

**Literature Search**  
**ACR Appropriateness Criteria®**  
**Thyroid Disease**

Literature Search Performed on: 06/09/2017

Beginning Date: January 2007

End Date: May 2017

Database: Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) <1946 to Present>

**Search Strategy**

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- 1 Thyroid cancer.mp. (19981)
- 2 medullary.mp. (38465)
- 3 recurrent.mp. (246498)
- 4 surveillance.mp. (185746)
- 5 Positron-Emission Tomography/ (45667)
- 6 radioiodine.mp. (7922)
- 7 scintigraphy.mp. (37653)
- 8 ultra sound.mp. (544)
- 9 3 or 4 (429293)
- 10 6 or 7 (45032)
- 11 5 or 6 or 7 (89482)
- 12 Diagnostic Imaging/ (38583)
- 13 1 and 9 and 11 and 12 (13)
- 14 Multiple Endocrine Neoplasia Type 2a/ (1216)
- 15 Radiotherapy/ (40603)
- 16 Thyroid Neoplasms/ (44667)
- 17 Thyroidectomy/ (20488)
- 18 Carcinoma, Medullary/ (3172)
- 19 Hormone Replacement Therapy/ (9035)
- 20 14 and 15 and 16 and 17 and 18 and 19 (2)
- 21 Lymphatic Metastasis/ (81917)
- 22 Neoplasm Recurrence, Local/ (102596)
- 23 Radiopharmaceuticals/ (45093)
- 24 Thyroid Neoplasms/ (44667)
- 25 Tomography, X-Ray Computed/ (344599)
- 26 Whole-Body Counting/ (2618)
- 27 21 and 22 and 23 and 24 and 25 and 26 (2)
- 28 Fluorodeoxyglucose F18/ (25239)
- 29 5 and 16 and 18 and 25 and 28 and 23 (12)
- 30 Thyroid cancer, medullary.mp. (695)
- 31 5 and 16 and 18 and 23 and 28 and 30 (2)
- 32 indium-111-octreotide.mp. (208)
- 33 Carcinoma, Neuroendocrine/ (3440)
- 34 16 and 28 and 32 and 33 (1)
- 35 13 or 20 or 27 or 29 or 31 or 34 (30)
- 36 limit 35 to (abstracts and english language and humans and yr="2007 -Current") (19)
- 37 remove duplicates from 36 (17)

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**Search Strategy**

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- 1 Thyroid cancer.mp. (19990)
- 2 recurrent.mp. (246622)
- 3 surveillance.mp. (185885)
- 4 well differentiated.mp. (19035)
- 5 papillary.mp. (61274)
- 6 follicular.mp. (62609)
- 7 4 or 5 or 6 (133938)
- 8 2 or 3 (429555)
- 9 Positron-Emission Tomography/ (45645)
- 10 1 and 7 and 8 and 9 (44)
- 11 Thyroid Neoplasms/ (44661)
- 12 Thyroid Nodule/ (4770)
- 13 Endocrinology/ (5468)
- 14 Consensus/ (7958)
- 15 11 and 12 and 13 and 14 (2)
- 16 Neck/ (27894)
- 17 Prognosis/ (442850)
- 18 Thyroglobulin/ (8084)
- 19 Thorax/ (20436)
- 20 11 and 16 and 17 and 18 and 19 (1)
- 21 Radionuclide Imaging/ (87446)
- 22 Iodine Radioisotopes/ (49365)
- 23 Whole Body Imaging/ (4118)
- 24 Neoplasm Staging/ (155036)
- 25 11 and 18 and 21 and 22 and 23 and 24 (4)
- 26 Neoplasm Recurrence, Local/ (102549)
- 27 Lymphatic Metastasis/ (81901)
- 28 11 and 21 and 23 and 26 and 27 (2)
- 29 Biomarkers, Tumor/ (117505)
- 30 Biopsy/ (159845)
- 31 9 and 11 and 18 and 22 and 23 and 26 and 29 and 30 (1)
- 32 Cell Differentiation/ (201791)
- 33 Tomography, Emission-Computed, Single-Photon/ (29091)
- 34 11 and 22 and 23 and 32 and 33 (2)
- 35 Thyroidectomy/ (20487)
- 36 Neoplasm Metastasis/ (94866)
- 37 11 and 18 and 21 and 22 and 35 and 36 (18)
- 38 Fluorodeoxyglucose F18/ (25235)
- 39 9 and 11 and 22 and 36 and 38 and 18 (8)
- 40 Radiopharmaceuticals/ (45084)
- 41 9 and 11 and 18 and 26 and 38 and 40 (18)
- 42 Adenocarcinoma, Follicular/ (3390)
- 43 9 and 11 and 22 and 23 and 38 and 40 and 42 (5)
- 44 9 and 11 and 18 and 22 and 23 and 38 (29)

**Literature Search**  
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**Thyroid Disease**

- 45 Recombinant Proteins/ (206167)
- 46 9 and 11 and 35 and 38 and 40 and 42 and 45 (1)
- 47 Carcinoma/ (84866)
- 48 11 and 18 and 21 and 38 and 47 (2)
- 49 1 and 9 and 11 and 18 and 38 and 45 and 47 (1)
- 50 anti-thyroglobulin.mp. (1357)
- 51 Neoplasm Recurrence, Local/ (102549)
- 52 9 and 11 and 38 and 50 and 51 (6)
- 53 Hypothyroidism/ (26122)
- 54 Choristoma/ (8038)
- 55 11 and 21 and 35 and 53 and 54 (1)
- 56 Triiodothyronine/ (24913)
- 57 11 and 21 and 53 and 56 (12)
- 58 Adenoma, Oxyphilic/ (1913)
- 59 11 and 22 and 33 and 35 and 42 and 58 (2)
- 60 9 and 11 and 38 and 40 and 51 (60)
- 61 10 or 15 or 20 or 25 or 28 or 31 or 34 or 37 or 39 or 41 or 43 or 44 or 46 or 48 or 49 or 52 or 55 or 57 or 59 or 60 (162)
- 62 limit 61 to (abstracts and english language and humans and yr="2007 -Current") (103)
- 63 limit 62 to case reports (11)
- 64 62 not 63 (92)
- 65 remove duplicates from 64 (89)

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**Search Strategy**

- 1 Positron-Emission Tomography/ (45667)
- 2 radioiodine.mp. (7922)
- 3 Thyroid neoplasm/ (44667)
- 4 Thyroid gland/ (55254)
- 5 Ultrasonography/ (166528)
- 6 Preoperative Care/ (57305)
- 7 3 and 4 and 5 and 6 (15)
- 8 Thyroid Carcinoma, Anaplastic/ (400)
- 9 Prognosis/ (443019)
- 10 3 and 4 and 8 and 9 (3)
- 11 1 and 3 and 4 and 5 (19)
- 12 Tomography, X-Ray Computed/ (344599)
- 13 Fluorodeoxyglucose F18/ (25239)
- 14 \*Carcinoma/dg, pa [Diagnostic Imaging, Pathology] (12540)
- 15 Lymphatic Metastasis/ (81917)
- 16 Thyroid cancer, papillary.mp. (2622)
- 17 12 and 13 and 14 and 15 and 16 (8)
- 18 5 and 12 and 13 and 14 and 15 and 16 (3)

**Literature Search**  
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**Thyroid Disease**

- 19 (Extrathyroid invasion and Positron emission tomography and Thyroid papillary carcinoma and Ultrasonography).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (1)
- 20 (18F-fluorodeoxyglucose and differentiated thyroid cancer and positron emission tomography and radioiodine therapy).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (2)
- 21 Neoplasm Metastasis/ (94891)
- 22 Thyroglobulin/ (8084)
- 23 1 and 2 and 12 and 13 and 21 and 22 (4)
- 24 Adenoma, Oxyphilic/ (1913)
- 25 3 and 9 and 12 and 13 and 22 and 24 (1)
- 26 Radiopharmaceuticals/ (45093)
- 27 3 and 13 and 24 and 26 (12)
- 28 Ki-67 Antigen/ (14622)
- 29 SLC2A1 protein, human.mp. (1340)
- 30 3 and 12 and 13 and 28 and 29 (1)
- 31 Thyrotropin/ (29410)
- 32 1 and 12 and 13 and 14 and 16 and 22 and 26 and 31 (1)
- 33 7 or 10 or 11 or 17 or 18 or 19 or 20 or 23 or 25 or 27 or 30 or 32 (67)
- 34 Technetium Tc 99m Sestamibi/ (5282)
- 35 Carcinoma, Papillary/ (14770)
- 36 Radionuclide Imaging/ (87446)
- 37 3 and 4 and 31 and 34 and 35 and 36 (1)
- 38 Neoplasm Invasiveness/ (69891)
- 39 3 and 12 and 13 and 38 (2)
- 40 3 and 12 and 14 (89)
- 41 Multimodal Imaging/ (10666)
- 42 Preoperative Care/ (57305)
- 43 Thyroid gland/ (55254)
- 44 40 and 41 and 42 and 43 (1)
- 45 Whole Body Imaging/ (4118)
- 46 Iodine Radioisotopes/ (49367)
- 47 3 and 22 and 36 and 45 and 46 (22)
- 48 7 or 10 or 11 or 17 or 18 or 19 or 20 or 23 or 25 or 27 or 32 or 33 or 37 or 39 or 40 or 44 or 47 (172)
- 49 limit 48 to (abstracts and english language and humans and yr="2007 -Current") (106)
- 50 limit 49 to case reports (35)
- 51 49 not 50 (71)
- 52 remove duplicates from 51 (68)

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**Search Strategy**

- 1 thyroiditis/ (4414)
- 2 Positron-Emission Tomography/ (45645)
- 3 radioiodine.mp. (7923)

**Literature Search**  
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**Thyroid Disease**

- 4 scintigraphy.mp. (37665)
- 5 Diagnostic Imaging/ (38582)
- 6 ultra sound.mp. (544)
- 7 1 and (2 or 3 or 4 or 5 or 6) (134)
- 8 Thyroid Neoplasms/ (44661)
- 9 Neoplasm Invasiveness/ (69875)
- 10 Thyroidectomy/ (20487)
- 11 \*Fluorodeoxyglucose F18/ (12695)
- 12 Papillary Thyroid Microcarcinoma.mp. (503)
- 13 8 and 9 and 10 and 11 and 12 (1)
- 14 Thyroid gland/ (55248)
- 15 Incidental Findings/ (8285)
- 16 Breast neoplasm/ (256491)
- 17 1 and 2 and 11 and 14 and 16 (1)
- 18 Hashimoto Disease/ (2326)
- 19 Radiopharmaceuticals/ (45084)
- 20 2 and 8 and 11 and 14 and 18 and 19 (1)
- 21 Hyperthyroidism/ (25900)
- 22 Ultrasonography/ (166508)
- 23 8 and 11 and 14 and 19 and 21 and 22 (1)
- 24 Whole-Body Counting/ (2618)
- 25 1 and 11 and 14 and 19 and 22 and 24 (1)
- 26 Thyrotoxicosis/ (3937)
- 27 Radionuclide Imaging/ (87446)
- 28 Iodine Radioisotopes/ (49365)
- 29 Biological Transport/ (102809)
- 30 14 and 26 and 27 and 28 and 29 (1)
- 31 Jordan/ (3383)
- 32 14 and 18 and 21 and 27 and 28 and 29 and 31 (1)
- 33 (Graves disease and apparent diffusion coefficient and diffusion-weighted magnetic resonance imaging and painless thyroiditis and thyroid radioactive iodine uptake and thyroid scintigraphy and thyrotropin receptor antibody).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (1)
- 34 Ultrasonography, Doppler, Color/ (13040)
- 35 Thyroiditis, Subacute/ (597)
- 36 34 and 35 (9)
- 37 (Diffuse thyroid uptake and Thyroid lobectomy and Thyroiditis).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (1)
- 38 (postpartum thyroiditis and pregnancy and thyroid and pregnancy and thyroid function tests).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (28)
- 39 Tomography, X-Ray Computed/ (344571)
- 40 2 and 8 and 11 and 14 and 15 and 39 (5)
- 41 Iodide Peroxidase/ (4384)
- 42 2 and 11 and 14 and 18 and 19 and 41 (1)
- 43 7 or 13 or 17 or 20 or 23 or 25 or 30 or 32 or 36 or 40 or 42 (155)
- 44 limit 43 to (abstracts and english language and humans and yr="2007 -Current") (36)
- 45 33 or 37 or 38 or 44 (66)
- 46 limit 45 to case reports (15)
- 47 45 not 46 (51)

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48 remove duplicates from 47 (49)

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**Search Strategy**

- 1 Hypothyroidism/ (26122)
- 2 Positron-Emission Tomography/ (45645)
- 3 radioiodine.mp. (7923)
- 4 scintigraphy.mp. (37665)
- 5 Diagnostic Imaging/ (38582)
- 6 ultra sound.mp. (544)
- 7 1 and (2 or 3 or 4 or 5 or 6) (598)
- 8 Thyroxine/ (36121)
- 9 Thyrotropin/ (29408)
- 10 Disease Management/ (28819)
- 11 Evidence-Based Medicine/ (66581)
- 12 1 and 8 and 9 and 10 and 11 (1)
- 13 (Chronic lymphocytic thyroiditis and diffuse thyroid fluorodeoxyglucose uptake and hypothyroidism and maximal standardized uptake value and positron emission tomography and serum thyroid).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (1)
- 14 7 or 12 (599)
- 15 limit 14 to (abstracts and english language and humans and yr="2007 -Current") (120)
- 16 13 or 15 (121)
- 17 limit 16 to case reports (31)
- 18 16 not 17 (90)
- 19 remove duplicates from 18 (84)

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**Search Strategy**

- 1 Hyperthyroidism/ (25900)
- 2 Positron-Emission Tomography/ (45645)
- 3 radioiodine.mp. (7923)
- 4 scintigraphy.mp. (37665)
- 5 Diagnostic Imaging/ (38582)
- 6 ultra sound.mp. (544)
- 7 1 and (2 or 3 or 4 or 5 or 6) (1269)
- 8 Thyroid Gland/ (55248)
- 9 Thyroid nodule/ (4770)
- 10 Thyrotropin/ (29408)

**Literature Search**  
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**Thyroid Disease**

- 11 8 and 9 and 10 (99)
- 12 Radionuclide Imaging/ (87446)
- 13 11 and 12 (16)
- 14 Thyrotoxicosis/ (3937)
- 15 Ultrasonography, Doppler, Color/ (13040)
- 16 Graves Disease/ (14756)
- 17 8 and 9 and 14 and 15 and 16 (1)
- 18 8 and 9 and 14 and 15 (1)
- 19 Thyroiditis, Autoimmune/ (6933)
- 20 1 and 8 and 19 (146)
- 21 Graves Disease/ (14756)
- 22 1 and 8 and 19 and 21 (40)
- 23 Tomography, Emission-Computed/ (24879)
- 24 15 and 21 and 23 (1)
- 25 1 and 8 and 9 and 16 and 15 (1)
- 26 Propylthiouracil/ (4118)
- 27 Antithyroid Agents/ (5769)
- 28 1 and 8 and 26 and 27 (23)
- 29 7 or 11 or 13 or 17 or 18 or 20 or 22 or 24 or 25 or 28 (1520)
- 30 limit 29 to (abstracts and english language and humans and yr="2007 -Current") (249)
- 31 limit 30 to case reports (39)
- 32 30 not 31 (210)
- 33 remove duplicates from 32 (200)

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**Search Strategy**

- 1 Goiter/ (11822)
- 2 Positron-Emission Tomography/ (45645)
- 3 radioiodine.mp. (7923)
- 4 scintigraphy.mp. (37665)
- 5 Diagnostic Imaging/ (38582)
- 6 ultra sound.mp. (544)
- 7 1 and (2 or 3 or 4 or 5 or 6) (346)
- 8 Goiter, Nodular/ (3942)
- 9 exp Ultrasonography/ (393147)
- 10 Goiter, Substernal/ (922)
- 11 8 and 9 and 10 (2)
- 12 Biopsy, Fine-Needle/ (11649)
- 13 Diagnostic Techniques, Endocrine/ (786)
- 14 8 and 12 and 13 (3)
- 15 Goiter, Endemic/ (2605)
- 16 Thyroid Gland/ (55248)
- 17 Thyroid Neoplasms/ (44661)

**Literature Search**  
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**Thyroid Disease**

- 18 Thyroidectomy/ (20487)
- 19 8 and 9 and 16 and 17 and 18 and 12 (11)
- 20 7 or 11 or 14 or 19 (361)
- 21 limit 20 to (abstracts and english language and humans and yr="2007 -Current") (62)
- 22 limit 21 to case reports (13)
- 23 21 not 22 (49)
- 24 remove duplicates from 23 (47)

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**Search Strategy**

- 1 (Thyroid and nodule).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (8129)
- 2 Positron-Emission Tomography/ (45645)
- 3 radioiodine.mp. (7923)
- 4 scintigraphy.mp. (37665)
- 5 ultra sound.mp. (544)
- 6 Diagnostic Imaging/ (38582)
- 7 1 and (2 or 3 or 4 or 5 or 6) (953)
- 8 Radiopharmaceuticals/ (45084)
- 9 1 and 8 (245)
- 10 Thyroid Neoplasms/ (44661)
- 11 Incidental Findings/ (8285)
- 12 2 and 8 and 10 and 11 (40)
- 13 Fluorodeoxyglucose F18/ (25235)
- 14 Thyroidectomy/ (20487)
- 15 1 and 8 and 14 (36)
- 16 2 and 8 and 13 and 14 (51)
- 17 2 and 10 and 11 and 13 (63)
- 18 1 and 2 and 10 (89)
- 19 1 and 2 and 8 and 13 (56)
- 20 Neoplasm Invasiveness/ (69875)
- 21 2 and 13 and 14 and 20 (3)
- 22 Graves Disease/ (14756)
- 23 Hyperthyroidism/ (25900)
- 24 Radionuclide Imaging/ (87446)
- 25 Thyroiditis, Autoimmune/ (6933)
- 26 22 and 23 and 24 and 25 (7)
- 27 Radionuclide Angiography/ (1200)
- 28 Technetium Tc 99m Sestamibi/ (5282)
- 29 Ultrasonography, Doppler, Pulsed/ (1406)
- 30 1 and 8 and 27 and 28 and 29 (1)
- 31 Sodium Pertechnetate Tc 99m/ (3174)
- 32 Thyroid Diseases/ (16828)



**Literature Search**  
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**Thyroid Disease**

- 33 Thyroid Gland/ (55248)
- 34 8 and 31 and 32 and 33 (18)
- 35 Tomography, Emission-Computed/ (24879)
- 36 1 and 8 and 10 and 13 and 35 (9)
- 37 7 or 9 or 12 or 15 or 16 or 17 or 18 or 19 or 21 or 26 or 30 or 34 or 36 (1139)
- 38 limit 37 to (abstracts and english language and humans and yr="2007 -Current") (401)
- 39 limit 38 to case reports (124)
- 40 38 not 39 (277)
- 41 remove duplicates from 40 (265)

**Summary**

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<b>Source</b>	<b>#Unique Refs</b>	<b>#Retained Refs</b>
Old bibliography	0	0
Literature Search(es)	697	17
Author Added	60	51
Supporting Docs	2	2
Total		70

References from the literature search that were not retained had a poor study design, were not relevant to the topic, or had unclear or biased results.

2 of the author added references were outside the search date range.