

Supplementary file 2 – Search strategies from each database

MEDLINE Search strategy:

1. exp Vitamin D/
2. vitamin D?.ti,ab,kf.
3. Vitamin D?.hw.
4. exp Ergocalciferols/
5. ergocalciferols.ti,ab,kf.
6. exp Cholecalciferol/
7. cholecalciferol.ti,ab,kf.
8. exp Calcitriol/
9. calcitriol.ti,ab,kf.
10. Receptors, Calcitriol/
11. vitamin D receptor.ti,ab,kf.
12. (hydroxycholecalciferol? or hydroxy-cholecalciferol? or dihydroxycholecalciferol? or dihydroxy-cholecalciferol? or hydroxyvitamin? D? or hydroxyl-vitamin? D?).ti,ab,kf.
13. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12
14. exp Testosterone/
15. testosterone.ti,ab,kf.
16. *Gonadal Hormones/
17. *Gonadal Steroid Hormones/
18. exp Testicular Hormones/
19. exp Testosterone Congeners/
20. 14 or 15 or 16 or 17 or 18 or 19
21. exp Prostatic Neoplasms/
22. (prostat\$ adj3 (neoplas\$ or cancer\$ or carcinoma\$ or adenocarcinoma\$ or tumo?r\$)).ti,ab.
23. (prostat\$ and (neoplas\$ or cancer\$ or carcinoma\$ or adenocarcinoma\$ or tumo?r\$)).kf.
24. 22 or 23
25. exp Neoplasm Metastasis/
26. exp Neoplasm Invasiveness/
27. ((metasta* or (neoplas* or cancer* or carcinoma* or adenocarcinoma* or tumo?r*)) and (invas* or invad* or aggressive* or progressi*)).ti,kf.
28. tumo?r progression.ti,kf.
29. 25 or 26 or 27 or 28
30. exp Prostatic Intraepithelial Neoplasia/
31. 21 or 24 or 30
32. 29 and 31
33. 13 and 20
59. 20 and 32

Pubmed search strategy

Search #1 (vitamin D terms):

"vitamin d"[MeSH Terms] OR "ergocalciferols"[MeSH Terms] OR "vitamin d"[Title/Abstract] OR "ergocalciferols"[MeSH Terms] OR "ergocalciferol*"[Title/Abstract] OR "calcifediol"[MeSH Terms] OR "calcifediol"[Title/Abstract] OR "Calcitriol"[MeSH Terms] OR "Calcitriol"[Title/Abstract] OR "receptors, calcitriol"[MeSH Terms] OR "calcitriol receptor"[Title/Abstract] OR "Cholecalciferol"[MeSH Terms] OR "Cholecalciferol"[Title/Abstract] OR "Hydroxycholecalciferols"[MeSH Terms] OR "Hydroxycholecalciferols"[Title/Abstract] OR "Dihydroxycholecalciferols"[MeSH Terms] OR "Dihydroxycholecalciferols"[Title/Abstract] OR "25 hydroxy vitamin d"[Title/Abstract]

Search #2 (testosterone terms):

"Testosterone"[MeSH Terms] OR "Testosterone"[Title/Abstract] OR "gonadal steroid hormones"[MeSH Terms] OR "gonadal steroid hormone*"[Title/Abstract] OR "gonadal steroid*"[Title/Abstract] OR "gonadal hormones"[MeSH Terms] OR "sex hormone*"[Title/Abstract]

Search #3 (prostate cancer terms):

"prostatic neoplasms"[MeSH Terms] OR "prostatic intraepithelial neoplasia"[MeSH Terms] OR "prostate"[Title/Abstract] OR "prostatic"[Title/Abstract] AND "cancer"[Title/Abstract] OR "carcinoma"[Title/Abstract] OR "adenocarcinoma"[Title/Abstract] OR "tumour"[Title/Abstract] OR "neoplasm"[Title/Abstract] AND "neoplasm metastasis"[MeSH Terms] OR "neoplasm invasiveness"[MeSH Terms] OR "metastas*"[Title/Abstract] OR "invasive*"[Title/Abstract] OR "aggressive*"[Title/Abstract] OR "tumour progressi*"[Title/Abstract]

Search #4 Combine search 1 and 2 with AND

Search #5 Combine search 2 and 3 with AND

BIOSIS Citation Index search strategy

1. ts=vitamin d OR ti=vitamin d
2. ts=ergocalciferol* OR ti=ergocalciferol*
3. ts=calcifediol OR ti= calcifediol
4. ts=calcitriol OR ti= calcitriol
5. ts=cholecalciferol OR ti= cholecalciferol
6. ts=Hydroxycholecalciferol* OR ti= Hydroxycholecalciferol*
7. ts=Dihydroxycholecalciferol* OR ti= Dihydroxycholecalciferol*
8. ts=(hydroxycholecalciferol* OR hydroxy-cholecalciferol* OR dihydroxycholecalciferol* OR dihydroxy-cholecalciferol* OR hydroxyvitamin D OR hydroxyl-vitamin D)
9. ti=(hydroxycholecalciferol* OR hydroxy-cholecalciferol* OR dihydroxycholecalciferol* OR dihydroxy-cholecalciferol*)
10. ts=(25-hydroxy vitamin D OR hydroxyl-vitamin D OR dihydroxyl-vitamin D) OR ti=(25-hydroxy vitamin D OR hydroxyl-vitamin D OR dihydroxyl-vitamin D)
11. ts="Calcitriol receptor"
12. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11
13. ts=Testosterone OR ti= Testosterone
14. ts="Gonadal Steroid Hormone*" OR ti="Gonadal Steroid Hormone*"
15. ts="Sex Hormone*" OR ti="Sex Hormone*"
16. ts="Gonadal Hormone*" OR ti="Gonadal Hormone*"
17. ts="Gonadal steroid*" OR ti="Gonadal steroid*"
18. 13 or 14 or 15 or 16 or 17
19. ts=(prostat* AND (neoplas* OR cancer OR carcinoma* OR tumor OR adenocarcinoma*)) OR ti=(prostat* AND (neoplas* OR cancer OR carcinoma* OR tumor OR adenocarcinoma*))
20. ts="prostatic intraepithelial neoplasia" OR ti="prostatic intraepithelial neoplasia"
21. ts=(metasta* OR invas* OR invad* OR aggressive* OR progressi*) OR ti=(metasta* invas* or invad* OR aggressive* OR progressi*)
22. #20 OR #19
23. #22 AND #21
24. #18 AND #12
25. #23 AND #18

EMBASE search strategy

1. vitamin d/
2. vitamin D?.ti,ab,kw.
3. Vitamin D?.hw.
4. 24,25 dihydroxyvitamin d/
5. 25 hydroxyvitamin d/
6. *ergocalciferol/
7. ergocalciferol*.ti,ab,kw.
8. exp colecalciferol/
9. colecalciferol.ti,ab,kw.
10. calcitriol/
11. Calcitriol.ti,ab,kw.
12. calcifediol/
13. calcifediol.ti,ab,kw.
14. colecalciferol/
15. colecalciferol.ti,ab,kw.
16. exp vitamin D receptor/
17. exp hydroxycolecalciferol/
18. hydroxycholecalciferol*.ti,ab,kw.
19. hydroxy-cholecalciferol*.ti,ab,kw.
20. exp dihydroxycolecalciferol/
21. Dihydroxycholecalciferol*.ab,kw,ti.
22. 25-hydroxy-vitamin D.ab,kw,ti.
23. exp 25 hydroxyvitamin D/
24. hydroxycholecalciferol.ti,ab,kw.
25. hydroxy-cholecalciferol.ti,ab,kw.
26. exp dihydroxycolecalciferol/
27. dihydroxy-cholecalciferol.ti,ab,kw.
28. or/1-27
29. testosterone/
30. testosterone.ti,ab,kw.
31. *sex hormone/
32. Sex hormone*.ti,ab,kw.
33. sex hormone binding globulin/
34. *androgen/
35. *androgen receptor/
36. or/29-35
37. Prostate cancer/
38. Prostate cancer.ti,ab,kw.
39. Prostate carcinoma/
40. Prostate carcinoma*.ti,ab,kw.
41. Prostate adenocarcinoma/
42. Prostate adenocarcinoma*.ti,ab,kw.
43. Prostate intraepithelial neoplasia/
44. 37 or 38 or 39 or 40 or 41 or 42 or 43
45. exp tumor invasion/
46. metastasis/
47. exp tumor growth/
48. (metasta* or invas* or invad* or aggressive* or progressi*).ti,kw.
49. 45 or 46 or 47 or 48

- 50. 44 and 49
- 51. 28 and 36
- 52. 36 and 50
- 53. limit 51 to exclude medline journals
- 54. limit 52 to exclude medline journals
- 55. limit 51 to embase
- 56. limit 52 to embase