

Supplementary Material

Planned search strategies for primary databases

#	Medline
1	exp Analgesics, Opioid/
2	exp Narcotics/
3	(opiod* or opiate* or narcotic*).mp.
4	(Bezitramide or Burgodin or Bezitramida or Buprenorphine or Buprenorfina or Buprenex or Prefin or Subutex or Buprex or Temgesic or Butorphanol or Butorfanol or Beforal or Moradol or Stadol or Torbugesic or Apo-Butorphanol or Dolorex or Codeine or Codeinum or Methylmorphine or N-Methylmorphine or Isocodeine or Ardinex or Dextromoramide or Palphium or Pyrrolamidol or Pyrrolamidol or D-Moramide or D Moramide or Palfium or Dextropropoxyphene or Propoxyphene or D-Propoxyphene or Darvon or Dezocine or Dihydrocodeine or paramol or Rikodeine or Tiamon or Tosidrin or Contugesic or Dicodin or Paracodin or Paracodina or Fentanyl or Fentanil or Phentanyl or Fentanest or Sublimaze or Transmucosal or Duragesic or Durogesic or Fentora or Hydrocodone or Dihydrocodeinone or Hydrocodon or Hydrocone or Hydroconum or Idrocodone or Dicodid or Robidone or Hycodan or Hycon or Hydromorphone or Dihydromorphinone or Dimorphone or Hydromorphon or Palladone or Laudacon or Dilaudid or Ketobemidone or Cetobemidol or Levorphanol or Levodroman or Levorphan or Levo-Dromoran or Levo Dromoran or LevoDromoran or L-Dromoran or L Dromoran or Meperidine or Isonipecaine or Pethidine or Isonipecaïn or Dolsin or Dolosal or Dolin or Operidine or Dolantin or Dolargan or Lidol or Lydol or Demerol or Dolcontral or Meptazinol or Meptid or Methadone or Biodone or Dolophine or Metadol or Metasedin or Symoron or Methadose or Methex or Phenadone or Physeptone or Phymet or Pinadone or Amidone or Methaddict or Methadyl acetate or Acetylmethadol or Alphacetylmethadol or Amidolacetate or Dimepheptanol or Levomethadyl or Levoacetylmethadol or Levomethadyl or Methadol or Acemethadone or Morphine or Morphia or Morphium or Contin or Oramorph or Duramorph or Nalbuphine or Nubain or Nicomorphine or Vilan or Opium or Papaveretum or Omnopon or Pantopon or Oxycodone or Dihydrohydroxycodone or Dihydroxycodone or Oxymorphone or Dihydrohydroxymorphinone or Dihydroxymorphinone or Oximorphonum or Numorphan or Opana or Pentazocine or Talwin or Fortral or Lexir or Phenazocine or Phenethylazocine or Phenbenzorphane or Narphen or Piritramide or Piritramid or Dipidolor or Dipydolor or Tapentadol or Nucynta of Tilidine or Tilidate or Tilidin or Valoron or Valerone or Tramadol* or Tramundin or Biodalgic or Jutadol or MTW-Tramadol or MTWTramadol or Nobligan or Prontofort or Zytram or Takadol or Theradol or Tiral or Topalgic or Tradol or Tradol-Puren or TradolPuren or Tradonal or Tralgiol or Trama AbZ or Trama KD or Trama-Dorsch or Trama Dorsch or TramaDorsch or Biokanol or Tramabeta or Tramadin or Tramadoc or Ranitidin or Trama or Trasedal or Ultram or Xymel or Zamudol or Zumalgic or Zydol or Tramadura or Tramagetic or Tramagit or Trama ke or Tramal or Tramex or Adolonta or Contramal or Amadol).mp.
5	1 or 2 or 3 or 4
6	Arthroplasty, Replacement/
7	Arthroplasty, Replacement, Ankle/
8	Arthroplasty, Replacement, Elbow/
9	Arthroplasty, Replacement, Hip/
10	Arthroplasty, Replacement, Knee/
11	Arthroplasty, Replacement, Shoulder/
12	((joint or shoulder or knee or hip or elbow or wrist or ankle) adj3 (replacement* or arthroplast*)).mp.
13	6 or 7 or 8 or 9 or 10 or 11 or 12
14	5 and 13
#	Embase
1	exp narcotic analgesic agent/
2	exp narcotic agent/

- 3 (opioid* or opiate* or narcotic*).mp.
- 4 (Bezitramide or Burgodin or Bezitramida or Buprenorphine or Buprenorfina or Buprenex or Pefin or Subutex or Buprex or Temgesic or Butorphanol or Butorfanol or Beforal or Moradol or Stadol or Torbugesic or Apo-Butorphanol or Dolorex or Codeine or Codeinum or Methyilmorphine or N-Methyilmorphine or Isocodeine or Ardinex or Dextromoramide or Palphium or Pyrrolamidol or Pyrrolamidol or D-Moramide or D Moramide or Palfium or Dextropropoxyphene or Propoxyphene or D-Propoxyphene or Darvon or Dezocine or Dihydrocodeine or paramol or Rikodeine or Tiamon or Tosidrin or Contugesic or Dicodin or Paracodin or Paracodina or Fentanyl or Fentanil or Phentanyl or Fentanest or Sublimaze or Transmucosal or Duragesic or Durogesic or Fentora or Hydrocodone or Dihydrocodeinone or Hydrocodon or Hydrocone or Hydroconum or Idrocodone or Dicodid or Robidone or Hycodan or Hycon or Hydromorphone or Dihydromorphinone or Dimorphone or Hydromorphon or Palladone or Laudacon or Dilaudid or Ketobemidone or Cetobemidone or Levorphanol or Levodroman or Levorphan or Levo-Dromoran or Levo Dromoran or LevoDromoran or L-Dromoran or L Dromoran or Meperidine or Isonipecaine or Pethidine or Isonipecaïn or Dolsin or Dolosal or Dolin or Operidine or Dolantin or Dolargan or Lidol or Lydol or Demerol or Dolcontral or Meptazinol or Meptid or Methadone or Biodone or Dolophine or Metadol or Metasedin or Symoron or Methadose or Methex or Phenadone or Physeptone or Phymet or Pinadone or Amidone or Methaddict or Methadyl acetate or Acetylmethadol or Alphacetylmethadol or Amidolacetate or Dimepheptanol or Levomethadyl or Levoacetylmethadol or Levomethadyl or Methadol or Acemethadone or Morphine or Morphia or Morphium or Contin or Oramorph or Duramorph or Nalbuphine or Nubain or Nicomorphine or Vilan or Opium or Papaveretum or Omnopon or Pantopon or Oxycodone or Dihydrohydroxycodone or Dihydroxycodone or Oxymorphone or Dihydrohydroxymorphinone or Dihydroxymorphinone or Oximorphonum or Numorphan or Opana or Pentazocine or Talwin or Fortral or Lexir or Phenazocine or Phenethylazocine or Phenbenzorphon or Narphen or Piritramide or Piritramid or Dipidolor or Dipydolor or Tapentadol or Nucynta of Tilidine or Tilidate or Tilidin or Valoron or Valerone or Tramadol* or Tramundin or Biodalgic or Jutadol or MTW-Tramadol or MTWTramadol or Nobligan or Prontofort or Zytram or Takadol or Theradol or Tiral or Topalgic or Tradol or Tradol-Puren or TradolPuren or Tradonal or Tralgiol or Trama AbZ or Trama KD or Trama-Dorsch or Trama Dorsch or TramaDorsch or Biokanol or Tramabeta or Tramadin or Tramadoc or Ranitidin or Trama or Trasedal or Ultram or Xymel or Zamudol or Zumalgic or Zydol or Tramadura or Tramagetic or Tramagit or Trama ke or Tramal or Tramex or Adolonta or Contramal or Amadol).mp.
- 5 1 or 2 or 3 or 4
- 6 replacement arthroplasty/
- 7 ankle replacement/ or ankle arthroplasty/
- 8 elbow replacement/ or elbow arthroplasty/
- 9 hip replacement/ or hip arthroplasty/
- 10 knee replacement/ or knee arthroplasty/
- 11 shoulder arthroplasty/ or reverse shoulder arthroplasty/ or shoulder replacement/
- 12 ((joint or shoulder or knee or hip or elbow or wrist or ankle) adj3 (replacement* or arthroplast*)).mp.
- 13 6 or 7 or 8 or 9 or 10 or 11 or 12
- 14 5 and 13

Web of Science

- 1 TS=(narcotic* OR opioid* OR opiate*)
- 2 TS=(Bezitramide or Burgodin or Bezitramida or Buprenorphine or Buprenorfina or Buprenex or Pefin or Subutex or Buprex or Temgesic or Butorphanol or Butorfanol or Beforal or Moradol or Stadol or Torbugesic or Apo-Butorphanol or Dolorex or Codeine or Codeinum or Methyilmorphine or N-Methyilmorphine or Isocodeine or Ardinex or Dextromoramide or Palphium or Pyrrolamidol or Pyrrolamidol or D-Moramide or D Moramide or Palfium or Dextropropoxyphene or Propoxyphene or D-Propoxyphene or Darvon or Dezocine or Dihydrocodeine or paramol or Rikodeine or Tiamon or Tosidrin or Contugesic or Dicodin or Paracodin or Paracodina or Fentanyl or Fentanil or Phentanyl or Fentanest or Sublimaze or Transmucosal or Duragesic or Durogesic or Fentora or Hydrocodone or Dihydrocodeinone or Hydrocodon or Hydrocone or Hydroconum or Idrocodone or Dicodid or Robidone or Hycodan or Hycon or Hydromorphone or Dihydromorphinone or Dimorphone or Hydromorphon or Palladone or Laudacon or Dilaudid or Ketobemidone or Cetobemidone or Levorphanol or Levodroman or Levorphan or Levo-Dromoran or Levo Dromoran or LevoDromoran or L-Dromoran or L Dromoran or Meperidine or Isonipecaine or Pethidine or Isonipecaïn or Dolsin or Dolosal or Dolin or Operidine or Dolantin or Dolargan or Lidol or Lydol or Demerol or Dolcontral or Meptazinol or Meptid or Methadone or Biodone or Dolophine or Metadol or Metasedin or Symoron or Methadose or Methex or Phenadone or Physeptone or Phymet or Pinadone or Amidone or Methaddict or

Methadyl acetate or Acetylmethadol or Alphacetylmethadol or Amidolacetate or Dimepheptanol or Levomethadyl or Levoacetylmethadol or Levomethadyl or Methadol or Acemethadone or Morphine or Morphia or Morphium or Contin or Oramorph or Duramorph or Nalbuphine or Nubain or Nicomorphine or Vilan or Opium or Papaveretum or Omnopon or Pantopon or Oxycodone or Dihydrohydroxycodone or Dihydroxycodone or Oxymorphone or Dihydrohydroxymorphine or Dihydroxymorphine or Oximorphonum or Numorphan or Opana or Pentazocine or Talwin or Fortral or Lexir or Phenazocine or Phenethylazocine or Phenbenzorphane or Narphen or Piritramide or Piritramid or Dipidolor or Dipydolor or Tapentadol or Nucynta of Tilidine or Tilidate or Tilidin or Valoron or Valerone or Tramadol* or Tramundin or Biodalgic or Jutadol or MTW-Tramadol or MTWTramadol or Nobligan or Prontoport or Zytram or Takadol or Theradol or Tiral or Topalgic or Tradol or Tradol-Puren or TradolPuren or Tradonal or Tralgiol or Trama AbZ or Trama KD or Trama-Dorsch or Trama Dorsch or TramaDorsch or Biokanol or Tramabeta or Tramadin or Tramadoc or Ranitidin or Trama or Trasedal or Ultram or Xymel or Zamudol or Zumalgic or Zydol or Tramadura or Tramagetic or Tramagit or Trake or Tramal or Tramex or Adolonta or Contramal or Amadol)

3 #1 OR 2

4 TS=((joint or shoulder or knee or hip or elbow or wrist or ankle) NEAR/3 (replacement* or arthroplast*))

5 #3 AND #4

PsychINFO

1 exp narcotic drugs/

2 exp Opiates

3 (opioid* or opiate* or narcotic*).mp.

4 (Bezitramide or Burgodin or Bezitramida or Buprenorphine or Buprenorfina or Buprenex or Prefin or Subutex or Buprex or Temgesic or Butorphanol or Butorfanol or Beforal or Moradol or Stadol or Torbugesic or Apo-Butorphanol or Dolorex or Codeine or Codeinum or Methylmorphine or N-Methylmorphine or Isocodeine or Ardinex or Dextromoramide or Palphium or Pyrrolamidol or Pyrrolamidol or D-Moramide or D Moramide or Palfium or Dextropropoxyphene or Propoxyphene or D-Propoxyphene or Darvon or Dezocine or Dihydrocodeine or paramol or Rikodeine or Tiamon or Tosidrin or Contugesic or Dicodin or Paracodin or Paracodina or Fentanyl or Fentanil or Phentanyl or Fentanest or Sublimaze or Transmucosal or Duragesic or Durogesic or Fentora or Hydrocodone or Dihydrocodeinone or Hydrocodon or Hydrocone or Hydroconum or Idrocodone or Dicodid or Robidone or Hycodan or Hycon or Hydromorphone or Dihydromorphine or Dimorphone or Hydromorphon or Palladone or Laudacon or Dilaudid or Ketobemidone or Cetobemidone or Levorphanol or Levodroman or Levorphan or Levo-Dromoran or Levo Dromoran or LevoDromoran or L-Dromoran or L Dromoran or Meperidine or Isonipeccaine or Pethidine or Isonipeccain or Dolsin or Dolosal or Dolin or Operidine or Dolantin or Dolargan or Lidol or Lydol or Demerol or Dolcontral or Meptazinol or Meptid or Methadone or Biodone or Dolophine or Metadol or Metasedin or Symoron or Methadose or Methex or Phenadone or Physeptone or Phymet or Pinadone or Amidone or Methaddict or Methadyl acetate or Acetylmethadol or Alphacetylmethadol or Amidolacetate or Dimepheptanol or Levomethadyl or Levoacetylmethadol or Levomethadyl or Methadol or Acemethadone or Morphine or Morphia or Morphium or Contin or Oramorph or Duramorph or Nalbuphine or Nubain or Nicomorphine or Vilan or Opium or Papaveretum or Omnopon or Pantopon or Oxycodone or Dihydrohydroxycodone or Dihydroxycodone or Oxymorphone or Dihydrohydroxymorphine or Dihydroxymorphine or Oximorphonum or Numorphan or Opana or Pentazocine or Talwin or Fortral or Lexir or Phenazocine or Phenethylazocine or Phenbenzorphane or Narphen or Piritramide or Piritramid or Dipidolor or Dipydolor or Tapentadol or Nucynta of Tilidine or Tilidate or Tilidin or Valoron or Valerone or Tramadol* or Tramundin or Biodalgic or Jutadol or MTW-Tramadol or MTWTramadol or Nobligan or Prontoport or Zytram or Takadol or Theradol or Tiral or Topalgic or Tradol or Tradol-Puren or TradolPuren or Tradonal or Tralgiol or Trama AbZ or Trama KD or Trama-Dorsch or Trama Dorsch or TramaDorsch or Biokanol or Tramabeta or Tramadin or Tramadoc or Ranitidin or Trama or Trasedal or Ultram or Xymel or Zamudol or Zumalgic or Zydol or Tramadura or Tramagetic or Tramagit or Trake or Tramal or Tramex or Adolonta or Contramal or Amadol).mp.

5 1 or 2 or 3 or 4

6 ((joint or shoulder or knee or hip or elbow or wrist or ankle) adj3 (replacement* or arthroplast*)).mp.

7 5 and 6

CINAHL Complete Search

1 MH ("Analgesics, Opioid+" OR "Narcotics+") OR (TX ("opioid*" OR "opiate*" OR "narcotic*" OR "Bezitramide" OR "Burgodin" OR "Bezitramida" OR "Buprenorphine" OR "Buprenorfina" OR "Buprenex" OR "Prefin" OR "Subutex" OR "Buprex" OR "Temgesic" OR

"Butorphanol" OR "Butorfanol" OR "Beforal" OR "Moradol" OR "Stadol" OR "Torbugesic" OR "Apo-Butorphanol" OR "Dolorex" OR "Codeine" OR "Codeinum" OR "Methylmorphine" OR "N-Methylmorphine" OR "Isocodeine" OR "Ardinex" OR "Dextromoramide" OR "Palphium" OR "Pyrrrolamidol" OR "Pyrrrolamidol" OR "D-Moramide" OR "D Moramide" OR "Palfium" OR "Dextropropoxyphene" OR "Propoxyphene" OR "D-Propoxyphene" OR "Darvon" OR "Dezocine" OR "Dihydrocodeine" OR "paramol" OR "Rikodeine" OR "Tiamon" OR "Tosidrin" OR "Contugesic" OR "Dicodin" OR "Paracodin" OR "Paracodina" OR "Fentanyl" OR "Fentanil" OR "Phentanyl" OR "Fentanest" OR "Sublimaze" OR "Transmucosal" OR "Duragesic" OR "Durogesic" OR "Fentora" OR "Hydrocodone" OR "Dihydrocodeinone" OR "Hydrocodon" OR "Hydrocone" OR "Hydroconum" OR "Idrocodone" OR "Dicodid" OR "Robidone" OR "Hycodan" OR "Hycon" OR "Hydromorphone" OR "Dihydromorphinone" OR "Dimorphone" OR "Hydromorphon" OR "Palladone" OR "Laudacon" OR "Dilaudid" OR "Ketobemidone" OR "Cetobemidon" OR "Levorphanol" OR "Levodroman" OR "Levorphan" OR "Levo-Dromoran" OR "Levo Dromoran" OR "LevoDromoran" OR "L-Dromoran" OR "L Dromoran" OR "Meperidine" OR "Isonipecaïne" OR "Pethidine" OR "Isonipecaïn" OR "Dolsin" OR "Dolosal" OR "Dolin" OR "Operidine" OR "Dolantin" OR "Dolargan" OR "Lidol" OR "Lydol" OR "Demerol" OR "Dolcontral" OR "Meptazinol" OR "Meptid" OR "Methadone" OR "Biodone" OR "Dolophine" OR "Metadol" OR "Nicomorphine" OR "Vilan" OR "Opium" OR "Papaveretum" OR "Omnopon" OR "Pantopon" OR "Oxycodone" OR "Dihydrohydroxycodone" OR "Dihydroxycodone" OR "Oxymorphone" OR "Dihydrohydroxymorphinone" OR "Dihydroxymorphinone" OR "Oximorphonum" OR "Numorphan" OR "Opana" OR "Pentazocine" OR "Talwin" OR "Fortral" OR "Lexir" OR "Phenazocine" OR "Phenethylazocine" OR "Phenbenzorphane" OR "Narphen" OR "Piritramide" OR "Piritramid" OR "Dipidolor" OR "Dipydolor" OR "Tapentadol" OR "Nucynta of Tilidine" OR "Tilidate" OR "Tilidin" OR "Valoron" OR "Valerone" OR "Tramadol*" OR "Tramundin" OR "Biodalgic" OR "Jutadol" OR "MTW-Tramadol" OR "MTWTramadol" OR "Nobligan" OR "Prontofort" OR "Zytram" OR "Takadol" OR "Theradol" OR "Tiral" OR "Topalgic" OR "Tradol" OR "Tradol-Puren" OR "TradolPuren" OR "Tradonal" OR "Tralgiol" OR "Trama AbZ" OR "Trama KD" OR "Trama-Dorsch" OR "Trama Dorsch" OR "TramaDorsch" OR "Biokanol" OR "Tramabeta" OR "Tramadin" OR "Tramadoc" OR "Ranitidin" OR "Trama" OR "Trasedal" OR "Ultram" OR "Xymel" OR "Zamudol" OR "Zumalgic" OR "Zydol" OR "Tramadura" OR "Tramagetic" OR "Tramagit" OR "Tramake" OR "Tramal" OR "Tramex" OR "Adolonta" OR "Contramal" OR "Amadol))

- 2 TX ("joint" OR "shoulder" OR "knee" OR "hip" OR "elbow" OR "wrist" OR "ankle") n3 ("replacement*" OR "arthroplast*") OR (MH ("Arthroplasty, replacement" OR "Arthroplasty, Replacement, Elbow" OR "Arthroplasty, Replacement, Shoulder" OR "Arthroplasty, Replacement, Ankle" OR "Arthroplasty, Replacement, Knee" OR "Arthroplasty, Replacement, Hip"))
- 3 1 AND 2

Planned search strategy for supplementary database

Google Scholar searches

- 1 ("preoperative narcotic" OR "preoperative opioid" OR "preoperative opiate") AND ("total joint arthroplasty" OR "total knee arthroplasty" OR "total hip arthroplasty" OR "total ankle arthroplasty")
- 2 ("preoperative narcotic" OR "preoperative opioid" OR "preoperative opiate") AND ("total elbow arthroplasty" OR "total shoulder arthroplasty" OR "total wrist arthroplasty")
- 3 ("preoperative narcotic" OR "preoperative opioid" OR "preoperative opiate") AND ("total joint replacement" OR "total knee replacement" OR "total hip replacement" OR "total ankle replacement")
- 4 ("preoperative narcotic" OR "preoperative opioid" OR "preoperative opiate") AND ("total elbow replacement" OR "total shoulder replacement" OR "total wrist replacement")