

Supplementary Appendix A Literature Search

Search: TAVI in Frail Patients with Aortic Stenosis

Database: Embase Classic+Embase 1947 to September 23, 2020

#	Searches
1	frailty/
2	frail elderly/
3	geriatric assessment/
4	frail*.mp.
5	fragile.mp.
6	or/1-5
7	geriatric patient/
8	very elderly/
9	aged/
10	aged hospital patient/
11	geriatrician/
12	*geriatrics/
13	(aged or aging or older or elderly or senior* or geriatric* or centenarian* or nonagenarian* or octogenarian* or septuagenarian* or sexagenarian*).mp.
14	or/7-13
15	exhaustion/
16	limited mobility/
17	"timed up and go test"/
18	exp walk test/
19	walking speed/
20	gait/
21	physical activity/
22	Performance Oriented Mobility Assessment/
23	grip strength/
24	hand strength/
25	muscle strength/
26	daily life activity/

27	exp "activity of daily living assessment"/
28	exp ADL disability/
29	exp disability/
30	exp functional status assessment/
31	exp neuropsychological test/
32	mental function assessment/
33	cognition assessment/
34	exp cognition/
35	exp cognitive defect/
36	memory assessment/
37	nutritional assessment/
38	((exhaustion or fatigue* or tired* or mobility or gait or walk* or stand or balance or bath* or dress* or toilet* or continence or feeding or cognition or memory or mental or disability or NYHA or Karnofsky or CSHA or functional* or Katz or Fried or Rockwood or frailty or nutrition*) adj7 (assess* or phenotype* or eval* or test* or exam* or instrument* or index or indices or scale* or score* or tool* or declin* or dependenc* or impair*)).mp.
39	(chair adj2 (rise or stand)).mp.
40	((grip* or grasp* or hand* or musc*) adj2 strength).mp.
41	(tug adj3 test).mp.
42	(timed* adj6 (up* or go)).mp.
43	timedupandgo.mp.
44	weight loss.mp.
45	(activit* adj3 (living or life)).mp.
46	(adl or iadl or badl).mp.
47	or/15-46
48	14 and 47
49	6 or 48
50	((transfemoral* or trans-femoral* or transapical* or trans-apical* or transaxillary or trans-axillary or transarterial* or trans-arterial* or subclavian* or sub-clavian* or transcatheter* or trans-catheter* or transcutaneous* or trans-cutaneous* or per-cutaneous* or percutaneous* or transcaval* or trans-caval* or "direct aortic" or tavi or tavr or pavi or pavr or sapien or cribier or revalv* or lotus or "direct flow" or jenavalve or portico or engager or evolut) adj3 aortic valv*).mp.
51	transcatheter aortic valve implantation/

52	or/50-51
53	49 and 52
54	limit 53 to yr="2006 -Current"

Database: Ovid MEDLINE(R) ALL 1946 to September 23, 2020

#	Searches
1	Frailty/
2	Frail Elderly/
3	Geriatric Assessment/
4	frail*.mp.
5	fragile.mp.
6	or/1-5
7	"Aged, 80 and over"/
8	Aged/
9	Geriatricians/
10	*Geriatrics/
11	(aged or aging or older or elderly or senior* or geriatric* or centenarian* or nonagenarian* or octogenarian* or septuagenarian* or sexagenarian*).mp.
12	or/7-11
13	Physical Exertion/
14	Physical Endurance/
15	Walk Test/
16	Exercise Test/
17	Exercise Tolerance/
18	Walking Speed/
19	Gait/
20	Exercise/
21	mobility limitation/
22	Hand Strength/
23	Muscle Strength/
24	exp "Activities of Daily Living"/
25	"Quality of Life"/
26	exp Neuropsychological Tests/
27	exp Cognition/
28	Cognitive Dysfunction/

29	Cognition Disorders/
30	Nutritional Assessment/
31	Nutritional Status/
32	((exhaustion or fatigue* or tired* or mobility or gait or walk* or stand or balance or bath* or dress* or toilet* or continence or feeding or cognition or memory or mental or disability or NYHA or Karnofsky or CSHA or functional* or Katz or Fried or Rockwood or frailty or nutrition*) adj7 (assess* or phenotype* or eval* or test* or exam* or instrument* or index or indices or scale* or score* or tool* or declin* or dependenc* or impair*)).mp.
33	(chair adj2 (rise or stand)).mp.
34	((grip* or grasp* or hand* or musc*) adj2 strength).mp.
35	(tug adj3 test).mp.
36	(timed* adj6 (up* or go)).mp.
37	timedupandgo.mp.
38	weight loss.mp.
39	(activit* adj3 (living or life)).mp.
40	(adl or iadl or badl).mp.
41	or/13-40
42	12 and 41
43	6 or 42
44	((transfemoral* or trans-femoral* or transapical* or trans-apical* or transaxillary or trans-axillary or transarterial* or trans-arterial* or subclavian* or sub-clavian* or transcatheter* or trans-catheter* or transcutaneous* or trans-cutaneous* or per-cutaneous* or percutaneous* or transcaval* or trans-caval* or "direct aortic" or tavi or tavr or pavi or pavr or sapien or cribier or revalv* or lotus or "direct flow" or jenavalve or portico or engager or evolut) adj3 aortic valv*).mp.
45	Transcatheter Aortic Valve Replacement/
46	or/44-45
47	43 and 46
48	limit 47 to yr="2006 -Current"

Database: Cochrane Central Register of Controlled Trials

#	Searches
1	MeSH descriptor: [Frailty] this term only
2	MeSH descriptor: [Frail Elderly] this term only
3	MeSH descriptor: [Geriatric Assessment] this term only
4	frail*:ti,ab,kw (Word variations have been searched)
5	fragile:ti,ab,kw (Word variations have been searched)
6	{OR #1-#5}
7	MeSH descriptor: [Aged, 80 and over] this term only
8	MeSH descriptor: [Aged] this term only
9	MeSH descriptor: [Geriatrics] this term only
10	aged or aging or older or elderly or senior* or geriatric* or centenarian* or nonagenarian* or octogenarian* or septuagenarian* or sexagenarian*:ti,ab,kw (Word variations have been searched)
11	{or #7-#10}
12	MeSH descriptor: [Mobility Limitation] this term only
13	MeSH descriptor: [Physical Exertion] this term only
14	MeSH descriptor: [Physical Endurance] this term only
15	MeSH descriptor: [Walk Test] this term only
16	MeSH descriptor: [Exercise Test] this term only
17	MeSH descriptor: [Exercise Tolerance] this term only
18	MeSH descriptor: [Walking Speed] this term only
19	MeSH descriptor: [Gait] this term only
20	MeSH descriptor: [Exercise] this term only
21	MeSH descriptor: [Hand Strength] this term only
22	MeSH descriptor: [Muscle Strength] this term only
23	MeSH descriptor: [Activities of Daily Living] explode all trees
24	MeSH descriptor: [Quality of Life] this term only
25	MeSH descriptor: [Neuropsychological Tests] explode all trees
26	MeSH descriptor: [Cognition] explode all trees
27	MeSH descriptor: [Cognition Disorders] this term only

28	MeSH descriptor: [Cognitive Dysfunction] this term only
29	MeSH descriptor: [Nutrition Assessment] this term only
30	MeSH descriptor: [Nutritional Status] this term only
31	((exhaustion or fatigue* or tired* or mobility or gait or walk* or stand or balance or bath* or dress* or toilet* or continence or feeding or cognition or memory or mental or disability or NYHA or Karnofsky or CSHA or functional* or Katz or Fried or Rockwood or frailty or nutrition*) next/7 (assess* or phenotype* or eval* or test* or exam* or instrument* or index or indices or scale* or score* or tool* or declin* or dependenc* or impair*)):ti,ab,kw (Word variations have been searched)
32	(chair next/2 (rise or stand)):ti,ab,kw (Word variations have been searched)
33	((grip* or grasp* or hand* or musc*) next/2 strength):ti,ab,kw (Word variations have been searched)
34	(tug next/3 test):ti,ab,kw (Word variations have been searched)
35	(timed* next/6 (up* or go)):ti,ab,kw (Word variations have been searched)
36	"weight loss":ti,ab,kw (Word variations have been searched)
37	(activit* next/3 (living or life)):ti,ab,kw (Word variations have been searched)
38	adl or iadl or badl:ti,ab,kw (Word variations have been searched)
39	{or #12-#38}
40	#11 and #39
41	#6 or #40
42	((transfemoral* or trans-femoral* or transapical* or trans-apical* or transaxillary or trans-axillary or transarterial* or trans-arterial* or subclavian* or sub-clavian* or transcatheter* or trans-catheter* or transcutaneous* or trans-cutaneous* or per-cutaneous* or percutaneous* or transcaval* or trans-caval* or "direct aortic" or tavi or tavr or pavi or pavr or sapien or cribier or revalv* or lotus or "direct flow" or jenavalve or portico or engager or evolut) next/3 aortic valv*):ti,ab,kw (Word variations have been searched)
43	MeSH descriptor: [Transcatheter Aortic Valve Replacement] this term only
44	#42 or #43
45	#41 and #44

Database: PsycINFO (ProQuest) - updated weekly

#	Searches
1	MAINSUBJECT.EXACT("Health Impairments" OR "Geriatric Assessment")
2	AB, TI, SU(frail* OR fragile)
3	1 OR 2
4	MAINSUBJECT.EXACT("Geriatric Patients" OR "Geriatrics" OR "Gerontology")
5	AB, TI, SU(aged OR aging OR older OR elderly OR senior* OR geriatric* OR centenarian* OR nonagenarian* OR octogenarian* OR septuagenarian* OR sexagenarian*)
6	4 OR 5
7	MAINSUBJECT.EXACT("Fatigue" OR "Physical Mobility" OR "Locomotion" OR "Physical Agility" OR "Physical Activity" OR "Physical Endurance" OR "Physical Fitness" OR "Physical Strength" OR "Exercise" OR "Ability Level" OR "Activity Level" OR "Walking" OR "Gait" OR "Activities of Daily Living" OR "Daily Activities" OR "Quality of Life" OR "Neuropsychological Assessment" OR "Cognition" OR "Cognitive Impairment" OR "Memory Disorders" OR "Nutritional Deficiencies")
8	AB, TI, SU(exhaustion OR fatigue* OR tired* OR mobility OR gait OR walk* OR stand OR balance OR bath* OR dress* OR toilet* OR continence OR feeding OR cognition OR memory OR mental OR disability OR NYHA OR Karnofsky OR CSHA OR functional* OR Katz OR Fried OR Rockwood OR frailty OR nutrition*) AND AB, TI, SU(assess* OR phenotype* OR eval* OR test* OR exam* OR instrument* OR index OR indices OR scale* OR score* OR tool* OR declin* OR dependenc* OR impair*)
9	chair NEAR/2 (rise OR stand)
10	strength NEAR/2 (grip* OR grasp* OR hand* OR musc*)
11	tug NEAR/3 test
12	timed* NEAR/6 (up* OR go)
13	activit* NEAR/3 (living OR life)
14	AB, TI, SU(timedupandgo OR weight loss OR adl OR iadl OR badl)
15	7 OR 8 OR 9 OR 10 OR 11 OR 12 OR 13 OR 14
16	6 AND 15
17	3 OR 16
18	(transfemoral* OR trans-femoral* OR transapical* OR trans-apical* OR transaxillary OR trans-axillary OR transarterial* OR trans-arterial* OR subclavian* OR sub-clavian* OR transcatheter* OR trans-catheter* OR transcuteaneous* OR trans-cutaneous* OR percutaneous* OR percutaneous* OR transcaval* OR trans-caval* OR "direct aortic" OR tavi OR tavr OR pavi OR pavr OR sapien OR cribier OR revalv* OR lotus OR "direct flow" OR jenavalve OR portico OR engager OR evoluf) AND (aortic valv*)
19	TAVI

20	18 OR 19
21	17 AND 20

Database: Web of Science Core Collection (Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, ESCI Timespan=All years) updated daily

#	Searches
1	TS=(frail*)
2	TS=(fragile)
3	#1 OR #2
4	TS=(aged OR aging OR older OR elderly OR senior* OR geriatric* OR centenarian* OR nonagenarian* OR octogenarian* OR septuagenarian* OR sexagenarian*)
5	TS=((exhaustion OR fatigue* OR tired* OR mobility OR gait OR walk* OR stand OR balance OR bath* OR dress* OR toilet* OR continence OR feeding OR cognition OR memory OR mental OR disability OR NYHA OR Karnofsky OR CSHA OR functional* OR Katz OR Fried OR Rockwood OR frailty OR nutrition*) NEAR/7 (assess* OR phenotype* OR eval* OR test* OR exam* OR instrument* OR index OR indices OR scale* OR score* OR tool* OR declin* OR dependenc* OR impair*))
6	TS=(chair NEAR/2 (rise OR stand))
7	TS=((grip* OR grasp* OR hand* OR musc*) NEAR/2 strength)
8	TS=(tug NEAR/3 test)
9	TS=(timed* NEAR/6 (up OR go))
10	TS=(weight loss)
11	TS=(activit* NEAR/3 (living OR life))
12	TS=(ADL OR IADL OR BADL)
13	#12 OR #11 OR #10 OR #9 OR #8 OR #7 OR #6 OR #5
14	#13 AND #4
15	#14 OR #3
16	TS=((transfemoral* OR trans-femoral* OR transapical* OR trans-apical* OR transaxillary OR trans-axillary OR transarterial* OR trans-arterial* OR subclavian* OR sub-clavian* OR transcatheter* OR trans-catheter* OR transcuteaneous* OR trans-cutaneous* OR percutaneous* OR percutaneous* OR transcaval* OR trans-caval* OR "direct aortic" OR tavi OR tavr OR pavi OR pavr OR sapien OR cribier OR revalv* OR lotus OR "direct flow" OR jenavalve OR portico OR engager OR evolut) NEAR/3 aortic valv*)
17	#16 AND #15