical Procedure, Endoscopic"[TW] OR "Endoscopy, Surgical"[TW] OR "Surgical Endoscopy"[TW] OR "Endoscopic Surgical Procedure"[TW] OR "Endoscopic Surgical Procedures"[TW] OR "endoscopic imaging"[TW] | 137,204 |  |
| #29 | "Endoscopes"[Mesh] | 25,299 |  |
| #30 | "Endoscopes"[TW] OR "Endoscope"[TW] OR "endoscope workstation"[TW] OR "endoscopes"[TW] OR "magnifying endoscope"[TW] | 20,273 |  |
| #31 | "Ultrasonography"[Mesh] | 458,366 |  |
| #32 | "Ultrasonography"[TW] OR "Diagnostic Ultrasound"[TW] OR "Diagnostic Ultrasounds"[TW] OR "Ultrasound, Diagnostic"[TW] OR "Ultrasounds, Diagnostic"[TW] OR "Ultrasound Imaging"[TW] OR "Imaging, Ultrasound"[TW] OR "Imagings, Ultrasound"[TW] OR "Echotomography"[TW] OR "Ultrasonic Imaging"[TW] OR "Imaging, Ultrasonic"[TW] OR "Sonography, Medical"[TW] OR "Medical Sonography"[TW] OR "Ultrasonographic Imaging"[TW] OR "Imaging, Ultrasonographic"[TW] OR "Imagings, Ultrasonographic"[TW] OR "Ultrasonographic Imagings"[TW] OR "Echography"[TW] OR "Diagnosis, Ultrasonic"[TW] OR "Diagnoses, Ultrasonic"[TW] OR "Ultrasonic Diagnoses"[TW] OR "Ultrasonic Diagnosis"[TW] OR "Echotomography, Computer"[TW] OR "Computer Echotomography"[TW] OR "Tomography, Ultrasonic"[TW] OR "Ultrasonic Tomography"[TW] OR "diagnostic ultrasonic examination"[TW] OR "diagnostic ultrasonic imaging"[TW] OR "diagnostic ultrasonic method"[TW] OR "doptone"[TW] OR "duplex echography"[TW] OR "echogram"[TW] OR "echographic evaluation"[TW] OR "echoscopy"[TW] OR "echosound"[TW] OR "high resolution echography"[TW] OR "scanning, ultrasonic"[TW] OR "sonogram"[TW] OR "sonographic examination"[TW] OR "sonographic screening"[TW] OR "sonography"[TW] OR "ultrasonic detection"[TW] OR "ultrasonic echo"[TW] OR "ultrasonic examination"[TW] OR "ultrasonic scanning"[TW] OR "ultrasonic scintillation"[TW] OR "ultrasonogram"[TW] OR "ultrasonographic examination"[TW] OR "ultrasonographic screening"[TW] OR "ultrasound diagnosis"[TW] OR "ultrasound scanning"[TW] OR "Ultrasound"[TW] | 493,806 |  |
| #33 | "ultrasound"[TW] OR "phonophoresis"[TW] OR "radiation, ultrasonic"[TW] OR "sonication"[TW] OR "sonification"[TW] OR "ultra sound"[TW] OR "ultrashell"[TW] OR "ultrasonic"[TW] OR "ultrasonic energy"[TW] OR "ultrasonic irradiation"[TW] OR "ultrasonic measurement"[TW] OR "ultrasonic sound"[TW] OR "ultrasonic wave"[TW] OR "ultrasonic waves"[TW] OR "ultrasonics"[TW] OR "ultrasound radiation"[TW] | 333,305 |  |
| #34 | "CT scan"[TW] OR "ct scanning"[TW] OR "CT"[TW] OR "Computed Tomography"[TW] | 734,886 |  |
| #35 | "Magnetic Resonance Imaging"[Mesh] | 485,690 |  |
| #36 | "Magnetic Resonance Imaging"[TW] OR "Imaging, Magnetic Resonance"[TW] OR "NMR Imaging"[TW] OR "Imaging, NMR"[TW] OR "Tomography, NMR"[TW] OR "Tomography, MR"[TW] OR "MR Tomography"[TW] OR "NMR Tomography"[TW] OR "Steady-State Free Precession MRI"[TW] OR "Steady State Free Precession MRI"[TW] OR "Zeugmatography"[TW] OR "Imaging, Chemical Shift"[TW] OR "Chemical Shift Imagings"[TW] OR "Imagings, Chemical Shift"[TW] OR "Shift Imaging, Chemical"[TW] OR "Shift Imagings, Chemical"[TW] OR "Chemical Shift Imaging"[TW] OR "Magnetic Resonance Image"[TW] OR "Image, Magnetic Resonance"[TW] OR "Magnetic Resonance Images"[TW] OR "Resonance Image, Magnetic"[TW] OR "Magnetization Transfer Contrast Imaging"[TW] OR "MRI Scans"[TW] OR "MRI Scan"[TW] OR "Scan, MRI"[TW] OR "Scans, MRI"[TW] OR "Tomography, Proton Spin"[TW] OR "Proton Spin Tomography"[TW] OR "fMRI"[TW] OR "MRI, Functional"[TW] OR "Functional MRI"[TW] OR "Functional MRIs"[TW] OR "MRIs, Functional"[TW] OR "Functional Magnetic Resonance Imaging"[TW] OR "Magnetic Resonance Imaging, Functional"[TW] OR "Spin Echo Imaging"[TW] OR "Echo Imaging, Spin"[TW] OR "Echo Imagings, Spin"[TW] OR "Imaging, Spin Echo"[TW] OR "Imagings, Spin Echo"[TW] OR "Spin Echo Imagings"[TW] OR "nuclear magnetic resonance imaging"[TW] OR "imaging, magnetization transfer"[TW] OR "magnetic resonance imaging"[TW] OR "magnetic resonance tomography"[TW] OR "magnetization transfer imaging"[TW] OR "mr imaging"[TW] OR "MRI"[TW] OR "NMR imaging"[TW] OR "MRI"[TW] | 636,027 |  |
| #37 | "Positron Emission Tomography Computed Tomography"[Mesh] | 12,750 |  |
| #38 | "Positron Emission Tomography Computed Tomography"[TW] OR "PET-CT Scan"[TW] OR "PET-CT Scans"[TW] OR "Scan, PET-CT"[TW] OR "Scans, PET-CT"[TW] OR "PET CT Scan"[TW] OR "CT Scan, PET"[TW] OR "CT Scans, PET"[TW] OR "PET CT Scans"[TW] OR "Scan, PET CT"[TW] OR "Scans, PET CT"[TW] OR "CT PET"[TW] OR "Positron Emission Tomography-Computed Tomography"[TW] OR "PET-CT"[TW] OR "CT PET Scan"[TW] OR "CT PET Scans"[TW] OR "PET Scan, CT"[TW] OR "PET Scans, CT"[TW] OR "Scan, CT PET"[TW] OR "Scans, CT PET"[TW] OR "computer assisted positron emission tomography"[TW] OR "positron emission computed tomography"[TW] OR "positron emission tomography computed tomography"[TW] OR "positron emission tomography, computer assisted"[TW] OR "positron-emission tomography and computed tomography"[TW] | 38,345 |  |
| #39 | "Whole Body Imaging"[Mesh] | 5,330 |  |
| #40 | "Whole Body Imaging"[TW] OR "Imaging, Whole Body"[TW] OR "Imagings, Whole Body"[TW] OR "Whole Body Imagings"[TW] OR "Whole Body Scanning"[TW] OR "Whole Body Scan"[TW] OR "Scan, Whole Body"[TW] OR "Scans, Whole Body"[TW] OR "Whole Body Screening"[TW] OR "Screening, Whole Body"[TW] OR "Screenings, Whole Body"[TW] OR "Whole Body Screenings"[TW] OR "whole body radiography"[TW] OR "whole body screening"[TW] OR "WBS"[TW] | 8,394 |  |
| #41 | #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 | 2,659,134 | I - preoperative workup |
| #42 | #12 AND #16 AND #21 AND #41 | 3,672 | P1 AND P2 AND P3 AND I |

**A2. What is the role of preoperative workup in patients with thyroid cancer with neck metastasis?**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| DB | no. | Search query | Search result 2021.09.16 | Note |
| PubMed | #1 | "Adult"[Mesh] | 7,560,696 |  |
| #2 | "Adult"[TW] OR "Adults"[TW] OR "adults"[TW] OR "grown-ups"[TW] OR "grownup"[TW] OR "grownups"[TW] | 6,120,632 |  |
| #3 | "Middle Aged"[Mesh] | 4,561,879 |  |
| #4 | "Middle Aged"[TW] OR "Middle Age"[TW] | 4,579,778 |  |
| #5 | "Aged"[Mesh] | 3,290,549 |  |
| #6 | "Aged"[TW] OR "Elderly"[TW] OR "senior citizen"[TW] OR "senium"[TW] | 5,708,406 |  |
| #7 | "Aged, 80 and over"[Mesh] | 974,164 |  |
| #8 | "Oldest Old"[TW] OR "Nonagenarians"[TW] OR "Nonagenarian"[TW] OR "Octogenarians"[TW] OR "Octogenarian"[TW] OR "Centenarians"[TW] OR "Centenarian"[TW] OR "very old"[TW] | 13,159 |  |
| #9 | "Frail Elderly"[Mesh] | 12,903 |  |
| #10 | "Frail Elderly"[TW] OR "Elderly, Frail"[TW] OR "Frail Elders"[TW] OR "Elder, Frail"[TW] OR "Elders, Frail"[TW] OR "Frail Elder"[TW] OR "Functionally-Impaired Elderly"[TW] OR "Elderly, Functionally-Impaired"[TW] OR "Functionally Impaired Elderly"[TW] OR "Frail Older Adults"[TW] OR "Adult, Frail Older"[TW] OR "Adults, Frail Older"[TW] OR "Frail Older Adult"[TW] OR "Older Adult, Frail"[TW] OR "Older Adults, Frail"[TW] | 15,473 |  |
| #11 | "older age"[TW] OR "aging"[TW] OR "ageing"[TW] OR "older adult\*"[TW] OR "older people"[TW] OR "older persons"[TW] OR "elder\*"[TW] OR "geriatric\* "[TW] OR "senior\*"[TW] OR "pensioner\*"[TW] OR "veteran\*"[TW] | 881,773 |  |
| #12 | #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 | 8,735,559 | P1 - Adult |
| #13 | "Thyroid Neoplasms"[Mesh] | 55,582 |  |
| #14 | "Thyroid Neoplasms"[TW] OR "Neoplasm, Thyroid"[TW] OR "Thyroid Neoplasm"[TW] OR "Neoplasms, Thyroid"[TW] OR "Thyroid Carcinoma"[TW] OR "Carcinoma, Thyroid"[TW] OR "Carcinomas, Thyroid"[TW] OR "Thyroid Carcinomas"[TW] OR "Cancer of Thyroid"[TW] OR "Thyroid Cancers"[TW] OR "Thyroid Cancer"[TW] OR "Cancer, Thyroid"[TW] OR "Cancers, Thyroid"[TW] OR "Cancer of the Thyroid"[TW] OR "Thyroid Adenoma"[TW] OR "Adenoma, Thyroid"[TW] OR "Adenomas, Thyroid"[TW] OR "Thyroid Adenomas"[TW] OR "thyroid tumor"[TW] OR "thyroid gland tumor"[TW] OR "thyroid gland tumour"[TW] OR "thyroid tumour"[TW] OR "thyroidal tumor"[TW] OR "thyroidal tumour"[TW] OR "tumor, thyroid gland"[TW] OR "tumour, thyroid gland"[TW] | 65,391 |  |
| #15 | "differentiated thyroid cancer"[TW] OR "differentiated thyroid cancers"[TW] OR "differentiated thyroid carcinoma"[TW] OR "differentiated thyroid carcinomas"[TW] OR "DTC"[TW] OR "WDTC"[TW] OR "well differentiated thyroid cancer"[TW] OR "well differentiated thyroid cancers"[TW] OR "well differentiated thyroid carcinoma"[TW] OR "well differentiated thyroid carcinomas"[TW] OR "well differentiated thyroid cancer"[TW] | 10,578 |  |
| #16 | #13 OR #14 OR #15 |  | P2 - patients with locally advanced thyroid cancer |
| #17 | "Neoplasm Metastasis"[Mesh] | 212,103 |  |
| #18 | "Neoplasm Metastasis"[TW] OR "Neoplasm Metastases"[TW] OR "Metastases, Neoplasm"[TW] OR "Metastasis, Neoplasm"[TW] OR "Metastase"[TW] OR "Metastases"[TW] OR "Metastasis"[TW] OR "lateral neck metastasis"[TW] OR "neck metastasis"[TW] | 480,569 |  |
| #19 | "Lymphatic Metastasis"[Mesh] | 92,940 |  |
| #20 | "Lymphatic Metastasis"[TW] OR "Lymphatic Metastases"[TW] OR "Lymph Node Metastasis"[TW] OR "Lymph Node Metastases"[TW] OR "Metastasis, Lymph Node"[TW] | 121,504 |  |
| #21 | #17 OR #18 OR #19 OR #20 | 490,939 | P3 - neck metastasis |
| #22 | "preoperative workup"[TW] OR "workupvmedical checkup"[TW] | 903 |  |
| #23 | "Biopsy"[Mesh] | 293,392 |  |
| #24 | "Biopsy"[TW] OR "Biopsies"[TW] OR "bioptic diagnosis"[TW] OR "bioptical diagnosis"[TW] OR "rebiopsy"[TW] | 532,689 |  |
| #25 | "Pathology, Molecular"[Mesh] | 2,321 |  |
| #26 | "Pathology, Molecular"[TW] OR "Molecular Pathologies"[TW] OR "Molecular Pathology"[TW] OR "Pathologies, Molecular"[TW] OR "Diagnostic Molecular Pathology"[TW] OR "Diagnostic Molecular Pathologies"[TW] OR "Molecular Pathologies, Diagnostic"[TW] OR "Molecular Pathology, Diagnostic"[TW] OR "Pathologies, Diagnostic Molecular"[TW] OR "Pathology, Diagnostic Molecular"[TW] OR "Molecular Diagnostics"[TW] OR "Diagnostic, Molecular"[TW] OR "Diagnostics, Molecular"[TW] OR "Molecular Diagnostic"[TW] OR "gene expression assay kit"[TW] OR "gene expression test kit"[TW] OR "genetic assay kit"[TW] OR "genetic test kit"[TW] OR "molecular diagnostic test kit"[TW] OR "molecular test"[TW] | 27,941 |  |
| #27 | "Endoscopy"[Mesh] | 373,679 |  |
| #28 | "Endoscopy"[TW] OR "Surgical Procedures, Endoscopic"[TW] OR "Procedure, Endoscopic Surgical"[TW] OR "Procedures, Endoscopic Surgical"[TW] OR "Surgical Procedure, Endoscopic"[TW] OR "Endoscopy, Surgical"[TW] OR "Surgical Endoscopy"[TW] OR "Endoscopic Surgical Procedure"[TW] OR "Endoscopic Surgical Procedures"[TW] OR "endoscopic imaging"[TW] | 137,204 |  |
| #29 | "Endoscopes"[Mesh] | 25,299 |  |
| #30 | "Endoscopes"[TW] OR "Endoscope"[TW] OR "endoscope workstation"[TW] OR "endoscopes"[TW] OR "magnifying endoscope"[TW] | 20,273 |  |
| #31 | "Ultrasonography"[Mesh] | 458,366 |  |
| #32 | "Ultrasonography"[TW] OR "Diagnostic Ultrasound"[TW] OR "Diagnostic Ultrasounds"[TW] OR "Ultrasound, Diagnostic"[TW] OR "Ultrasounds, Diagnostic"[TW] OR "Ultrasound Imaging"[TW] OR "Imaging, Ultrasound"[TW] OR "Imagings, Ultrasound"[TW] OR "Echotomography"[TW] OR "Ultrasonic Imaging"[TW] OR "Imaging, Ultrasonic"[TW] OR "Sonography, Medical"[TW] OR "Medical Sonography"[TW] OR "Ultrasonographic Imaging"[TW] OR "Imaging, Ultrasonographic"[TW] OR "Imagings, Ultrasonographic"[TW] OR "Ultrasonographic Imagings"[TW] OR "Echography"[TW] OR "Diagnosis, Ultrasonic"[TW] OR "Diagnoses, Ultrasonic"[TW] OR "Ultrasonic Diagnoses"[TW] OR "Ultrasonic Diagnosis"[TW] OR "Echotomography, Computer"[TW] OR "Computer Echotomography"[TW] OR "Tomography, Ultrasonic"[TW] OR "Ultrasonic Tomography"[TW] OR "diagnostic ultrasonic examination"[TW] OR "diagnostic ultrasonic imaging"[TW] OR "diagnostic ultrasonic method"[TW] OR "doptone"[TW] OR "duplex echography"[TW] OR "echogram"[TW] OR "echographic evaluation"[TW] OR "echoscopy"[TW] OR "echosound"[TW] OR "high resolution echography"[TW] OR "scanning, ultrasonic"[TW] OR "sonogram"[TW] OR "sonographic examination"[TW] OR "sonographic screening"[TW] OR "sonography"[TW] OR "ultrasonic detection"[TW] OR "ultrasonic echo"[TW] OR "ultrasonic examination"[TW] OR "ultrasonic scanning"[TW] OR "ultrasonic scintillation"[TW] OR "ultrasonogram"[TW] OR "ultrasonographic examination"[TW] OR "ultrasonographic screening"[TW] OR "ultrasound diagnosis"[TW] OR "ultrasound scanning"[TW] OR "Ultrasound"[TW] | 493,806 |  |
| #33 | "ultrasound"[TW] OR "phonophoresis"[TW] OR "radiation, ultrasonic"[TW] OR "sonication"[TW] OR "sonification"[TW] OR "ultra sound"[TW] OR "ultrashell"[TW] OR "ultrasonic"[TW] OR "ultrasonic energy"[TW] OR "ultrasonic irradiation"[TW] OR "ultrasonic measurement"[TW] OR "ultrasonic sound"[TW] OR "ultrasonic wave"[TW] OR "ultrasonic waves"[TW] OR "ultrasonics"[TW] OR "ultrasound radiation"[TW] | 333,305 |  |
| #34 | "CT scan"[TW] OR "ct scanning"[TW] OR "CT"[TW] OR "Computed Tomography"[TW] | 734,886 |  |
| #35 | "Magnetic Resonance Imaging"[Mesh] | 485,690 |  |
| #36 | "Magnetic Resonance Imaging"[TW] OR "Imaging, Magnetic Resonance"[TW] OR "NMR Imaging"[TW] OR "Imaging, NMR"[TW] OR "Tomography, NMR"[TW] OR "Tomography, MR"[TW] OR "MR Tomography"[TW] OR "NMR Tomography"[TW] OR "Steady-State Free Precession MRI"[TW] OR "Steady State Free Precession MRI"[TW] OR "Zeugmatography"[TW] OR "Imaging, Chemical Shift"[TW] OR "Chemical Shift Imagings"[TW] OR "Imagings, Chemical Shift"[TW] OR "Shift Imaging, Chemical"[TW] OR "Shift Imagings, Chemical"[TW] OR "Chemical Shift Imaging"[TW] OR "Magnetic Resonance Image"[TW] OR "Image, Magnetic Resonance"[TW] OR "Magnetic Resonance Images"[TW] OR "Resonance Image, Magnetic"[TW] OR "Magnetization Transfer Contrast Imaging"[TW] OR "MRI Scans"[TW] OR "MRI Scan"[TW] OR "Scan, MRI"[TW] OR "Scans, MRI"[TW] OR "Tomography, Proton Spin"[TW] OR "Proton Spin Tomography"[TW] OR "fMRI"[TW] OR "MRI, Functional"[TW] OR "Functional MRI"[TW] OR "Functional MRIs"[TW] OR "MRIs, Functional"[TW] OR "Functional Magnetic Resonance Imaging"[TW] OR "Magnetic Resonance Imaging, Functional"[TW] OR "Spin Echo Imaging"[TW] OR "Echo Imaging, Spin"[TW] OR "Echo Imagings, Spin"[TW] OR "Imaging, Spin Echo"[TW] OR "Imagings, Spin Echo"[TW] OR "Spin Echo Imagings"[TW] OR "nuclear magnetic resonance imaging"[TW] OR "imaging, magnetization transfer"[TW] OR "magnetic resonance imaging"[TW] OR "magnetic resonance tomography"[TW] OR "magnetization transfer imaging"[TW] OR "mr imaging"[TW] OR "MRI"[TW] OR "NMR imaging"[TW] OR "MRI"[TW] | 636,027 |  |
| #37 | "Positron Emission Tomography Computed Tomography"[Mesh] | 12,750 |  |
| #38 | "Positron Emission Tomography Computed Tomography"[TW] OR "PET-CT Scan"[TW] OR "PET-CT Scans"[TW] OR "Scan, PET-CT"[TW] OR "Scans, PET-CT"[TW] OR "PET CT Scan"[TW] OR "CT Scan, PET"[TW] OR "CT Scans, PET"[TW] OR "PET CT Scans"[TW] OR "Scan, PET CT"[TW] OR "Scans, PET CT"[TW] OR "CT PET"[TW] OR "Positron Emission Tomography-Computed Tomography"[TW] OR "PET-CT"[TW] OR "CT PET Scan"[TW] OR "CT PET Scans"[TW] OR "PET Scan, CT"[TW] OR "PET Scans, CT"[TW] OR "Scan, CT PET"[TW] OR "Scans, CT PET"[TW] OR "computer assisted positron emission tomography"[TW] OR "positron emission computed tomography"[TW] OR "positron emission tomography computed tomography"[TW] OR "positron emission tomography, computer assisted"[TW] OR "positron-emission tomography and computed tomography"[TW] | 38,345 |  |
| #39 | "Whole Body Imaging"[Mesh] | 5,330 |  |
| #40 | "Whole Body Imaging"[TW] OR "Imaging, Whole Body"[TW] OR "Imagings, Whole Body"[TW] OR "Whole Body Imagings"[TW] OR "Whole Body Scanning"[TW] OR "Whole Body Scan"[TW] OR "Scan, Whole Body"[TW] OR "Scans, Whole Body"[TW] OR "Whole Body Screening"[TW] OR "Screening, Whole Body"[TW] OR "Screenings, Whole Body"[TW] OR "Whole Body Screenings"[TW] OR "whole body radiography"[TW] OR "whole body screening"[TW] OR "WBS"[TW] | 8,394 |  |
| #41 | #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 | 2,659,134 | I - preoperative workup |
| #42 | #12 AND #16 AND #21 AND #41 | 3,672 | P1 AND P2 AND P3 AND I |

1. **Surgical extent of thyroidectomy**

**B1. What is the appropriate surgical extent of thyroidectomy in T3/T4 thyroid cancer?**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Database | No. | Search Query | Search Results 2021.09.14 | Note |
| PubMed | #1 | "Adult"[Mesh] | 7580322 |  |
| #2 | "Adult"[TW] OR "Adults"[TW] OR "adults"[TW] OR "grown-ups"[TW] OR "grownup"[TW] OR "grownups"[TW] | 6136788 |  |
| #3 | "Middle Aged"[Mesh] | 4573189 |  |
| #4 | "Middle Aged"[TW] OR "Middle Age"[TW] | 4591189 |  |
| #5 | "Aged"[Mesh] | 3299774 |  |
| #6 | "Aged"[TW] OR "Elderly"[TW] OR "senior citizen"[TW] OR "senium"[TW] | 5724589 |  |
| #7 | "Aged, 80 and over"[Mesh] | 977210 |  |
| #8 | "Oldest Old"[TW] OR "Nonagenarians"[TW] OR "Nonagenarian"[TW] OR "Octogenarians"[TW] OR "Octogenarian"[TW] OR "Centenarians"[TW] OR "Centenarian"[TW] OR "very old"[TW] | 13206 |  |
| #9 | "Frail Elderly"[Mesh] | 12984 |  |
| #10 | "Frail Elderly"[TW] OR "Elderly, Frail"[TW] OR "Frail Elders"[TW] OR "Elder, Frail"[TW] OR "Elders, Frail"[TW] OR "Frail Elder"[TW] OR "Functionally-Impaired Elderly"[TW] OR "Elderly, Functionally-Impaired"[TW] OR "Functionally Impaired Elderly"[TW] OR "Frail Older Adults"[TW] OR "Adult, Frail Older"[TW] OR "Adults, Frail Older"[TW] OR "Frail Older Adult"[TW] OR "Older Adult, Frail"[TW] OR "Older Adults, Frail"[TW] | 15564 |  |
| #11 | "older age"[TW] OR "aging"[TW] OR "ageing"[TW] OR "older adult\*"[TW] OR "older people"[TW] OR "older persons"[TW] OR "elder\*"[TW] OR "geriatric\* "[TW] OR "senior\*"[TW] OR "pensioner\*"[TW] OR "veteran\*"[TW] | 885626 |  |
| #12 | #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 | 8,760,220 | P1-Adult |
| #13 | "Thyroid Neoplasms"[Mesh] | 55,781 |  |
| #14 | "Thyroid Neoplasms"[TW] OR "Neoplasm, Thyroid"[TW] OR "Thyroid Neoplasm"[TW] OR "Neoplasms, Thyroid"[TW] OR "Thyroid Carcinoma"[TW] OR "Carcinoma, Thyroid"[TW] OR "Carcinomas, Thyroid"[TW] OR "Thyroid Carcinomas"[TW] OR "Cancer of Thyroid"[TW] OR "Thyroid Cancers"[TW] OR "Thyroid Cancer"[TW] OR "Cancer, Thyroid"[TW] OR "Cancers, Thyroid"[TW] OR "Cancer of the Thyroid"[TW] OR "Thyroid Adenoma"[TW] OR "Adenoma, Thyroid"[TW] OR "Adenomas, Thyroid"[TW] OR "Thyroid Adenomas"[TW] OR "thyroid tumor"[TW] OR "thyroid gland tumor"[TW] OR "thyroid gland tumour"[TW] OR "thyroid tumour"[TW] OR "thyroidal tumor"[TW] OR "thyroidal tumour"[TW] OR "tumor, thyroid gland"[TW] OR "tumour, thyroid gland"[TW] | 65,636 |  |
| #15 | "differentiated thyroid cancer"[TW] OR "differentiated thyroid cancers"[TW] OR "differentiated thyroid carcinoma"[TW] OR "differentiated thyroid carcinomas"[TW] OR "DTC"[TW] OR "WDTC"[TW] OR "well differentiated thyroid cancer"[TW] OR "well differentiated thyroid cancers"[TW] OR "well differentiated thyroid carcinoma"[TW] OR "well differentiated thyroid carcinomas"[TW] | 10,624 |  |
| #16 | "Thyroid Cancer, Papillary"[Mesh] | 5,139 |  |
| #17 | "Thyroid Cancer, Papillary"[TW] OR "Cancer, Papillary Thyroid"[TW] OR "Cancers, Papillary Thyroid"[TW] OR "Papillary Thyroid Cancer"[TW] OR "Papillary Thyroid Cancers"[TW] OR "Thyroid Cancers, Papillary"[TW] OR "Thyroid Carcinoma, Papillary"[TW] OR "Carcinoma, Papillary Thyroid"[TW] OR "Carcinomas, Papillary Thyroid"[TW] OR "Papillary Thyroid Carcinomas"[TW] OR "Thyroid Carcinomas, Papillary"[TW] OR "Papillary Carcinoma Of Thyroid"[TW] OR "Papillary Thyroid Carcinoma"[TW] OR "Familial Nonmedullary Thyroid Cancer"[TW] OR "Nonmedullary Thyroid Carcinoma"[TW] OR "Carcinoma, Nonmedullary Thyroid"[TW] OR "Carcinomas, Nonmedullary Thyroid"[TW] OR "Nonmedullary Thyroid Carcinomas"[TW] OR "Thyroid Carcinoma, Nonmedullary"[TW] OR "Thyroid Carcinomas, Nonmedullary"[TW] OR "thyroid papillary carcinoma"[TW] OR "papillary thyroid microcarcinoma"[TW] OR "thyroid gland papillary carcinoma"[TW] OR "thyroid papilla carcinoma"[TW] OR "thyroid papillary cancer"[TW] OR "thyroid papillary microcarcinoma"[TW] OR "PTC"[TW] | 22,289 |  |
| #18 | "Carcinoma, Papillary"[Mesh] | 19,167 |  |
| #19 | "Carcinoma, Papillary"[TW] OR "Carcinomas, Papillary"[TW] OR "Papillary Carcinoma"[TW] OR "Papillary Carcinomas"[TW] | 23,082 |  |
| #20 | "Thyroid cancer, follicular"[Supplementary Concept] | 219 |  |
| #21 | "Thyroid cancer, follicular"[TW] OR "Follicular Thyroid cancer"[TW] | 929 |  |
| #22 | #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 | 85,975 | P2-thyroid cancer |
| #23 | "Neoplasm Staging"[Mesh] | 183,155 |  |
| #24 | "Neoplasm Staging"[TW] OR "Staging, Neoplasm"[TW] OR "Tumor Staging"[TW] OR "Staging, Tumor"[TW] OR "Cancer Staging"[TW] OR "Staging, Cancer"[TW] OR "TNM Staging"[TW] OR "Staging, TNM"[TW] OR "TNM Staging System"[TW] OR "Staging System, TNM"[TW] OR "Staging Systems, TNM"[TW] OR "System, TNM Staging"[TW] OR "Systems, TNM Staging"[TW] OR "TNM Staging Systems"[TW] OR "TNM Classification"[TW] OR "Classification, TNM"[TW] OR "Classifications, TNM"[TW] OR "TNM Classifications"[TW] OR "cancer evaluation"[TW] OR "cancer stage"[TW] OR "response evaluation criteria in solid tumours"[TW] OR "stage classification"[TW] OR "staging, tumour"[TW] OR "tmn system"[TW] OR "tnm"[TW] OR "tnm system"[TW] OR "tumor node metastasis system"[TW] OR "tumor stage"[TW] OR "tumour node metastasis system"[TW] OR "tumour stage"[TW] OR "tumour staging"[TW] OR "Extrathyroid extension"[TW] OR "ETE"[TW] OR "T3N0"[TW] | 219,022 |  |
| #25 | "Neck Muscles"[Mesh] | 6,133 |  |
| #26 | "Neck Muscles"[TW] OR "Neck Muscles"[TW] OR "Muscle, Neck"[TW] OR "Muscles, Neck"[TW] OR "Neck Muscle"[TW] OR "cervical muscle"[TW] OR "muscle, nuchal"[TW] OR "nuchal muscle"[TW] OR "Strap Muscle"[TW] OR "Strap Muscles"[TW] OR "muscle invasion"[TW] | 8,820 |  |
| #27 | "Neoplasm Invasiveness"[Mesh] OR "Soft Tissue Neoplasms"[Mesh] | 112,811 |  |
| #28 | "Neoplasm Invasiveness"[TW] OR "Neoplasm Invasion"[TW] OR "Invasion, Neoplasm"[TW] OR "Invasiveness, Neoplasm"[TW] OR "tumor invasion"[TW] OR "cancer invasion"[TW] OR "invasive cancer"[TW] OR "neoplasm invasion"[TW] OR "neoplasm invasiveness"[TW] OR "tumour invasion"[TW] OR "Soft Tissue Neoplasms"[TW] OR "Neoplasm, Soft Tissue"[TW] OR "Neoplasms, Soft Tissue"[TW] OR "Soft Tissue Neoplasm"[TW] OR "soft tissue tumor"[TW] OR "connective and soft tissue neoplasm"[TW] OR "neoplasms, connective and soft tissue"[TW] OR "soft tissue neoplasms"[TW] OR "soft tissue tumour"[TW] OR "tumor, soft tissue"[TW] OR "tumour, soft tissue"[TW] OR "soft tissue invasion"[TW] OR "soft tissue involvement"[TW] | 124,390 |  |
| #29 | #23 OR #24 OR #25 OR #26 OR #27 OR #28 | 334,655 | P3 - with clinical T3N0 + soft tissue |
| #30 | "thyroid surgery"[TW] OR "surgery, thyroid gland"[TW] OR "thyroid gland surgery"[TW] OR "thyroid operation"[TW] OR "surgical extent"[TW] OR "operation range"[TW] OR "Optimal extent"[TW] OR "Surgery Extent"[TW] OR "Extent of Surgery"[TW] | 9,692 |  |
| #31 | "Thyroidectomy"[Mesh] | 23,703 |  |
| #32 | "Thyroidectomy"[TW] OR "Thyroidectomies"[TW] OR "strumectomy"[TW] OR "total thyroidectomy"[TW] | 31,704 |  |
| #33 | #30 OR #31 OR #32 | 36,670 | I- surgical extent |
| #34 | #12 AND #22 AND #29 AND #33 | 1,791 | P AND I |

1. **Surgery for invasion into the strap muscles, recurrent laryngeal nerve, laryngeal framework and esophagus**

**C1. What is the appropriate surgical margin in thyroid cancer with invasion into the strap muscles or soft tissue?**

**C2. What is the appropriate surgical procedure for DTC with recurrent laryngeal nerve invasion?**

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| DB | no. | Search query | Search result 2021.09.17 | Note |
| PubMed | #1 | "Adult"[Mesh] | 7,582,889 |  |
| #2 | "Adult"[TW] OR "Adults"[TW] OR "adults"[TW] OR "grown-ups"[TW] OR "grownup"[TW] OR "grownups"[TW] | 6,138,366 |  |
| #3 | "Middle Aged"[Mesh] | 4,574,669 |  |
| #4 | "Middle Aged"[TW] OR "Middle Age"[TW] | 4,592,658 |  |
| #5 | "Aged"[Mesh] | 3,301,080 |  |
| #6 | "Aged"[TW] OR "Elderly"[TW] OR "senior citizen"[TW] OR "senium"[TW] | 5,726,534 |  |
| #7 | "Aged, 80 and over"[Mesh] | 977,639 |  |
| #8 | "Oldest Old"[TW] OR "Nonagenarians"[TW] OR "Nonagenarian"[TW] OR "Octogenarians"[TW] OR "Octogenarian"[TW] OR "Centenarians"[TW] OR "Centenarian"[TW] OR "very old"[TW] | 13,209 |  |
| #9 | "Frail Elderly"[Mesh] | 12,995 |  |
| #10 | "Frail Elderly"[TW] OR "Elderly, Frail"[TW] OR "Frail Elders"[TW] OR "Elder, Frail"[TW] OR "Elders, Frail"[TW] OR "Frail Elder"[TW] OR "Functionally-Impaired Elderly"[TW] OR "Elderly, Functionally-Impaired"[TW] OR "Functionally Impaired Elderly"[TW] OR "Frail Older Adults"[TW] OR "Adult, Frail Older"[TW] OR "Adults, Frail Older"[TW] OR "Frail Older Adult"[TW] OR "Older Adult, Frail"[TW] OR "Older Adults, Frail"[TW] | 15,574 |  |
| #11 | "older age"[TW] OR "aging"[TW] OR "ageing"[TW] OR "older adult\*"[TW] OR "older people"[TW] OR "older persons"[TW] OR "elder\*"[TW] OR "geriatric\* "[TW] OR "senior\*"[TW] OR "pensioner\*"[TW] OR "veteran\*"[TW] | 885,937 |  |
| #12 | #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 | 8,762,814 | P - Adult |
| #13 | "Thyroid Neoplasms"[Mesh] | 55,789 |  |
| #14 | "Thyroid Neoplasms"[TW] OR "Neoplasm, Thyroid"[TW] OR "Thyroid Neoplasm"[TW] OR "Neoplasms, Thyroid"[TW] OR "Thyroid Carcinoma"[TW] OR "Carcinoma, Thyroid"[TW] OR "Carcinomas, Thyroid"[TW] OR "Thyroid Carcinomas"[TW] OR "Cancer of Thyroid"[TW] OR "Thyroid Cancers"[TW] OR "Thyroid Cancer"[TW] OR "Cancer, Thyroid"[TW] OR "Cancers, Thyroid"[TW] OR "Cancer of the Thyroid"[TW] OR "Thyroid Adenoma"[TW] OR "Adenoma, Thyroid"[TW] OR "Adenomas, Thyroid"[TW] OR "Thyroid Adenomas"[TW] OR "thyroid tumor"[TW] OR "thyroid gland tumor"[TW] OR "thyroid gland tumour"[TW] OR "thyroid tumour"[TW] OR "thyroidal tumor"[TW] OR "thyroidal tumour"[TW] OR "tumor, thyroid gland"[TW] OR "tumour, thyroid gland"[TW] | 65,659 |  |
| #15 | "differentiated thyroid cancer"[TW] OR "differentiated thyroid cancers"[TW] OR "differentiated thyroid carcinoma"[TW] OR "differentiated thyroid carcinomas"[TW] OR "DTC"[TW] OR "WDTC"[TW] OR "well differentiated thyroid cancer"[TW] OR "well differentiated thyroid cancers"[TW] OR "well differentiated thyroid carcinoma"[TW] OR "well differentiated thyroid carcinomas"[TW] | 10,629 |  |
| #16 | "Thyroid Cancer, Papillary"[Mesh] | 5,139 |  |
| #17 | "Thyroid Cancer, Papillary"[TW] OR "Cancer, Papillary Thyroid"[TW] OR "Cancers, Papillary Thyroid"[TW] OR "Papillary Thyroid Cancer"[TW] OR "Papillary Thyroid Cancers"[TW] OR "Thyroid Cancers, Papillary"[TW] OR "Thyroid Carcinoma, Papillary"[TW] OR "Carcinoma, Papillary Thyroid"[TW] OR "Carcinomas, Papillary Thyroid"[TW] OR "Papillary Thyroid Carcinomas"[TW] OR "Thyroid Carcinomas, Papillary"[TW] OR "Papillary Carcinoma Of Thyroid"[TW] OR "Papillary Thyroid Carcinoma"[TW] OR "Familial Nonmedullary Thyroid Cancer"[TW] OR "Nonmedullary Thyroid Carcinoma"[TW] OR "Carcinoma, Nonmedullary Thyroid"[TW] OR "Carcinomas, Nonmedullary Thyroid"[TW] OR "Nonmedullary Thyroid Carcinomas"[TW] OR "Thyroid Carcinoma, Nonmedullary"[TW] OR "Thyroid Carcinomas, Nonmedullary"[TW] OR "thyroid papillary carcinoma"[TW] OR "papillary thyroid microcarcinoma"[TW] OR "thyroid gland papillary carcinoma"[TW] OR "thyroid papilla carcinoma"[TW] OR "thyroid papillary cancer"[TW] OR "thyroid papillary microcarcinoma"[TW] OR "PTC"[TW] | 22,303 |  |
| #18 | "Carcinoma, Papillary"[Mesh] | 19,169 |  |
| #19 | "Carcinoma, Papillary"[TW] OR "Carcinomas, Papillary"[TW] OR "Papillary Carcinoma"[TW] OR "Papillary Carcinomas"[TW] | 23,084 |  |
| #20 | "Thyroid cancer, follicular"[Supplementary Concept] | 219 |  |
| #21 | "Thyroid cancer, follicular"[TW] OR "Follicular Thyroid cancer"[TW] | 929 |  |
| #22 | "Adenocarcinoma, Follicular"[Mesh] | 4,752 |  |
| #23 | "Adenocarcinoma, Follicular"[TW] OR "Adenocarcinomas, Follicular"[TW] OR "Follicular Adenocarcinoma"[TW] OR "Follicular Adenocarcinomas"[TW] OR "Thyroid Carcinoma, Follicular"[TW] OR "Follicular Thyroid Carcinoma"[TW] OR "Carcinoma, Follicular Thyroid"[TW] OR "Carcinomas, Follicular Thyroid"[TW] OR "Follicular Thyroid Carcinomas"[TW] OR "Thyroid Carcinomas, Follicular"[TW] OR "thyroid follicular carcinoma"[TW] OR "carcinoma, papillary, follicular"[TW] OR "carcinoma, thyroid follicle"[TW] OR "carcinoma, thyroidal gland follicle"[TW] OR "encapsulated angioinvasive carcinoma, thyroid gland"[TW] OR "follicle carcinoma, thyreoideal gland"[TW] OR "follicle carcinoma, thyroid gland"[TW] OR "follicular papillary carcinoma"[TW] OR "thyroid encapsulated angioinvasive carcinoma"[TW] OR "thyroid follicle carcinoma"[TW] OR "thyroid gland encapsulated angioinvasive carcinoma"[TW] OR "thyroid gland follicle carcinoma"[TW] OR "thyroid gland follicular carcinoma"[TW] OR "thyroidal encapsulated angioinvasive carcinoma"[TW] OR "thyroidal follicle carcinoma"[TW] OR "thyroidal follicular carcinoma"[TW] OR "thyroidal gland encapsulated angioinvasive carcinoma"[TW] OR "thyroidal gland follicle carcinoma"[TW] OR "thyroidal gland follicular carcinoma"[TW] OR "thyroideal encapsulated angioinvasive carcinoma"[TW] OR "thyroideal follicle carcinoma"[TW] OR "thyroideal follicular carcinoma"[TW] OR "thyroideal gland encapsulated angioinvasive carcinoma"[TW] OR "thyroideal gland follicle carcinoma"[TW] OR "thyroideal gland follicular carcinoma"[TW] OR "Thyroid cancer, follicular"[TW] | 5,685 |  |
| #24 | #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 | 86,056 | P patients with papillary or follicular thyroid cancer with Recurrent laryngeal nerve(RLN) invasion (T4a) |
| #25 | #12 AND #24 | 42,949 | P- Total |
| #26 | "Recurrent Laryngeal Nerve"[Mesh] | 2,197 |  |
| #27 | "Recurrent Laryngeal Nerve"[TW] OR "Laryngeal Nerve, Recurrent"[TW] OR "Laryngeal Nerves, Recurrent"[TW] OR "Nerve, Recurrent Laryngeal"[TW] OR "Nerves, Recurrent Laryngeal"[TW] OR "Recurrent Laryngeal Nerves"[TW] OR "Laryngeal Nerve, Inferior"[TW] OR "Inferior Laryngeal Nerve"[TW] OR "Inferior Laryngeal Nerves"[TW] OR "Laryngeal Nerves, Inferior"[TW] OR "Nerve, Inferior Laryngeal"[TW] OR "Nerves, Inferior Laryngeal"[TW] OR "laryngeal recurrent nerve"[TW] OR "larynx nerve, recurrent"[TW] OR "nerve, recurrent larynx"[TW] OR "nervus laryngeus recurrens"[TW] OR "nervus recurrens"[TW] OR "recurrens, nervus"[TW] OR "recurrent larynx nerve"[TW] OR "recurrent nerve"[TW] | 7,623 |  |
| #28 | #26 OR #27 | 7,623 | I RLN resection |
| #29 | #25 AND #28 | 927 | P AND I |
| #30 | #29 NOT ("animals"[MeSH] NOT "Humans"[MeSH]) | 926 | P AND I |

**C3. What is the appropriate surgical procedure for DTC with laryngeal invasion?**

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| --- | --- | --- | --- | --- |
| DB | no. | Search query | Search result 2021.09.17 | Note |
| PubMed | #1 | "Adult"[Mesh] | 7,582,889 |  |
| #2 | "Adult"[TW] OR "Adults"[TW] OR "adults"[TW] OR "grown-ups"[TW] OR "grownup"[TW] OR "grownups"[TW] | 6,138,366 |  |
| #3 | "Middle Aged"[Mesh] | 4,574,669 |  |
| #4 | "Middle Aged"[TW] OR "Middle Age"[TW] | 4,592,658 |  |
| #5 | "Aged"[Mesh] | 3,301,080 |  |
| #6 | "Aged"[TW] OR "Elderly"[TW] OR "senior citizen"[TW] OR "senium"[TW] | 5,726,534 |  |
| #7 | "Aged, 80 and over"[Mesh] | 977,639 |  |
| #8 | "Oldest Old"[TW] OR "Nonagenarians"[TW] OR "Nonagenarian"[TW] OR "Octogenarians"[TW] OR "Octogenarian"[TW] OR "Centenarians"[TW] OR "Centenarian"[TW] OR "very old"[TW] | 13,209 |  |
| #9 | "Frail Elderly"[Mesh] | 12,995 |  |
| #10 | "Frail Elderly"[TW] OR "Elderly, Frail"[TW] OR "Frail Elders"[TW] OR "Elder, Frail"[TW] OR "Elders, Frail"[TW] OR "Frail Elder"[TW] OR "Functionally-Impaired Elderly"[TW] OR "Elderly, Functionally-Impaired"[TW] OR "Functionally Impaired Elderly"[TW] OR "Frail Older Adults"[TW] OR "Adult, Frail Older"[TW] OR "Adults, Frail Older"[TW] OR "Frail Older Adult"[TW] OR "Older Adult, Frail"[TW] OR "Older Adults, Frail"[TW] | 15,574 |  |
| #11 | "older age"[TW] OR "aging"[TW] OR "ageing"[TW] OR "older adult\*"[TW] OR "older people"[TW] OR "older persons"[TW] OR "elder\*"[TW] OR "geriatric\* "[TW] OR "senior\*"[TW] OR "pensioner\*"[TW] OR "veteran\*"[TW] | 885,937 |  |
| #12 | #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 | 8,762,814 | P - Adult |
| #13 | "Thyroid Neoplasms"[Mesh] | 55,789 |  |
| #14 | "Thyroid Neoplasms"[TW] OR "Neoplasm, Thyroid"[TW] OR "Thyroid Neoplasm"[TW] OR "Neoplasms, Thyroid"[TW] OR "Thyroid Carcinoma"[TW] OR "Carcinoma, Thyroid"[TW] OR "Carcinomas, Thyroid"[TW] OR "Thyroid Carcinomas"[TW] OR "Cancer of Thyroid"[TW] OR "Thyroid Cancers"[TW] OR "Thyroid Cancer"[TW] OR "Cancer, Thyroid"[TW] OR "Cancers, Thyroid"[TW] OR "Cancer of the Thyroid"[TW] OR "Thyroid Adenoma"[TW] OR "Adenoma, Thyroid"[TW] OR "Adenomas, Thyroid"[TW] OR "Thyroid Adenomas"[TW] OR "thyroid tumor"[TW] OR "thyroid gland tumor"[TW] OR "thyroid gland tumour"[TW] OR "thyroid tumour"[TW] OR "thyroidal tumor"[TW] OR "thyroidal tumour"[TW] OR "tumor, thyroid gland"[TW] OR "tumour, thyroid gland"[TW] | 65,659 |  |
| #15 | "differentiated thyroid cancer"[TW] OR "differentiated thyroid cancers"[TW] OR "differentiated thyroid carcinoma"[TW] OR "differentiated thyroid carcinomas"[TW] OR "DTC"[TW] OR "WDTC"[TW] OR "well differentiated thyroid cancer"[TW] OR "well differentiated thyroid cancers"[TW] OR "well differentiated thyroid carcinoma"[TW] OR "well differentiated thyroid carcinomas"[TW] | 10,629 |  |
| #16 | "Thyroid Cancer, Papillary"[Mesh] | 5,139 |  |
| #17 | "Thyroid Cancer, Papillary"[TW] OR "Cancer, Papillary Thyroid"[TW] OR "Cancers, Papillary Thyroid"[TW] OR "Papillary Thyroid Cancer"[TW] OR "Papillary Thyroid Cancers"[TW] OR "Thyroid Cancers, Papillary"[TW] OR "Thyroid Carcinoma, Papillary"[TW] OR "Carcinoma, Papillary Thyroid"[TW] OR "Carcinomas, Papillary Thyroid"[TW] OR "Papillary Thyroid Carcinomas"[TW] OR "Thyroid Carcinomas, Papillary"[TW] OR "Papillary Carcinoma Of Thyroid"[TW] OR "Papillary Thyroid Carcinoma"[TW] OR "Familial Nonmedullary Thyroid Cancer"[TW] OR "Nonmedullary Thyroid Carcinoma"[TW] OR "Carcinoma, Nonmedullary Thyroid"[TW] OR "Carcinomas, Nonmedullary Thyroid"[TW] OR "Nonmedullary Thyroid Carcinomas"[TW] OR "Thyroid Carcinoma, Nonmedullary"[TW] OR "Thyroid Carcinomas, Nonmedullary"[TW] OR "thyroid papillary carcinoma"[TW] OR "papillary thyroid microcarcinoma"[TW] OR "thyroid gland papillary carcinoma"[TW] OR "thyroid papilla carcinoma"[TW] OR "thyroid papillary cancer"[TW] OR "thyroid papillary microcarcinoma"[TW] OR "PTC"[TW] | 22,303 |  |
| #18 | "Carcinoma, Papillary"[Mesh] | 19,169 |  |
| #19 | "Carcinoma, Papillary"[TW] OR "Carcinomas, Papillary"[TW] OR "Papillary Carcinoma"[TW] OR "Papillary Carcinomas"[TW] | 23,084 |  |
| #20 | "Thyroid cancer, follicular"[Supplementary Concept] | 219 |  |
| #21 | "Thyroid cancer, follicular"[TW] OR "Follicular Thyroid cancer"[TW] | 929 |  |
| #22 | "Adenocarcinoma, Follicular"[Mesh] | 4,752 |  |
| #23 | "Adenocarcinoma, Follicular"[TW] OR "Adenocarcinomas, Follicular"[TW] OR "Follicular Adenocarcinoma"[TW] OR "Follicular Adenocarcinomas"[TW] OR "Thyroid Carcinoma, Follicular"[TW] OR "Follicular Thyroid Carcinoma"[TW] OR "Carcinoma, Follicular Thyroid"[TW] OR "Carcinomas, Follicular Thyroid"[TW] OR "Follicular Thyroid Carcinomas"[TW] OR "Thyroid Carcinomas, Follicular"[TW] OR "thyroid follicular carcinoma"[TW] OR "carcinoma, papillary, follicular"[TW] OR "carcinoma, thyroid follicle"[TW] OR "carcinoma, thyroidal gland follicle"[TW] OR "encapsulated angioinvasive carcinoma, thyroid gland"[TW] OR "follicle carcinoma, thyreoideal gland"[TW] OR "follicle carcinoma, thyroid gland"[TW] OR "follicular papillary carcinoma"[TW] OR "thyroid encapsulated angioinvasive carcinoma"[TW] OR "thyroid follicle carcinoma"[TW] OR "thyroid gland encapsulated angioinvasive carcinoma"[TW] OR "thyroid gland follicle carcinoma"[TW] OR "thyroid gland follicular carcinoma"[TW] OR "thyroidal encapsulated angioinvasive carcinoma"[TW] OR "thyroidal follicle carcinoma"[TW] OR "thyroidal follicular carcinoma"[TW] OR "thyroidal gland encapsulated angioinvasive carcinoma"[TW] OR "thyroidal gland follicle carcinoma"[TW] OR "thyroidal gland follicular carcinoma"[TW] OR "thyroideal encapsulated angioinvasive carcinoma"[TW] OR "thyroideal follicle carcinoma"[TW] OR "thyroideal follicular carcinoma"[TW] OR "thyroideal gland encapsulated angioinvasive carcinoma"[TW] OR "thyroideal gland follicle carcinoma"[TW] OR "thyroideal gland follicular carcinoma"[TW] OR "Thyroid cancer, follicular"[TW] | 5,685 |  |
| #24 | #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 | 86,056 | P patients with papillary or follicular thyroid cancer |
| #25 | "larynx"[Mesh] | 41,288 |  |
| #26 | "larynx"[TW] OR "Laryngeal Posterior Commissure"[TW] OR "Commissure, Laryngeal Posterior"[TW] OR "Commissures, Laryngeal Posterior"[TW] OR "Laryngeal Posterior Commissures"[TW] OR "Posterior Commissures, Laryngeal"[TW] OR "Posterior Commissure, Larynx"[TW] OR "Commissure, Larynx Posterior"[TW] OR "Commissures, Larynx Posterior"[TW] OR "Larynx Posterior Commissure"[TW] OR "Larynx Posterior Commissures"[TW] OR "Posterior Commissures, Larynx"[TW] OR "Posterior Commissure, Laryngeal"[TW] OR "Laryngeal Anterior Commissure"[TW] OR "Anterior Commissures, Laryngeal"[TW] OR "Commissure, Laryngeal Anterior"[TW] OR "Commissures, Laryngeal Anterior"[TW] OR "Laryngeal Anterior Commissures"[TW] OR "Anterior Commissure, Larynx"[TW] OR "Anterior Commissures, Larynx"[TW] OR "Commissure, Larynx Anterior"[TW] OR "Commissures, Larynx Anterior"[TW] OR "Larynx Anterior Commissure"[TW] OR "Larynx Anterior Commissures"[TW] OR "Anterior Commissure, Laryngeal"[TW] OR "laryngeal development"[TW] OR "laryngeal function"[TW] OR "larynx development"[TW] OR "larynx function"[TW] | 41,531 |  |
| #27 | #25 OR #26 | 60,378 | P with larynx invasion (T4a) |
| #28 | #12 AND #24 AND #27 | 509 | P Total |
| #29 | "Thyroidectomy"[Mesh] | 23,708 |  |
| #30 | "Thyroidectomy"[TW] OR "Thyroidectomies"[TW] | 31,589 |  |
| #31 | "Larynx/surgery"[Mesh] | 8,328 |  |
| #32 | "larynx surgery"[TW] OR "laryngeal surgery"[TW] OR "larynx microsurgery"[TW] OR "surgery, larynx"[TW] OR "cordectomy"[TW] OR "laryngectomy"[TW] OR "Laryngectomies"[TW] OR "laryngoplasty"[TW] OR "Laryngoplasties"[TW] OR "supraglottoplasty"[TW] | 16,339 |  |
| #33 | #29 OR #30 OR #31 OR #32 | 50,836 | I Total thyroidectomy with laryngeal surgery |
| #34 | #28 AND #33 | 265 | P AND I |
| #35 | #34 NOT ("animals"[MeSH] NOT "Humans"[MeSH]) | 265 | P AND I |

1. **Surgery for invasion of the trachea**

**D1. What is the appropriate surgical procedure for DTC with tracheal invasion?**

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| Database | No. | Search Query | Search Results 2021.08.13 | Note |
| PubMed | #1 | "Thyroid Neoplasms"[Mesh] | 55,521 |  |
| #2 | "Thyroid Neoplasms"[TW] OR "Neoplasm, Thyroid"[TW] OR "Thyroid Neoplasm"[TW] OR "Neoplasms, Thyroid"[TW] OR "Thyroid Carcinoma"[TW] OR "Carcinoma, Thyroid"[TW] OR "Carcinomas, Thyroid"[TW] OR "Thyroid Carcinomas"[TW] OR "Cancer of Thyroid"[TW] OR "Thyroid Cancers"[TW] OR "Thyroid Cancer"[TW] OR "Cancer, Thyroid"[TW] OR "Cancers, Thyroid"[TW] OR "Cancer of the Thyroid"[TW] OR "Thyroid Adenoma"[TW] OR "Adenoma, Thyroid"[TW] OR "Adenomas, Thyroid"[TW] OR "Thyroid Adenomas"[TW] OR "thyroid tumor"[TW] OR "thyroid gland tumor"[TW] OR "thyroid gland tumour"[TW] OR "thyroid tumour"[TW] OR "thyroidal tumor"[TW] OR "thyroidal tumour"[TW] OR "tumor, thyroid gland"[TW] OR "tumour, thyroid gland"[TW] | 65,320 |  |
| #3 | "differentiated thyroid cancer"[TW] OR "differentiated thyroid cancers"[TW] OR "differentiated thyroid carcinoma"[TW] OR "differentiated thyroid carcinomas"[TW] OR "DTC"[TW] OR "WDTC"[TW] OR "well differentiated thyroid cancer"[TW] OR "well differentiated thyroid cancers"[TW] OR "well differentiated thyroid carcinoma"[TW] OR "well differentiated thyroid carcinomas"[TW] | 10,566 |  |
| #4 | "Thyroid Cancer, Papillary"[Mesh] | 5,060 |  |
| #5 | "Thyroid Cancer, Papillary"[TW] OR "Cancer, Papillary Thyroid"[TW] OR "Cancers, Papillary Thyroid"[TW] OR "Papillary Thyroid Cancer"[TW] OR "Papillary Thyroid Cancers"[TW] OR "Thyroid Cancers, Papillary"[TW] OR "Thyroid Carcinoma, Papillary"[TW] OR "Carcinoma, Papillary Thyroid"[TW] OR "Carcinomas, Papillary Thyroid"[TW] OR "Papillary Thyroid Carcinomas"[TW] OR "Thyroid Carcinomas, Papillary"[TW] OR "Papillary Carcinoma Of Thyroid"[TW] OR "Papillary Thyroid Carcinoma"[TW] OR "Familial Nonmedullary Thyroid Cancer"[TW] OR "Nonmedullary Thyroid Carcinoma"[TW] OR "Carcinoma, Nonmedullary Thyroid"[TW] OR "Carcinomas, Nonmedullary Thyroid"[TW] OR "Nonmedullary Thyroid Carcinomas"[TW] OR "Thyroid Carcinoma, Nonmedullary"[TW] OR "Thyroid Carcinomas, Nonmedullary"[TW] OR "thyroid papillary carcinoma"[TW] OR "papillary thyroid microcarcinoma"[TW] OR "thyroid gland papillary carcinoma"[TW] OR "thyroid papilla carcinoma"[TW] OR "thyroid papillary cancer"[TW] OR "thyroid papillary microcarcinoma"[TW] OR "PTC"[TW] | 22,127 |  |
| #6 | "Carcinoma, Papillary"[Mesh] | 19,123 |  |
| #7 | "Carcinoma, Papillary"[TW] OR "Carcinomas, Papillary"[TW] OR "Papillary Carcinoma"[TW] OR "Papillary Carcinomas"[TW] | 23,034 |  |
| #8 | "Thyroid cancer, follicular"[Supplementary Concept] | 218 |  |
| #9 | "Thyroid cancer, follicular"[TW] OR "Follicular Thyroid cancer"[TW] | 923 |  |
| #10 | "Adenocarcinoma, Follicular"[Mesh] | 4,729 |  |
| #11 | "Adenocarcinoma, Follicular"[TW] OR "Adenocarcinomas, Follicular"[TW] OR "Follicular Adenocarcinoma"[TW] OR "Follicular Adenocarcinomas"[TW] OR "Thyroid Carcinoma, Follicular"[TW] OR "Follicular Thyroid Carcinoma"[TW] OR "Carcinoma, Follicular Thyroid"[TW] OR "Carcinomas, Follicular Thyroid"[TW] OR "Follicular Thyroid Carcinomas"[TW] OR "Thyroid Carcinomas, Follicular"[TW] OR "thyroid follicular carcinoma"[TW] OR "carcinoma, papillary, follicular"[TW] OR " carcinoma, thyroid follicle"[TW] OR "carcinoma, thyroidal gland follicle"[TW] OR "encapsulated angioinvasive carcinoma, thyroid gland"[TW] OR "follicle carcinoma, thyreoideal gland"[TW] OR "follicle carcinoma, thyroid gland"[TW] OR "follicular papillary carcinoma"[TW] OR "thyroid encapsulated angioinvasive carcinoma"[TW] OR "thyroid follicle carcinoma"[TW] OR "thyroid gland encapsulated angioinvasive carcinoma"[TW] OR "thyroid gland follicle carcinoma"[TW] OR "thyroid gland follicular carcinoma"[TW] OR "thyroidal encapsulated angioinvasive carcinoma"[TW] OR "thyroidal follicle carcinoma"[TW] OR "thyroidal follicular carcinoma"[TW] OR "thyroidal gland encapsulated angioinvasive carcinoma"[TW] OR "thyroidal gland follicle carcinoma"[TW] OR "thyroidal gland follicular carcinoma"[TW] OR "thyroideal encapsulated angioinvasive carcinoma"[TW] OR "thyroideal follicle carcinoma"[TW] OR "thyroideal follicular carcinoma"[TW] OR "thyroideal gland encapsulated angioinvasive carcinoma"[TW] OR "thyroideal gland follicle carcinoma"[TW] OR "thyroideal gland follicular carcinoma"[TW] OR "Thyroid cancer, follicular"[TW] OR "FTC"[TW] | 8,512 |  |
| #12 | #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 | 88,194 | P1- Patients with thyroid cancer / Differentiated thyroid cancer |
| #13 | "Tracheotomy"[Mesh] OR "Tracheostomy"[Mesh] | 16,265 |  |
| #14 | "Tracheotomy"[TW] OR "Tracheotomies"[TW] OR "Tracheostomy"[TW] OR "Tracheostomies"[TW] OR "trachea resection"[TW] OR "trachea extirpation"[TW] OR "tracheal resection"[TW] "resection"[TW] | 334,673 |  |
| #15 | #13 OR #14 | 334,673 | I-Tracheostomy |
| #16 | #12 AND #15 | 3,994 | P AND I |

1. **Surgery for esophageal invasion**

**E1. What is the appropriate surgical procedure for DTC with esophageal invasion?**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Database | No. | Search Query | Search Results 2021.08.13 | Note |
| PubMed | #1 | "Thyroid Neoplasms"[Mesh] | 55,521 |  |
| #2 | "Thyroid Neoplasms"[TW] OR "Neoplasm, Thyroid"[TW] OR "Thyroid Neoplasm"[TW] OR "Neoplasms, Thyroid"[TW] OR "Thyroid Carcinoma"[TW] OR "Carcinoma, Thyroid"[TW] OR "Carcinomas, Thyroid"[TW] OR "Thyroid Carcinomas"[TW] OR "Cancer of Thyroid"[TW] OR "Thyroid Cancers"[TW] OR "Thyroid Cancer"[TW] OR "Cancer, Thyroid"[TW] OR "Cancers, Thyroid"[TW] OR "Cancer of the Thyroid"[TW] OR "Thyroid Adenoma"[TW] OR "Adenoma, Thyroid"[TW] OR "Adenomas, Thyroid"[TW] OR "Thyroid Adenomas"[TW] OR "thyroid tumor"[TW] OR "thyroid gland tumor"[TW] OR "thyroid gland tumour"[TW] OR "thyroid tumour"[TW] OR "thyroidal tumor"[TW] OR "thyroidal tumour"[TW] OR "tumor, thyroid gland"[TW] OR "tumour, thyroid gland"[TW] | 65,320 |  |
| #3 | "differentiated thyroid cancer"[TW] OR "differentiated thyroid cancers"[TW] OR "differentiated thyroid carcinoma"[TW] OR "differentiated thyroid carcinomas"[TW] OR "DTC"[TW] OR "WDTC"[TW] OR "well differentiated thyroid cancer"[TW] OR "well differentiated thyroid cancers"[TW] OR "well differentiated thyroid carcinoma"[TW] OR "well differentiated thyroid carcinomas"[TW] | 10,566 |  |
| #4 | "Thyroid Cancer, Papillary"[Mesh] | 5,060 |  |
| #5 | "Thyroid Cancer, Papillary"[TW] OR "Cancer, Papillary Thyroid"[TW] OR "Cancers, Papillary Thyroid"[TW] OR "Papillary Thyroid Cancer"[TW] OR "Papillary Thyroid Cancers"[TW] OR "Thyroid Cancers, Papillary"[TW] OR "Thyroid Carcinoma, Papillary"[TW] OR "Carcinoma, Papillary Thyroid"[TW] OR "Carcinomas, Papillary Thyroid"[TW] OR "Papillary Thyroid Carcinomas"[TW] OR "Thyroid Carcinomas, Papillary"[TW] OR "Papillary Carcinoma Of Thyroid"[TW] OR "Papillary Thyroid Carcinoma"[TW] OR "Familial Nonmedullary Thyroid Cancer"[TW] OR "Nonmedullary Thyroid Carcinoma"[TW] OR "Carcinoma, Nonmedullary Thyroid"[TW] OR "Carcinomas, Nonmedullary Thyroid"[TW] OR "Nonmedullary Thyroid Carcinomas"[TW] OR "Thyroid Carcinoma, Nonmedullary"[TW] OR "Thyroid Carcinomas, Nonmedullary"[TW] OR "thyroid papillary carcinoma"[TW] OR "papillary thyroid microcarcinoma"[TW] OR "thyroid gland papillary carcinoma"[TW] OR "thyroid papilla carcinoma"[TW] OR "thyroid papillary cancer"[TW] OR "thyroid papillary microcarcinoma"[TW] OR "PTC"[TW] | 22,127 |  |
| #6 | "Carcinoma, Papillary"[Mesh] | 19,123 |  |
| #7 | "Carcinoma, Papillary"[TW] OR "Carcinomas, Papillary"[TW] OR "Papillary Carcinoma"[TW] OR "Papillary Carcinomas"[TW] | 23,034 |  |
| #8 | "Thyroid cancer, follicular"[Supplementary Concept] | 218 |  |
| #9 | "Thyroid cancer, follicular"[TW] OR "Follicular Thyroid cancer"[TW] | 923 |  |
| #10 | "Adenocarcinoma, Follicular"[Mesh] | 4,729 |  |
| #11 | "Adenocarcinoma, Follicular"[TW] OR "Adenocarcinomas, Follicular"[TW] OR "Follicular Adenocarcinoma"[TW] OR "Follicular Adenocarcinomas"[TW] OR "Thyroid Carcinoma, Follicular"[TW] OR "Follicular Thyroid Carcinoma"[TW] OR "Carcinoma, Follicular Thyroid"[TW] OR "Carcinomas, Follicular Thyroid"[TW] OR "Follicular Thyroid Carcinomas"[TW] OR "Thyroid Carcinomas, Follicular"[TW] OR "thyroid follicular carcinoma"[TW] OR "carcinoma, papillary, follicular"[TW] OR " carcinoma, thyroid follicle"[TW] OR "carcinoma, thyroidal gland follicle"[TW] OR "encapsulated angioinvasive carcinoma, thyroid gland"[TW] OR "follicle carcinoma, thyreoideal gland"[TW] OR "follicle carcinoma, thyroid gland"[TW] OR "follicular papillary carcinoma"[TW] OR "thyroid encapsulated angioinvasive carcinoma"[TW] OR "thyroid follicle carcinoma"[TW] OR "thyroid gland encapsulated angioinvasive carcinoma"[TW] OR "thyroid gland follicle carcinoma"[TW] OR "thyroid gland follicular carcinoma"[TW] OR "thyroidal encapsulated angioinvasive carcinoma"[TW] OR "thyroidal follicle carcinoma"[TW] OR "thyroidal follicular carcinoma"[TW] OR "thyroidal gland encapsulated angioinvasive carcinoma"[TW] OR "thyroidal gland follicle carcinoma"[TW] OR "thyroidal gland follicular carcinoma"[TW] OR "thyroideal encapsulated angioinvasive carcinoma"[TW] OR "thyroideal follicle carcinoma"[TW] OR "thyroideal follicular carcinoma"[TW] OR "thyroideal gland encapsulated angioinvasive carcinoma"[TW] OR "thyroideal gland follicle carcinoma"[TW] OR "thyroideal gland follicular carcinoma"[TW] OR "Thyroid cancer, follicular"[TW] OR "FTC"[TW] | 8,512 |  |
| #12 | #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 | 88,194 | P1- Patients with thyroid cancer / Differentiated thyroid cancer |
| #13 | "Esophagectomy"[Mesh] | 10,938 |  |
| #14 | "Esophagectomy"[TW] OR "Esophagectomies"[TW] OR "esophagus resection"[TW] OR "esophageal resection"[TW] OR "esophagus shortening"[TW] OR "oesophageal resection"[TW] OR "oesophagectomy"[TW] OR "oesophagus resection"[TW] OR "resection, esophagus"[TW] OR "resection"[TW] | 320,854 |  |
| #15 | #13 OR #14 | 320,854 | I-Esophagectomy |
| #16 | #12 AND #16 | 3,776 | P AND I |

1. **Surgery for central and lateral cervical lymph node involvement**

**F1. Is prophylactic neck dissection necessary for clinically N0 locally invasive DTC?**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| DB | no. | Search query | Search note 2021.09.08 | Note |
| PubMed | #1 | "Adult"[Mesh] | 7,575,545 |  |
| #2 | "Adult"[TW] OR "Adults"[TW] OR "adults"[TW] OR "grown-ups"[TW] OR "grownup"[TW] OR "grownups"[TW] | 6,132,830 |  |
| #3 | "Middle Aged"[Mesh] | 4,570,381 |  |
| #4 | "Middle Aged"[TW] OR "Middle Age"[TW] | 4,588,343 |  |
| #5 | "Aged"[Mesh] | 3,297,419 |  |
| #6 | "Aged"[TW] OR "Elderly"[TW] OR "senior citizen"[TW] OR "senium"[TW] | 5,720,555 |  |
| #7 | "Aged, 80 and over"[Mesh] | 976,408 |  |
| #8 | "Oldest Old"[TW] OR "Nonagenarians"[TW] OR "Nonagenarian"[TW] OR "Octogenarians"[TW] OR "Octogenarian"[TW] OR "Centenarians"[TW] OR "Centenarian"[TW] OR "very old"[TW] | 13,192 |  |
| #9 | "Frail Elderly"[Mesh] | 12,960 |  |
| #10 | "Frail Elderly"[TW] OR "Elderly, Frail"[TW] OR "Frail Elders"[TW] OR "Elder, Frail"[TW] OR "Elders, Frail"[TW] OR "Frail Elder"[TW] OR "Functionally-Impaired Elderly"[TW] OR "Elderly, Functionally-Impaired"[TW] OR "Functionally Impaired Elderly"[TW] OR "Frail Older Adults"[TW] OR "Adult, Frail Older"[TW] OR "Adults, Frail Older"[TW] OR "Frail Older Adult"[TW] OR "Older Adult, Frail"[TW] OR "Older Adults, Frail"[TW] | 15,539 |  |
| #11 | "older age"[TW] OR "aging"[TW] OR "ageing"[TW] OR "older adult\*"[TW] OR "older people"[TW] OR "older persons"[TW] OR "elder\*"[TW] OR "geriatric\* "[TW] OR "senior\*"[TW] OR "pensioner\*"[TW] OR "veteran\*"[TW] | 884,699 |  |
| #12 | #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 | 8,754,250 | P - Adult |
| #13 | "Thyroid Neoplasms"[Mesh] | 55,734 |  |
| #14 | "Thyroid Neoplasms"[TW] OR "Neoplasm, Thyroid"[TW] OR "Thyroid Neoplasm"[TW] OR "Neoplasms, Thyroid"[TW] OR "Thyroid Carcinoma"[TW] OR "Carcinoma, Thyroid"[TW] OR "Carcinomas, Thyroid"[TW] OR "Thyroid Carcinomas"[TW] OR "Cancer of Thyroid"[TW] OR "Thyroid Cancers"[TW] OR "Thyroid Cancer"[TW] OR "Cancer, Thyroid"[TW] OR "Cancers, Thyroid"[TW] OR "Cancer of the Thyroid"[TW] OR "thyroid tumor"[TW] OR "thyroid gland tumor"[TW] OR "thyroid gland tumour"[TW] OR "thyroid tumour"[TW] OR "thyroidal tumor"[TW] OR "thyroidal tumour"[TW] OR "tumor, thyroid gland"[TW] OR "tumour, thyroid gland"[TW] | 65,288 |  |
| #15 | "differentiated thyroid cancer"[TW] OR "differentiated thyroid cancers"[TW] OR "differentiated thyroid carcinoma"[TW] OR "differentiated thyroid carcinomas"[TW] OR "DTC"[TW] OR "WDTC"[TW] OR "well differentiated thyroid cancer"[TW] OR "well differentiated thyroid cancers"[TW] OR "well differentiated thyroid carcinoma"[TW] OR "well differentiated thyroid carcinomas"[TW] OR "Advanced differentiated thyroid cancer"[TW] OR "advanced thyroid cancer"[TW] | 10,810 |  |
| #16 | "Thyroid Cancer, Papillary"[Mesh] | 5,120 |  |
| #17 | "Thyroid Cancer, Papillary"[TW] OR "Cancer, Papillary Thyroid"[TW] OR "Cancers, Papillary Thyroid"[TW] OR "Papillary Thyroid Cancer"[TW] OR "Papillary Thyroid Cancers"[TW] OR "Thyroid Cancers, Papillary"[TW] OR "Thyroid Carcinoma, Papillary"[TW] OR "Carcinoma, Papillary Thyroid"[TW] OR "Carcinomas, Papillary Thyroid"[TW] OR "Papillary Thyroid Carcinomas"[TW] OR "Thyroid Carcinomas, Papillary"[TW] OR "Papillary Carcinoma Of Thyroid"[TW] OR "Papillary Thyroid Carcinoma"[TW] OR "Nonmedullary Thyroid Carcinoma"[TW] OR "Carcinoma, Nonmedullary Thyroid"[TW] OR "Carcinomas, Nonmedullary Thyroid"[TW] OR "Nonmedullary Thyroid Carcinomas"[TW] OR "Thyroid Carcinoma, Nonmedullary"[TW] OR "Thyroid Carcinomas, Nonmedullary"[TW] OR "thyroid papillary carcinoma"[TW] OR "papillary thyroid microcarcinoma"[TW] OR "thyroid gland papillary carcinoma"[TW] OR "thyroid papilla carcinoma"[TW] OR "thyroid papillary cancer"[TW] OR "thyroid papillary microcarcinoma"[TW] OR "PTC"[TW] | 22,231 |  |
| #18 | "Carcinoma, Papillary"[Mesh] | 19,156 |  |
| #19 | "Carcinoma, Papillary"[TW] OR "Carcinomas, Papillary"[TW] OR "Papillary Carcinoma"[TW] OR "Papillary Carcinomas"[TW] | 23,070 |  |
| #20 | "Thyroid cancer, follicular"[Supplementary Concept] | 219 |  |
| #21 | "Thyroid cancer, follicular"[TW] OR "Follicular Thyroid cancer"[TW] | 928 |  |
| #22 | "Thyroid Carcinoma, Follicular"[TW] OR "Follicular Thyroid Carcinoma"[TW] OR "Carcinoma, Follicular Thyroid"[TW] OR "Carcinomas, Follicular Thyroid"[TW] OR "Follicular Thyroid Carcinomas"[TW] OR "Thyroid Carcinomas, Follicular"[TW] OR "thyroid follicular carcinoma"[TW] OR "carcinoma, papillary, follicular"[TW] OR " carcinoma, thyroid follicle"[TW] OR "carcinoma, thyroidal gland follicle"[TW] OR "encapsulated angioinvasive carcinoma, thyroid gland"[TW] OR "follicle carcinoma, thyreoideal gland"[TW] OR "follicle carcinoma, thyroid gland"[TW] OR "follicular papillary carcinoma"[TW] OR "thyroid encapsulated angioinvasive carcinoma"[TW] OR "thyroid follicle carcinoma"[TW] OR "thyroid gland encapsulated angioinvasive carcinoma"[TW] OR "thyroid gland follicle carcinoma"[TW] OR "thyroid gland follicular carcinoma"[TW] OR "thyroidal encapsulated angioinvasive carcinoma"[TW] OR "thyroidal follicle carcinoma"[TW] OR "thyroidal follicular carcinoma"[TW] OR "thyroidal gland encapsulated angioinvasive carcinoma"[TW] OR "thyroidal gland follicle carcinoma"[TW] OR "thyroidal gland follicular carcinoma"[TW] OR "thyroideal encapsulated angioinvasive carcinoma"[TW] OR "thyroideal follicle carcinoma"[TW] OR "thyroideal follicular carcinoma"[TW] OR "thyroideal gland encapsulated angioinvasive carcinoma"[TW] OR "thyroideal gland follicle carcinoma"[TW] OR "thyroideal gland follicular carcinoma"[TW] OR "Thyroid cancer, follicular"[TW] OR "FTC"[TW] | 5,770 |  |
| #23 | #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 | 88,248 | P - patients with advanced thyroid cancer |
| #24 | "Neck Dissection"[Mesh] | 8,002 |  |
| #25 | "Neck Dissection"[TW] OR "Dissection, Neck"[TW] OR "Dissections, Neck"[TW] OR "Neck Dissections"[TW] OR "Radical Neck Dissection"[TW] OR "Dissection, Radical Neck"[TW] OR "Dissections, Radical Neck"[TW] OR "Neck Dissection, Radical"[TW] OR "Neck Dissections, Radical"[TW] OR "Radical Neck Dissections"[TW] OR "neck radical dissection"[TW] OR "ipsilateral neck dissection"[TW] OR "contralateral central neck dissection"[TW] OR "lateral neck dissection"[TW] | 13,425 |  |
| #26 | "Lymph Node Excision"[Mesh] | 50,632 |  |
| #27 | "Lymph Node Excision"[TW] OR "Excision, Lymph Node"[TW] OR "Excisions, Lymph Node"[TW] OR "Lymph Node Excisions"[TW] OR "Lymphadenectomy"[TW] OR "Lymphadenectomies"[TW] OR "Lymph Node Dissection"[TW] OR "Dissection, Lymph Node"[TW] OR "Dissections, Lymph Node"[TW] OR "Lymph Node Dissections"[TW] OR "Node Dissection, Lymph"[TW] OR "Node Dissections, Lymph"[TW] OR "lymph node dissection"[TW] OR "lymph nodal dissection"[TW] OR "lymph node dissection, retroperitoneal"[TW] OR "lymph node extirpation"[TW] OR "lymph node resection"[TW] OR "lymphadenectomy"[TW] OR "lymphoadenectomy"[TW] OR "retroperitoneal lymph node dissection"[TW] | 54,409 |  |
| #28 | "Prophylactic Surgical Procedures"[Mesh] | 622 |  |
| #29 | "Prophylactic Surgical Procedures"[TW] OR "Procedure, Prophylactic Surgical"[TW] OR "Procedures, Prophylactic Surgical"[TW] OR "Prophylactic Surgical Procedure"[TW] OR "Surgical Procedure, Prophylactic"[TW] OR "Surgical Procedures, Preventive"[TW] OR "Surgical Procedures, Prophylactic"[TW] OR "Preventive Surgical Procedures"[TW] OR "Preventive Surgical Procedure"[TW] OR "Procedure, Preventive Surgical"[TW] OR "Procedures, Preventive Surgical"[TW] OR "Surgical Procedure, Preventive"[TW] OR "prophylactic"[TW] OR "prophylactic neck dissection"[TW] OR "prophylactic dissection"[TW] | 83,667 |  |
| #30 | ("Elective Surgical Procedures"[Mesh] AND "Neck Dissection"[Mesh]) OR "elective neck dissection"[TW] | 833 |  |
| #31 | "optimal extent"[TW] OR "surgical extent"[TW] OR "operation range"[TW] OR "Surgery Extent"[TW] OR "Extent of Surgery"[TW] | 2,618 |  |
| #32 | #24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 | 156,839 | I - optimal extent of prophylactic neck dissection |
| #33 | #12 AND #23 AND #32 | 3,591 | P AND I |
| #34 | #33 NOT ("animals"[MeSH] NOT "Humans"[MeSH]) | 3,590 | P AND I |

**F2. What extent of neck dissection is appropriate for DTC patients with clinically positive neck nodes?**

**F3. What is the appropriate extent of neck dissection for DTC patients with recurrent/persistent neck node involvement?**

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| --- | --- | --- | --- | --- |
| DB | no. | Search query | Search result 2021.08.13 | Note |
| PubMed | #1 | "Adult"[Mesh] | 7,553,042 |  |
| #2 | "Adult"[TW] OR "Adults"[TW] OR "adults"[TW] OR "grown-ups"[TW] OR "grownup"[TW] OR "grownups"[TW] | 6,115,642 |  |
| #3 | "Middle Aged"[Mesh] | 4,558,265 |  |
| #4 | "Middle Aged"[TW] OR "Middle Age"[TW] | 4,576,184 |  |
| #5 | "Aged"[Mesh] | 3,287,161 |  |
| #6 | "Aged"[TW] OR "Elderly"[TW] OR "senior citizen"[TW] OR "senium"[TW] | 5,703,008 |  |
| #7 | "Aged, 80 and over"[Mesh] | 973,189 |  |
| #8 | "Oldest Old"[TW] OR "Nonagenarians"[TW] OR "Nonagenarian"[TW] OR "Octogenarians"[TW] OR "Octogenarian"[TW] OR "Centenarians"[TW] OR "Centenarian"[TW] OR "very old"[TW] | 13,141 |  |
| #9 | "Frail Elderly"[Mesh] | 12,857 |  |
| #10 | "Frail Elderly"[TW] OR "Elderly, Frail"[TW] OR "Frail Elders"[TW] OR "Elder, Frail"[TW] OR "Elders, Frail"[TW] OR "Frail Elder"[TW] OR "Functionally-Impaired Elderly"[TW] OR "Elderly, Functionally-Impaired"[TW] OR "Functionally Impaired Elderly"[TW] OR "Frail Older Adults"[TW] OR "Adult, Frail Older"[TW] OR "Adults, Frail Older"[TW] OR "Frail Older Adult"[TW] OR "Older Adult, Frail"[TW] OR "Older Adults, Frail"[TW] | 15,431 |  |
| #11 | "older age"[TW] OR "aging"[TW] OR "ageing"[TW] OR "older adult\*"[TW] OR "older people"[TW] OR "older persons"[TW] OR "elder\*"[TW] OR "geriatric\* "[TW] OR "senior\*"[TW] OR "pensioner\*"[TW] OR "veteran\*"[TW] | 880,657 |  |
| #12 | #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 | 8,727,739 | P - Adult |
| #13 | "Thyroid Neoplasms"[Mesh] | 55,521 |  |
| #14 | "Thyroid Neoplasms"[TW] OR "Neoplasm, Thyroid"[TW] OR "Thyroid Neoplasm"[TW] OR "Neoplasms, Thyroid"[TW] OR "Thyroid Carcinoma"[TW] OR "Carcinoma, Thyroid"[TW] OR "Carcinomas, Thyroid"[TW] OR "Thyroid Carcinomas"[TW] OR "Cancer of Thyroid"[TW] OR "Thyroid Cancers"[TW] OR "Thyroid Cancer"[TW] OR "Cancer, Thyroid"[TW] OR "Cancers, Thyroid"[TW] OR "Cancer of the Thyroid"[TW] OR "Thyroid Adenoma"[TW] OR "Adenoma, Thyroid"[TW] OR "Adenomas, Thyroid"[TW] OR "Thyroid Adenomas"[TW] OR "thyroid tumor"[TW] OR "thyroid gland tumor"[TW] OR "thyroid gland tumour"[TW] OR "thyroid tumour"[TW] OR "thyroidal tumor"[TW] OR "thyroidal tumour"[TW] OR "tumor, thyroid gland"[TW] OR "tumour, thyroid gland"[TW] | 65,320 |  |
| #15 | "differentiated thyroid cancer"[TW] OR "differentiated thyroid cancers"[TW] OR "differentiated thyroid carcinoma"[TW] OR "differentiated thyroid carcinomas"[TW] OR "DTC"[TW] OR "WDTC"[TW] OR "well differentiated thyroid cancer"[TW] OR "well differentiated thyroid cancers"[TW] OR "well differentiated thyroid carcinoma"[TW] OR "well differentiated thyroid carcinomas"[TW] | 10,566 |  |
| #16 | "Thyroid Cancer, Papillary"[Mesh] | 5,060 |  |
| #17 | "Thyroid Cancer, Papillary"[TW] OR "Cancer, Papillary Thyroid"[TW] OR "Cancers, Papillary Thyroid"[TW] OR "Papillary Thyroid Cancer"[TW] OR "Papillary Thyroid Cancers"[TW] OR "Thyroid Cancers, Papillary"[TW] OR "Thyroid Carcinoma, Papillary"[TW] OR "Carcinoma, Papillary Thyroid"[TW] OR "Carcinomas, Papillary Thyroid"[TW] OR "Papillary Thyroid Carcinomas"[TW] OR "Thyroid Carcinomas, Papillary"[TW] OR "Papillary Carcinoma Of Thyroid"[TW] OR "Papillary Thyroid Carcinoma"[TW] OR "Familial Nonmedullary Thyroid Cancer"[TW] OR "Nonmedullary Thyroid Carcinoma"[TW] OR "Carcinoma, Nonmedullary Thyroid"[TW] OR "Carcinomas, Nonmedullary Thyroid"[TW] OR "Nonmedullary Thyroid Carcinomas"[TW] OR "Thyroid Carcinoma, Nonmedullary"[TW] OR "Thyroid Carcinomas, Nonmedullary"[TW] OR "thyroid papillary carcinoma"[TW] OR "papillary thyroid microcarcinoma"[TW] OR "thyroid gland papillary carcinoma"[TW] OR "thyroid papilla carcinoma"[TW] OR "thyroid papillary cancer"[TW] OR "thyroid papillary microcarcinoma"[TW] OR "PTC"[TW] | 22,127 |  |
| #18 | "Carcinoma, Papillary"[Mesh] | 19,123 |  |
| #19 | "Carcinoma, Papillary"[TW] OR "Carcinomas, Papillary"[TW] OR "Papillary Carcinoma"[TW] OR "Papillary Carcinomas"[TW] | 23,034 |  |
| #20 | "Thyroid cancer, follicular"[Supplementary Concept] | 218 |  |
| #21 | "Thyroid cancer, follicular"[TW] OR "Follicular Thyroid cancer"[TW] | 923 |  |
| #22 | "Adenocarcinoma, Follicular"[Mesh] | 4,729 |  |
| #23 | "Adenocarcinoma, Follicular"[TW] OR "Adenocarcinomas, Follicular"[TW] OR "Follicular Adenocarcinoma"[TW] OR "Follicular Adenocarcinomas"[TW] OR "Thyroid Carcinoma, Follicular"[TW] OR "Follicular Thyroid Carcinoma"[TW] OR "Carcinoma, Follicular Thyroid"[TW] OR "Carcinomas, Follicular Thyroid"[TW] OR "Follicular Thyroid Carcinomas"[TW] OR "Thyroid Carcinomas, Follicular"[TW] OR "thyroid follicular carcinoma"[TW] OR "carcinoma, papillary, follicular"[TW] OR "carcinoma, thyroid follicle"[TW] OR "carcinoma, thyroidal gland follicle"[TW] OR "encapsulated angioinvasive carcinoma, thyroid gland"[TW] OR "follicle carcinoma, thyreoideal gland"[TW] OR "follicle carcinoma, thyroid gland"[TW] OR "follicular papillary carcinoma"[TW] OR "thyroid encapsulated angioinvasive carcinoma"[TW] OR "thyroid follicle carcinoma"[TW] OR "thyroid gland encapsulated angioinvasive carcinoma"[TW] OR "thyroid gland follicle carcinoma"[TW] OR "thyroid gland follicular carcinoma"[TW] OR "thyroidal encapsulated angioinvasive carcinoma"[TW] OR "thyroidal follicle carcinoma"[TW] OR "thyroidal follicular carcinoma"[TW] OR "thyroidal gland encapsulated angioinvasive carcinoma"[TW] OR "thyroidal gland follicle carcinoma"[TW] OR "thyroidal gland follicular carcinoma"[TW] OR "thyroideal encapsulated angioinvasive carcinoma"[TW] OR "thyroideal follicle carcinoma"[TW] OR "thyroideal follicular carcinoma"[TW] OR "thyroideal gland encapsulated angioinvasive carcinoma"[TW] OR "thyroideal gland follicle carcinoma"[TW] OR "thyroideal gland follicular carcinoma"[TW] OR "Thyroid cancer, follicular"[TW] | 5,654 |  |
| #24 | #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 | 85,611 | P Patients with thyroid cancer / Differentiated thyroid cancer |
| #25 | "Recurrence"[Mesh] | 191,027 |  |
| #26 | "Recurrence"[TW] OR "Recurrences"[TW] OR "Recrudescence"[TW] OR "Recrudescences"[TW] OR "Relapse"[TW] OR "Relapses"[TW] OR "disease recurrence"[TW] OR "periodic disease"[TW] OR "relapsing disease"[TW] OR "symptom flare up"[TW] | 639,239 |  |
| #27 | "Neoplasm Recurrence, Local"[Mesh] | 127,863 |  |
| #28 | "Neoplasm Recurrence, Local"[TW] OR "Local Neoplasm Recurrences"[TW] OR "Locoregional Neoplasm Recurrence"[TW] OR "Recurrences, Local Neoplasm"[TW] OR "Neoplasm Recurrences, Local"[TW] OR "Recurrence, Local Neoplasm"[TW] OR "Recurrence, Locoregional Neoplasm"[TW] OR "Local Neoplasm Recurrence"[TW] OR "Neoplasm Recurrence, Locoregional"[TW] OR "Locoregional Neoplasm Recurrences"[TW] OR "Neoplasm Recurrences, Locoregional"[TW] OR "Recurrences, Locoregional Neoplasm"[TW] OR "recurrent tumor"[TW] OR "recurrent tumour"[TW] OR "tumour recurrence"[TW] | 132,105 |  |
| #29 | "Lymphatic metastasis"[Mesh] | 92,883 |  |
| #30 | "Lymphatic metastasis"[TW] OR "Lymphatic Metastases"[TW] OR "Lymph Node Metastasis"[TW] OR "Lymph Node Metastases"[TW] OR "Metastasis, Lymph Node"[TW] OR "lymph gland metastasis"[TW] OR "lymph metastasis"[TW] OR "lymphatic node metastasis"[TW] OR "lymphnode metastasis"[TW] OR "lymphogenic metastasis"[TW] OR "lymphogenous metastasis"[TW] OR "lymphoid metastasis"[TW] OR "metastasis, lymphatic"[TW] OR "metastatic lymph node"[TW] | 122,249 |  |
| #31 | #25 OR #26 OR #27 OR #28 OR #29 OR #30 | 735,256 | P with lymph node metastasis /Lymph node/ Metastasis |
| #32 | #12 AND #24 AND #31 | 9,614 | P Total |
| #33 | "Reoperation"[Mesh] | 90,810 |  |
| #34 | "Reoperation"[TW] OR "Surgical Revision"[TW] OR "Surgery, Repeat"[TW] OR "Revision, Surgical"[TW] OR "Revision Surgery"[TW] OR "Revision Surgeries"[TW] OR "Surgery, Revision"[TW] OR "Repeat Surgery"[TW] OR "Revision, Joint"[TW] OR "Joint Revision"[TW] | 122,884 |  |
| #35 | "Neck Dissection"[Mesh] | 7,973 |  |
| #36 | "Neck Dissection"[TW] OR "Dissection, Neck"[TW] OR "Dissections, Neck"[TW] OR "Neck Dissections"[TW] OR "Radical Neck Dissection"[TW] OR "Dissection, Radical Neck"[TW] OR "Dissections, Radical Neck"[TW] OR "Neck Dissection, Radical"[TW] OR "Neck Dissections, Radical"[TW] OR "Radical Neck Dissections"[TW] OR "neck radical dissection"[TW] | 13,387 |  |
| #37 | #33 OR #34 OR #35 OR #36 | 135,880 | I Surgery/ Neck dissection  Central neck lymph node dissection/ Modified radical lymph node dissection Therapeutic neck dissection/ Central compartment / Lateral compartment |
| #38 | #32 AND #37 | 1,540 | P AND I |
| #39 | #38 NOT ("animals"[MeSH] NOT "Humans"[MeSH]) | 1,540 | P AND I |