## Supplementary material

Table 4. Summary of Key Findings of Studies of mechanical medical devices used for airway clearance

| **First Author**<br>*In-patient/out-patient* | **Year** | **Study design** | **Population**<br>*Mean age, years [min-max]*<br>*Gender*<br>*Type of cough assistance* | **Objectives and outcome measures** | **Key findings** | | |
|---|---|---|---|---|---|---|---|
| | | | | | **Efficacy** | **Safety** | **Quality of life** |
| Bach[38]<br>*In-patient* | 1993 | Observational, single-center | 46 subjects with NMD<br>‣ 21 ventilators users (mean-use: 22.3 hours/day)<br><br>*45.7±18.0*<br>*12 Male/9 Female*<br><br>*Cough assistance:*<br>a. Unassisted<br>b. Air-stacking<br>c. Manually assisted<br>d. MI-E | Comparison of CPF with unassisted, air-stacking, manually assisted cough and MI-E in ventilators users | **CPF, L/min (n=21)**<br>a. 108.6±61.8 vs<br>b. 202.2±64.2 vs<br>c. 256.2±77.4 vs<br>d. 448.2±61.2<br>p<.001<br><br>*CPF value before MI-E vs after MI-E*<br>104.4±54 vs 109.2±52.2, p=.09 | Episodes of stomach distention reported (number not mentioned)<br>No bleeding<br>No pneumothorax<br>No mediastinal emphysema | Not assessed |
| Sivasothy[31]<br>*In-patient* | 2001 | Randomized controlled trial, single-center | 29 subjects:<br>– 9 healthy volunteers<br>– 8 subjects with COPD<br>– 12 subjects with NMD (8 without scoliosis, 4 with scoliosis)<br><br>*Healthy volunteers: 27 [17-71]*<br>*COPD: 65 [52-74]*<br>*NMD - scoliosis: 63 [27-73]*<br>*NMD + scoliosis: 57 [44-66]*<br><br>*18 Male/11 Female*<br><br>*Cough assistance:*<br>a. Baseline<br>b. Manually assisted cough (MAC)<br>c. MI-E<br>d. In combination (MIE+MAC) | Compare CPF and cough expiratory volume of subjects treated by MAC versus MI-E versus in combination | **CPF, L/min [min-max]**<br>*Baseline vs MAC vs MI-E vs in combination*<br><br>Healthy volunteers (p-value not available in the publication):<br>a. 668 [310-700] vs<br>b. 624 [326-700] vs<br>c. 676 [494-695] vs<br>d. 624 [288-695]<br><br>COPD (* p<.01):<br>a. 370 [267-483] vs<br>b. 226 [120-315]* vs<br>c. 288 [218-370] vs<br>d. 245 [218-370]*<br><br>NMD without scoliosis (* p<.01):<br>a. 104 [43-188] vs<br>b. 185 [93-355]* vs<br>c. 156 [61-247] vs<br>d. 248 [110-343]*<br><br>NMD with scoliosis:<br>a. 288 [175-367] vs<br>b. 193 [185-287] vs<br>c. 231 [148-597] vs<br>d. 362 [218-440] | Not reported | Not assessed |

| First Author<br>*In-patient/out-patient* | Year | Study design | Population<br>*Mean age, years [min-max]*<br>*Gender*<br>*Type of cough assistance* | Objectives and outcome measures | Key findings<br>Efficacy | Safety | Quality of life |
|---|---|---|---|---|---|---|---|
| Mustfa[32]<br>*In-patient* | 2003 | Randomized controlled trial single-center | 57 subjects:<br>– 10 healthy volunteers<br>– 21 subjects with bulbar ALS<br>– 26 subjects with non-bulbar ALS<br>*Mean age not specified*<br>*38 Male/19 Female*<br>*Cough assistance:*<br>a. Unassisted<br>b. Manually<br>c. Exsufflation with MI-E<br>d. Insufflation with MI-E<br>e. In-exsufflation | Evaluate pulmonary function parameters with MAC and MI-E (CPF) | **CPF, L/min (% increase/unassisted)**<br>Bulbar ALS:<br>a. 178±61<br>b. 197±63 (11%) p<.01<br>c. 225±76 (26%) p<.001<br>d. 188±64 (6%)<br>e. 212±75 (19%) p<.05<br>Non-bulbar ALS:<br>a. 217±84<br>b. 244±83 (13%) p<.001<br>c. 279±87 (28%) p<.001<br>d. 226±86 (4%)<br>e. 264±73 (21%) p<.001 | Not reported | Not assessed |
| Chatwin[33]<br>*In-patient* | 2003 | Comparative study, single-center | 22 subjects with NMD<br>19 age-matched controls<br>*25±13 [10-56], median 21*<br>*16 Male/6 Female*<br>*Couch assistance:*<br>a. Unassisted-cough<br>b. Physiotherapist-assisted cough<br>c. Non-invasive ventilator-assisted cough<br>d. Exsufflation-assisted cough<br>e. In-exsufflation assisted cough | CPF and strength of cough, distress and comfort (rated by subject) | **CPF, L/min**<br>Treated group vs age-matched group, *Mean (95% CI)*<br>a. 169 *(129-209)* vs 578 *(508-648)*<br>b. 188 *(146-229)* vs 587 *(512-663)*<br>c. 182 *(147-217)* vs 565 *(495-635)*<br>d. 235 *(186-284)* vs 633 *(570-695)*<br>e. 297 *(246-350)* vs 629 *(565-603)*<br>Variance analysis for intervention:<br>treated group p<.001 and age-matched group p<.001<br>**Strength of cough (visual analogue scale in cm)**<br>Treated group vs age-matched group, *Mean (95% CI)*<br>a. 5.4 *(5.2-6.7)* vs 7.0 *(6.4-7.7)*<br>b. 5.9 *(5.2-6.7)* vs 7.7 *(7.1-8.3)*<br>c. 5.8 *(4.8-6.8)* vs 7.2 *(6.5-7.9)*<br>d. 6.9 *(5.3-7.0)* vs 7.9 *(7.3-8.5)*<br>e. 7.3 *(6.6-8.0)* vs 8.1 *(7.5-8.6)*<br>Variance analysis for intervention:<br>treated group p<.001 and age-matched group p<.001 | No adverse event observed | **Comfort and distress**<br>Authors reported no significant change from baseline in results for comfort or distress of intervention on the VAS (No data reported in the publication, no p-value available) |

| First Author<br>*In-patient/out-patient* | Year | Study design | Population<br>*Mean age, years [min-max]*<br>*Gender*<br>*Type of cough assistance* | Objectives and outcome measures | Key findings<br>Efficacy | Safety | Quality of life |
|---|---|---|---|---|---|---|---|
| Miske[39]<br>*Out-patient* | 2004 | Observational, retrospective data, single-center | 62 children with NMD<br>*Range of ages at introduction of MI-E use:*<br>*0.25-28.6, median 12.6 years*<br>*34 Male/28 Female*<br>*Cough assistance:*<br>MI-E | Description criteria | **Reported by caregivers**<br>5 children experienced reduction in the frequency of pneumonia<br>4 subjects experienced improvement in chronic atelectasis | 6 subjects discontinue treatment:<br>- 1 on parent advice<br>- 2 chose to use other devices (1 with tracheostomy thought it contributed to her chronic abdominal pain, other chest discomfort)<br>- 3 subjects thought that the device was ineffective or unpleasant<br>No episode of pneumothorax or pulmonary hemorrhage<br>No episode of symptomatic reflux<br>One subject experienced premature ventricular contractions (initial use) | Not assessed |
| Winck[36]<br>*In-patient* | 2004 | Comparative, single-center | 29 subjects<br>– 7 subjects with NMD<br>– 13 subjects with ALS<br>– 9 subjects COPD<br>*NMD: 29 [26-49]*<br>*ALS: 55 [47-68]*<br>*COPD: 69 [54-73]*<br>*21 Male/8 Female*<br>*Cough assistance:*<br>MI-E | Tolerance and effect on breathing pattern (CPF, oxygen saturation, …) | **CPF, L/min**<br>*baseline vs MI-E 40 cm$H_2O$*<br>NMD: 180 [150-275] vs 220 [190-300] p<.05<br>ALS: 170 [128-300] vs 200 [170-352] p<.001<br>COPD: 250 [173-288] vs 275 [195-315] (no p-value available in the publication)<br>**$S_{pO2}$, %**<br>*baseline vs MI-E 40 cm$H_2O$*<br>NMD: 94 [92-96] vs 98 [97-98] p<.001<br>ALS: 94 [94-95] vs 98 [97-98] p<.001<br>COPD: 92 [91-94] vs 97 [95-97] p<.02 | **Subject declaration**<br>No abdominal distention or vomiting<br>No blood-streaked sputum<br>No chest pain | **Subject declaration**<br>No discomfort |
| Vianello[40]<br>*In-patient* | 2005 | Observational, single-center (historical comparison) | 11 subjects with NMD<br>16 subjects with NMD (historical comparison group)<br>*34.91±17.28*<br>*39.75±21.56*<br>*7 Male/4 Female*<br>*12 Male/4 Female*<br>*Cough assistance:*<br>a. MI-E<br>b. conventional chest physical treatment | Treatment failure defined by: administration of cricothyroid, minitracheotomy or endotracheal intubation | **Treatment failure, n**<br>*MI-E vs conventional chest physical treatment*<br>2 vs 10 p=.047<br>**Hospital stay, days**<br>*MI-E vs conventional chest physical treatment*<br>20.5±20 vs 19.8±17, p=.93 | 1 stomach distension episode in 1 subject<br>1 mild nasal bleeding in 1 subject | Not assessed |

| First Author<br>*In-patient/out-patient* | Year | Study design | Population<br>*Mean age, years [min-max]*<br>*Gender*<br>*Type of cough assistance* | Objectives and outcome measures | Key findings<br>Efficacy | Safety | Quality of life |
|---|---|---|---|---|---|---|---|
| Fauroux[41]<br>*In-patient* | 2008 | Observational, single-center | 17 children with NMD<br>*[5-18]*<br>*12 Male/5 Female*<br>*Cough assistance:*<br>MI-E | Pulmonary function parameters<br>Tolerance | **SNIP, *cm $H_2O$***<br>*Baseline vs MI-E 40 cm $H_2O$*<br>29±19 vs 31±20 p=.046<br>**CPF, L/min**<br>*Baseline vs MI-E 40 cm $H_2O$*<br>162±97 vs 192±99 p=.02<br>**$P_{tcCo2_2}$ mmHg**<br>*Baseline vs MI-E 40 cm $H_2O$*<br>39.9±3.8 vs 37.8±4.7 p<.001<br>**Vital capacity, L**<br>*Population vs MI-E 40 cm $H_2O$*<br>1.04±1.13 vs 1.87±1.04 (no p-value available) | No abdominal distension<br>No gastroesophageal reflux<br>No chest pain or discomfort | Respiratory comfort<br>*VAS/100*<br>73±21 vs 83±19, p=.02 |
| Chatwin[33]<br>*In-patient* | 2009 | Randomized controlled trial, single-center | 8 subjects with NMD<br>Group 1:<br>day 1 morning without MI-E and afternoon with MI-E<br>day 2 morning with MI-E and afternoon without MI-E<br>Group 2:<br>day 1 morning with MI-E and afternoon without MI-E<br>day 2 morning without MI-E and afternoon with MI-E<br>*22.25 [4-44]*<br>*6 Male/2 Female*<br>*Cough assistance:*<br>MI-E + standard airway clearance | Compare current respiratory physiotherapy practice without MI-E to current respiratory physiotherapy practice with MI-E on pulmonary function parameters ($S_{pO2}$, $P_{tcCO2}$)<br>Subject satisfaction | No difference in mean heart rate, $S_{pO2}$ et $P_{tcCO2}$ (no data reported in the publication)<br>**Treatment time, min [min-max]:**<br>Before MI-E vs after MI-E<br>30 [0-27] group 1 vs 47 [0-35] group 2 p=.03 | Not assessed | Fatigue, VAS cm<br>*The lower the score the more favorable the outcome*<br>*Before MI-E vs after MI-E*<br>3.2±2.2 group 1 vs 5.1±2.6 group 2 p=.005<br>No statistical difference in comfort breathlessness or mood is reported in the publications (data available on figure in publication) |

| **First Author**<br>*In-patient/out-patient* | **Year** | **Study design** | **Population**<br>*Mean age, years [min-max]*<br>*Gender*<br>*Type of cough assistance* | **Objectives and outcome measures** | **Key findings**<br>**Efficacy** | **Safety** | **Quality of life** |
|---|---|---|---|---|---|---|---|
| Senent[37]<br>*Out-patient* | 2011 | Comparative, single-center | 16 subjects with ALS<br>9 bulbar vs 7 non-bulbar<br>*63 [57-68]*<br>*12 Male/4 Female*<br>*Cough assistance:*<br>Cough manual techniques:<br>a. Unassisted cough<br>b. Coached unassisted cough<br>c. Coached unassisted cough with abdominal thrust.<br>Cough instrumental techniques<br>d. Abdominal thrust + air-stacking<br>e. Abdominal thrust + subject's bi-level pressure ventilator with its usual settings<br>f. Abdominal thrust + subject ventilator IPAP of +30 cm $H_2O$<br>g. In-exsufflator | CPF responses of bulbar and non-bulbar subjects<br>Perception of techniques by subjects and physiotherapists | **CPF (min-max), L/min**<br>a. 84 (35-118)<br>b. 79 (36-142)<br>c. 104 (80-140)<br>d. 284 (146-353)<br>e. 212 (99-595)<br>f. 233 (100-389)<br>g. 488 (243-605)<br>Difference between manual techniques and instrumental techniques: p<.001<br>No different between each instrumental technique<br>No different between each manual techniques<br>No different between bulbar and non-bulbar group<br>(no actual p-value available in publication) | **Six months follow-up:**<br>3 subjects developed pneumonia and 1 died (subjects were in group e)<br>1 subject died in palliative care | Not assessed |

| **First Author**<br>*In-patient/out-patient* | **Year** | **Study design** | **Population**<br>*Mean age, years [min-max]*<br>*Gender*<br>*Type of cough assistance* | **Objectives and outcome measures** | **Key findings**<br>**Efficacy** | **Safety** | **Quality of life** |
|---|---|---|---|---|---|---|---|
| Moran[42]<br>*Out-patient* | 2013 | Observational, retrospective data, single-center | 10 children with NMD<br>*9.87 [1.4-18.1]*<br>*7 Male/3 Female*<br>*Cough assistance:*<br>MI-E | Effects of home MI-E on admission rates, admission details, length of stay and ventilation requirements<br>Impact of MI-E on the life-style of child and family | **Time in hospital (days) (95% CI)**<br>*Before MI-E vs after MI-E*<br>6 months: 39.0±30.7 vs 9.3 ±10.9 (95% CI 2.8-56.6) p=.04<br>12 months: 43.7±35.6 vs 13.3±12.6 (95% CI 4.7-56.2) p=.03<br>**Hospital admission respiratory (n) (95% CI)**<br>*Before MI-E vs after MI-E*<br>6 months: 1.6±1.5 vs 1.1±1.2 (95% CI -0.9-1.7) p=.45<br>12 months: 2.0±1.8 vs 1.7±1.8 (95% CI -1.4-1.9) p=.69<br>**Time in intensive care unit (days) (95% CI)**<br>*Before MI-E vs after MI-E*<br>6 months: 17.7±19.1 vs 2.1±4.8 (95% CI -1.1-32.3) p=.06<br>12 months: 19.9±22.3 vs 4.6±7.3 (95% CI -1.0-31.6) p=.06<br>**Invasive ventilation time (hours) (95% CI)**<br>*Before MI-E vs after MI-E*<br>6 months: 128.2±165.6 vs 0 (95% CI -24.9-281.4) p=.09<br>12 months: 170.8±256.6 vs 18.2±48.2 (95% CI -46.4±351.6) p=.11<br>**Non-invasive ventilation time (hours) (95% CI)**<br>*Before MI-E vs after MI-E*<br>6 months: 276.5±268.9 vs 56.5±94.4 (95% CI -57.9±497.9) p=.10<br>12 months: 278.0±267.9 vs 82.8±102.4 (95% CI -58.4-448.8) p=.11 | No adverse event observed | Caregivers reported size and awkwardness of the device and its inability to run from battery power |
| Lacombe[34]<br>*In-patient* | 2014 | Randomized controlled trial, single-center | 18 subjects with NMD<br>*32.8 [21-68]*<br>*13 Male/5 Female*<br>*Cough assistance:*<br>a. MI-E<br>b. MI-E+MAC<br>c. IPPB+ MAC | Compare CPF using three techniques that combine inspiratory and expiratory support: MI-E+MAC, MI-E and IPPB+MAC,<br>Comfort and effectiveness evaluated with a visual analog scale | CPF L/min<br>highest with IPPB+MAC than with MI-E+MAC (p=.01) or MI-E alone (p=.030)<br>(data not available, represented on figure in publication)<br>Effectiveness (VAS cm)<br>*MI-E vs IPPB+MAC vs MI-E+MAC*<br>6.4 (4.8-8.2) vs 8.3 (7.2-9.0)* vs 8.5 (6.2-9.0)*<br>* p<.05 compared to MI-E alone | Not assessed | Comfort (VAS cm):<br>*MI-E vs IPPB+MAC vs MI-E+MAC*<br>6.4 (5.5-7.0) vs 7.0 (6.0-8.5) vs 6.6 (5.8-8.0) (not significant, no actual p-value reported in the publication) |

| **First Author** *In-patient/out-patient* | **Year** | **Study design** | **Population** *Mean age, years [min-max]* *Gender* *Type of cough assistance* | **Objectives and outcome measures** | **Key findings** | | |
|---|---|---|---|---|---|---|---|
| | | | | | **Efficacy** | **Safety** | **Quality of life** |

MI-E = Mechanical in-exsufflation
IPPB = Intermittent Positive Pressure Breathing
MAC = Manually assisted cough
CPF = Cough peak flow
ALS = Amyotrophic lateral sclerosis
COPD = Chronic obstructive pulmonary disease
NMD = Neuromuscular disease

Table 5. Research strategy

1 – Bibliograhics databases

| Study type / subject<br>Terms used | Period | Number of references |
|---|---|---|
| LUNG EXPANSION<br>Recommendations | No limit – 10/2014 | 11 |
| Step 1 (Intermittent Positive-Pressure Breathing OR Insufflation/instrumentation OR Inhalation/instrumentation)/de OR (insufflator* OR exsufflator* OR insufflator-exsufflator*)/ti,ab OR (airway clearance/ti,ab AND (positive expiratory pressure OR PEP OR IPPB OR intermittent positive pressure breathing)/ti,ab) OR airway clearance*/ti,ab OR IPPB/ti | | |
| AND | | |
| Step 2 Health Planning Guidelines/de OR (practice guideline OR guideline OR Consensus Development Conference OR Consensus Development Conference, NIH)/pt OR (recommendation* OR guideline*)/ti | | |
| Systematic reviews and meta-analysis | No limit – 10/2014 | 26+3 |
| Step 1 | | |
| AND | | |
| Step 3 (metaanalys* OR meta-analys* OR meta analysis OR systematic review* OR systematic overview* OR systematic literature review* OR systematical review* OR systematical overview* OR systematical literature review* OR systematic literature search)/ti OR meta-analysis/pt OR cochrane database syst rev/ta | | |
| Randomized controlled trial | No limit – 10/2014 | 72+3 |
| Step 1 | | |
| AND | | |
| Step 4 (random*/ti OR (randomly OR randomized OR placebo)/ti,ab OR (Random Allocation OR Double-Blind Method OR Single-Blind Method OR Cross-Over Studies)/de OR (randomized controlled trial OR controlled clinical trial)/pt | | |
| Comparatives studies | No limit - 10/2014 | 51 |
| Step 1 | | |
| AND | | |
| Step 5 (clinical trial* OR comparative stud* OR versus)/ti OR clinical trial/pt OR comparative study/pt | | |
| Observational studies | No limit – 10/2014 | 42 |
| Step 1 | | |

| | | | |
|---|---|---|---|
| AND | | | |
| Step 6 | (observational* OR cohort* OR longitudinal stud* OR follow-up stud* OR prospective stud* OR retrospective stud*)/ti OR (Cohort Studies OR Longitudinal Studies OR Follow-Up Studies OR Prospective Studies OR Epidemiologic Studies OR Retrospective Studies)/de | | |
| COUGH ASSISTANCE | | | |
| Recommendations | | No limit – 10/2014 | 3+1 |
| Step 7 | ((Cough/de OR cough*/ti,ab) AND ((Respiratory Paralysis OR Paralysis OR Spinal Cord Diseases OR Spinal Cord Injuries OR Neurodegenerative Diseases OR Nervous System Diseases)/de OR paralyzed OR paralised OR paralys* OR palsy OR palsies OR spinal cord* OR neurodegenerative* OR neurologic* OR nervous system*)/ti)) OR (cough assistance OR cough assist therap* OR mechanical insufflation* OR in exsufflation* OR cough capacity OR cough respiratory therapy OR mechanically assisted cough*)/ti,ab OR MIE/ti | | |
| AND | | | |
| Step 2 | | | |
| Systematic reviews and meta-analysis | | No limit – 10/2014 | 3 |
| Step 7 AND Step 3 | | | |
| Randomized controlled trial | | No limit – 10/2014 | 29 |
| Step 7 AND Step 4 | | | |
| Comparatives studies | | No limit – 10/2014 | 23 |
| Step 7 AND Step 5 | | | |
| Observational studies | | No limit – 10/2014 | 92 |
| Step 7 AND Step 6 | | | |

de : descriptor ; ti : title ; ab : abstract ; * truncation; ! : explosion; pt: publication type

## 2 – Visited websites

Last consultation: 10/01/2014

Bibliothèque médicale Lemanissier

Catalogue et index des sites médicaux francophones – CISMeF

Comité d'Evaluation et de Diffusion des Innovations Technologiques – CEDIT

Evaluation des technologies de santé pour l'aide à la décision (Fédération hospitalière de France) – ETSAD

Expertise collective INSERM

Société française de médecine générale – SFMG

Société française de pneumologie de langue française – SPLF

Adelaide Health Technology Assessment – AHTA

Agency for Healthcare Research and Quality – AHRQ

Alberta Heritage Foundation for Medical Research – AHFMR

Alberta Medical Association

American Association for Respiratory Care –AARC

American College of Physicians – ACP

Australian Safety and Efficacy Register of New Interventional Procedures – Surgical

American Thoracic Society

Blue Cross Blue Shield Association – BCBS - Technology Evaluation Center

BMJ Clinical Evidence

British Thoracic Society

California Technology Assessment Forum – CTAF

Canadian Agency for Drugs and Technologies in Health – CADTH

Canadian Task Force on Preventive Health Care

Canadian Thoracic Society

Centers for Disease Control and Prevention

Centre fédéral d'expertise des soins de santé – KCE

Centre for Clinical Effectiveness – CCE

Centre for Reviews and Dissemination databases

Clinical Practice Guidelines Portal

CMA Infobase

Cochrane Library

College of Physicians and Surgeons of Alberta – CPSA

Cystic Fibrosis Foundation

Cystic Fibrosis Trust

Euroscan

Guideline Advisory Committee – GAC

Guidelines and Protocols Advisory Committee – GPAC

Guidelines International Network – GIN

Health Services Technology Assessment Text – HSTAT

Australia and New Zealand Horizon Scanning Network

Institut national d'excellence en santé et en services sociaux – INESSS

Institute for Clinical Evaluative Sciences – ICES

Institute for Clinical Systems Improvement – ICSI

Institute for Health Economics Alberta – IHE

Medical Services Advisory Committee – MSAC

Minnesota Department of Health – Health Technology Avisory Committee (to 2002) – HTAC

National Coordinating Centre for Health Technology Assessment – NCCHTA

National Guideline Clearinghouse – NGC

National Health and Medical Research Council – NHMRC

National Horizon Scanning Centre – NHSC

National Institute for Health and Clinical Excellence – NICE

New Zealand Guidelines Group – NZGG

New Zealand Health Technology Assessment – NZHTA

NHS Evidence

Ontario Health Technology Advisory Committee – OHTAC

Public Health Agency of Canada - Diseases Prevention and Control Guidelines

Scottish Intercollegiate Guidelines Network – SIGN

Singapore Ministry of Health

Thoracic Society of Australia and New Zealand

Tripdatabase

U.S. Preventive Services Task Force

Veterans affairs, Dep. Of Defense Clinical practice guidelines

West Midlands Health Technology Assessment Collaboration – WMHTA

## 3 – Literature monitoring

A literature monitoring was performed until December 2015 on the websites listed above and in the Medline database.

Table 6. List of full-text articles excluded, with reasons

| Author | Date of publication | Reason for exclusion |
|---|---|---|
| Aiello M | 2008 | WI |
| Andrews J | 2013 | WI |
| Ann Intern | 1983 | WPP |
| Bach JR | 2002 | WI |
| Bach JR | 1995 | UR |
| Bach JR | 1997 | WI |
| Bach JR | 2000 | WO |
| Bach JR | 2004 | UR |
| Bach JR | 2007 | UR |
| Bach JR | 2010 | WO |
| Berlowitz D | 2013 | WI |
| Choi WA | 2012 | WI |
| Cleary S | 2013 | WI |
| Elkins MR | 2006 | WI |
| Estenne M | 1989 | WI |
| Felix E | 2014 | WI |
| Flume PA | 2009 | WI |
| Garuti G | 2013 | UR |
| Gomez-Merino E | 2002 | UR |
| Goncalves MR | 2012 | WPP |
| Gosselink R | 2008 | WPP |
| Gregoretti C | 2013 | UR |
| Guerin C | 2010 | WO |
| Ishikawa Y | 2011 | UR |
| Kang SW | 2006 | UR |
| Khirani S | 2013 | WI |
| Konstan MW | 2010 | WI |
| Kulnik ST | 2014 | WI |
| Lemoine TJ | 2012 | WI |
| Lester MK | 2009 | WI |
| McKim DA | 2012 | UR |
| Mckoy NA | 2012 | WI |
| Mellies U | 2005 | WSD |
| Miske LJ | 2013 | WO |
| Murray JF | 1974 | WSD |
| Niranjan V | 1998 | UR |
| Osadnik C | 2014 | WI |
| Oskoui M | 2007 | WI |

| | | |
|---|---|---|
| Ottonello G | 2011 | WI |
| Pelissier J | 2001 | WI |
| Pryor JA | 2010 | WI |
| Sancho J | 2003 | WSD |
| Servera E | 2005 | WO |
| Silverman EP | 2006 | WI |
| Simonds AK | 1989 | UR |
| Toussaint M | 2009 | UR |
| Tzeng AC | 2000 | UR |
| van Der Schans CP | 2000 | WI |
| Vianello A | 2011 | WO |
| Winfield NR | 2014 | WPP |

| | |
|---|---|
| WSD | Wrong study design |
| WPP | Wrong patient population |
| WO | Wrong outcome |
| WI | Wrong intervention |
| UR | Unclear reporting |