Information Page

Report citation: Hamel C, Ghannad M, McInnes M, Skidmore B, Garritty C. Ottawa Hospital Research Institute, August 2016.

UKNSC collaborators: John Marshall, Jonothan Earnshaw

Acknowledgements: The authors thank Roxanne Ward and Raymond Daniel for their assistance with this report compilation, and Tamara Rader for performing the PRESS Peer review. We would also like to thank Misty Pratt and Mona Hersi for their contribution to the qualitative narrative component.

Disclosure of interests of the report authors: The authors declare no competing interests.

Source of funding: The United Kingdom National Screening Committee (UKNSC)

Appendix 1. Search Strategy for Subaneurysmal Aortas

Subaneurysmal Aortas
2016 Feb 16

OVID Multifile

Database: EmbaseClassic+Embase<1947 to 2016 February 12>, Ovid MEDLINE® In-Process & Other Non-Indexed Citations and Ovid MEDLINE® <1946 to Present>
Search Strategy:

1 ((subaneurysm* or sub-aneurysm*) adj2 aort*).tw,kw. (9)
2 ((nonaneurysm* or non-aneurysm*) adj2 aort*).tw,kw. (276)
3 (abdominal aortic aneurysm* adj3 (very small* or tiny* or miniscule* or minute or subsize* or sub-size*)).tw,kw. (6)
4 (AAA adj3 (very small* or tiny* or miniscule* or minute or subsize* or sub-size*)).tw,kw. (13)
5 or/1-4 (300)
6 (25 mm or 25mm or “2.5 cm” or “2.5cm”).tw,kw. (65183)
7 (“25” adjmillimet*).tw,kw. (64)
8 (“2.5” adjcentimet*).tw,kw. (142)
9 (26 mm or 26mm or “2.6 cm” or “2.6cm”).tw,kw. (12334)
10 (“26” adjmillimet*).tw,kw. (20)
11 (“2.6” adjcentimet*).tw,kw. (7)
12 (27 mm or 27mm or “2.7 cm” or “2.7cm”).tw,kw. (11864)
13 (“27” adjmillimet*).tw,kw. (9)
14 (“2.7” adjcentimet*).tw,kw. (12)
15 (28 mm or 28mm or “2.8 cm” or “2.8cm”).tw,kw. (14411)
16 (“28” adjmillimet*).tw,kw. (22)
17 (“2.8” adjcentimet*).tw,kw. (17)
18 (29 mm or 29mm or “2.9 cm” or “2.9cm”).tw,kw. (9358)
19 (“29” adjmillimet*).tw,kw. (8)
20 (“2.9” adjcentimet*).tw,kw. (3)
21 ((“25-29” or “25 to 29”) adj (mm or millimet*)).tw,kw. (127)
22 ((“2.5-2.9” or “2.5 to 2.9”) adj (cm or centimet*)).tw,kw. (48)
23 ((“26-29” or “26 to 29”) adj (mm or millimet*)).tw,kw. (74)
24 ((“2.6-2.9” or “2.6 to 2.9”) adj (cm or centimet*)).tw,kw. (22)
25 ((less than or under) adj (“30” or 30mm or “3.0” or “3.0cm”)).tw,kw. (26554)
26 or/6-25 (133895)
27 Aortic Aneurysm, Abdominal/ (21719)
28 Aorta, Abdominal/ (35848)
29 AAA.tw,kw. (22877)
30 “triple A”.tw,kw. (560)
31 ((infrarenal* or infra renal*) adj3 aort*).tw,kw. (8584)
32 (abdom* adj3 (aneurysm or aort*)).tw,kw. (67963)
33 ((aneurysm* or aort*) adj3 diameter*).tw,kw. (12873)
34 ((aneurysm* or aort*) adj3 dimension*).tw,kw. (2987)
35 ((aneurysm* or aort*) adj3 expan*).tw,kw. (2982)
36 ((aneurysm* or aort*) adj3 measur*).tw,kw. (13631)
37 ((aneurysm* or aort*) adj3 (size? Or sizing)).tw,kw. (8814)
38 ((ectatic* or dilat*) adj1 aort*).tw,kw. (3864)
39 or/27-38 (129986)
40 26 and 39 (2375)
41 5 or 40 (2658)

42 exp Animals/ not (exp Animals/ and Humans/) (13736598)
43 41 not 42 (1906)
44 (comment or editorial or interview or news or newspaper article).pt. (1623274)
45 (letter not (letter and randomized controlled trial)).pt. (1821252)
46 43 not (44 or 45) (1900)
47 46 use prmz (919) [MEDLINE RECORDS]
48 ((subaneurysm* or sub-aneurysm*) adj2 aort*).tw,kw. (9)
49 ((nonaneurysm* or non-aneurysm*) adj2 aort*).tw,kw. (276)
50 (abdominal aortic aneurysm* adj3 (very small* or tiny* or miniscule* or minute or subsize* or sub-size*)).tw,kw. (6)
51 (AAA adj3 (very small* or tiny* or miniscule* or minute or subsize* or sub-size*)).tw,kw. (13)
52 or/48-51 (300)
53 (25 mm or 25mm or “2.5 cm” or “2.5cm”).tw,kw. (65183)
54 (“25” adjmillimet*).tw,kw. (64)
55 (“2.5” adjcentimet*).tw,kw. (142)
56 (26 mm or 26mm or “2.6 cm” or “2.6cm”).tw,kw. (12334)
57 (“26” adjmillimet*).tw,kw. (20)
58 (“2.6” adjcentimet*).tw,kw. (7)
59 (27 mm or 27mm or “2.7 cm” or “2.7cm”).tw,kw. (11864)
60 (“27” adjmillimet*).tw,kw. (9)
61 (“2.7” adjcentimet*).tw,kw. (12)
62 (28 mm or 28mm or “2.8 cm” or “2.8cm”).tw,kw. (14411)
63 (“28” adjmillimet*).tw,kw. (22)
64 (“2.8” adjcentimet*).tw,kw. (17)
65 (29 mm or 29mm or “2.9 cm” or “2.9cm”).tw,kw. (9358)
66 (“29” adjmillimet*).tw,kw. (8)
67 (“2.9” adjcentimet*).tw,kw. (3)
68 ((“25-29” or “25 to 29”) adj (mm or millimet*)).tw,kw. (127)
69 ((“2.5-2.9” or “2.5 to 2.9”) adj (cm or centimet*)).tw,kw. (48)
70 ((“26-29” or “26 to 29”) adj (mm or millimet*)).tw,kw. (74)
71 ((“2.6-2.9” or “2.6 to 2.9”) adj (cm or centimet*)).tw,kw. (22)
72 ((less than or under) adj (“30” or 30mm or “3.0” or “3.0cm”)).tw,kw. (26554)
73 or/53-72 (133895)
74 abdominal aorta aneurysm/ (21934)
75 abdominal aorta/ (37976)
76 AAA.tw,kw. (22877)
77 “triple A”.tw,kw. (560)
78 ((infrarenal* or infra renal*) adj3 aort*).tw,kw. (8584)
79 (abdom* adj3 (aneurysm or aort*)).tw,kw. (67963)
80 ((aneurysm* or aort*) adj3 diameter*).tw,kw. (12873)
81 ((aneurysm* or aort*) adj3 dimension*).tw,kw. (2987)
82 ((aneurysm* or aort*) adj3 expan*).tw,kw. (2982)
83 ((aneurysm* or aort*) adj3 measur*).tw,kw. (13631)
84 ((aneurysm* or aort*) adj3 (size? Or sizing)).tw,kw. (8814)
85 ((ectatic* or dilat*) adj1 aort*).tw,kw. (3864)
86 or/74-85 (130646)
87 73 and 86 (2366)
88 52 or 87 (2649)
89 exp animal experimentation/ or exp models animal/ or exp animal experiment/ or nonhuman/ or exp vertebrate/ (41921111)
90 exp humans/ or exp human experimentation/ or exp human experiment/ (32544881)
91 89 not 90 (9377887)
92 88 not 91 (2470)

93 editorial.pt. (893452)
94 letter.pt.not (letter.pt. and randomized controlled trial/) (1816782)
95 92 not (93 or 94) (2465)
96 95 use emczd (1556) [EMBASE RECORDS]
97 47 or 96 (2475)
98 remove duplicates from 97 (1651) [TOTAL UNIQUE RECORDS]
99 98 use prmz (917) [MEDLINE UNIQUE RECORDS]
100 98 use emczd (734) [EMBASE UNIQUE RECORDS]

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Cochrane Library

Search Name: Subaneurysmal Aorta
Date Run: 16/02/16 13:22:49.305
Description: OHRI — 2016 Feb 12

ID Search Hits
#1 ((subaneurysm* or (sub next aneurysm*)) near/2 aort*):ti,ab,kw 0
#2 ((nonaneurysm* or (non next aneurysm*)) near/2 aort*):ti,ab,kw 1
#3 ((abdominal aortic next aneurysm*) near/3 (“very small” or tiny* or miniscule* or minute or subsize* or (sub next size*))):ti,ab,kw 0
#4 (AAA near/3 (“very small” or tiny* or miniscule* or minute or subsize* or (sub next size*))):ti,ab,kw 1
#5 {or #1-#4} 2
#6 (“25 mm” or 25mm or “2.5 cm” or “2.5cm”):ti,ab,kw 969
#7 (25 next millimet*):ti,ab,kw 1
#8 (“2.5” next centimet*):ti,ab,kw 1
#9 (“26 mm” or 26mm or “2.6 cm” or “2.6cm”):ti,ab,kw 326
#10 (26 next millimet*):ti,ab,kw 0
#11 (“2.6” next centimet*):ti,ab,kw 0
#12 (“27 mm” or 27mm or “2.7 cm” or “2.7cm”):ti,ab,kw 303
#13 (27 next millimet*):ti,ab,kw 0
#14 (“2.7” next centimet*):ti,ab,kw 0
#15 (“28 mm” or 28mm or “2.8 cm” or “2.8cm”):ti,ab,kw 423
#16 (28 next millimet*):ti,ab,kw 2
#17 (“2.8” next centimet*):ti,ab,kw 0
#18 (“29 mm” or 29mm or “2.9 cm” or “2.9cm”):ti,ab,kw 278
#19 (29 adjmillimet*):ti,ab,kw 0
#20 (“2.9” next centimet*):ti,ab,kw 0
#21 ((“25-29” or “25 to 29”) next (mm or millimet*)):ti,ab,kw 2
#22 ((“2.5-2.9” or “2.5 to 2.9”) next (cm or centimet*)):ti,ab,kw 4
#23 ((“26-29” or “26 to 29”) next (mm or millimet*)):ti,ab,kw 0
#24 ((“2.6-2.9” or “2.6 to 2.9”) next (cm or centimet*)):ti,ab,kw 0
#25 ((“less than” or under) next (30 or 30mm or “3.0” or “3.0cm”)):ti,ab,kw653
#26 {or #6-#25} 2765
#27 [mh “Aortic Aneurysm, Abdominal”] 679
#28 [mh “Aorta, Abdominal”] 326
#29 AAA:ti,ab,kw 345
#30 “triple A”:ti,ab,kw 7
#31 ((infrarenal* or (infra next renal*)) near/3 aort*):ti,ab,kw 173
#32 (abdom* near/3 (aneurysm or aort*)):ti,ab,kw 1416
#33 ((aneurysm* or aort*) near/3 diameter*):ti,ab,kw 194
#34 ((aneurysm* or aort*) near/3 dimension*):ti,ab,kw 41

#35	((aneurysm* or aort*) near/3 expan*):ti,ab,kw	42
#36	((aneurysm* or aort*) near/3 measur*):ti,ab,kw	268
#37	((aneurysm* or aort*) near/3 (size or sizes or sized or sizing)):ti,ab,kw	104
#38	((ectatic* or dilat*) near/1 aort*):ti,ab,kw	49
#39	{or #27-#38}	1933
#40	#26 and #39	32
#41	#5 or #40	34

CENTRAL – 34

Appendix 2. Second search targeting Psychological Aspects

Subaneurysmal Aortas — Screening
2016 Mar 29

OVID Multifile

Database: EmbaseClassic+Embase<1947 to 2016 March 18>, Ovid MEDLINE® In-Process & Other Non-Indexed Citations and Ovid MEDLINE® <1946 to Present>, PsycINFO<1806 to March Week 3 2016>
Search Strategy:

1 ((subaneurysm* or sub-aneurysm*) adj2 aort*).tw,kw. (9)
2 ((nonaneurysm* or non-aneurysm*) adj2 aort*).tw,kw. (283)
3 (abdominal aortic aneurysm* adj3 (very small* or tiny* or miniscule* or minute or subsize* or sub-size*)).tw,kw. (6)
4 ((AAA or AAAs) adj3 (very small* or tiny* or miniscule* or minute or subsize* or sub-size*)).tw,kw. (22)
5 or/1-4 (316)
6 (25 mm or 25mm or “2.5 cm” or “2.5cm”).tw,kw. (66104)
7 (“25” adjmillimet*).tw,kw. (65)
8 (“2.5” adjcentimet*).tw,kw. (145)
9 (26 mm or 26mm or “2.6 cm” or “2.6cm”).tw,kw. (12500)
10 (“26” adjmillimet*).tw,kw. (20)
11 (“2.6” adjcentimet*).tw,kw. (7)
12 (27 mm or 27mm or “2.7 cm” or “2.7cm”).tw,kw. (11993)
13 (“27” adjmillimet*).tw,kw. (9)
14 (“2.7” adjcentimet*).tw,kw. (12)
15 (28 mm or 28mm or “2.8 cm” or “2.8cm”).tw,kw. (14601)
16 (“28” adjmillimet*).tw,kw. (22)
17 (“2.8” adjcentimet*).tw,kw. (17)
18 (29 mm or 29mm or “2.9 cm” or “2.9cm”).tw,kw. (9474)
19 (“29” adjmillimet*).tw,kw. (8)
20 (“2.9” adjcentimet*).tw,kw. (3)
21 ((“25-29” or “25 to 29”) adj (mm or millimet*)).tw,kw. (128)
22 ((“2.5-2.9” or “2.5 to 2.9”) adj (cm or centimet*)).tw,kw. (50)
23 ((“26-29” or “26 to 29”) adj (mm or millimet*)).tw,kw. (79)
24 ((“2.6-2.9” or “2.6 to 2.9”) adj (cm or centimet*)).tw,kw. (22)
25 ((less than or under) adj (“30” or 30mm or “3.0” or “3.0cm”)).tw,kw. (27693)
26 or/6-25 (136487)
27 Aortic Aneurysm, Abdominal/ (21828)
28 Aorta, Abdominal/ (35905)
29 (AAA or AAAs).tw,kw. (25162)
30 “triple A”.tw,kw. (588)
31 (abdominal adj (AA or Aas)).tw,kw. (34)
32 ((infrarenal* or infra renal*) adj3 aort*).tw,kw. (8637)
33 (abdom* adj3 (aneurysm or aort*)).tw,kw. (68542)
34 ((aneurysm* or aort*) adj3 diameter*).tw,kw. (13033)
35 ((aneurysm* or aort*) adj3 dimension*).tw,kw. (3033)
36 ((aneurysm* or aort*) adj3 expan*).tw,kw. (3020)
37 ((aneurysm* or aort*) adj3 measur*).tw,kw. (13785)
38 ((aneurysm* or aort*) adj3 (size? Or sizing)).tw,kw. (8942)
39 ((ectatic* or dilat*) adj1 aort*).tw,kw. (3926)
40 or/27-39 (132517)

41 26 and 40 (2391)
42 5 or 41 (2690)
43 Mass Screening/ (138439)
44 screen*.tw,kw. (1343568)
45 NAAASP.tw,kw. (14)
46 SAAAVE.tw,kw. (14)
47 Aortic Aneurysm, Abdominal/pc (387)
48 Aortic Rupture/pc (427)
49 exp Population Surveillance/ (236953)
50 surveillance.tw,kw. (295707)
51 Watchful Waiting/ (4362)
52 watchful waiting.tw,kw. (4854)
53 or/43-52 (1845075)
54 42 and 53 (287)
55 exp Animals/ not (exp Animals/ and Humans/) (14278145)
56 54 not 55 (223)
57 56 use prmz (121)
58 ((subaneurysm* or sub-aneurysm*) adj2 aort*).tw,kw. (9)
59 ((nonaneurysm* or non-aneurysm*) adj2 aort*).tw,kw. (283)
60 (abdominal aortic aneurysm* adj3 (very small* or tiny* or miniscule* or minute or subsize* or sub-size*)).tw,kw. (6)
61 ((AAA or AAAs) adj3 (very small* or tiny* or miniscule* or minute or subsize* or sub-size*)).tw,kw. (22)
62 or/58-61 (316)
63 (25 mm or 25mm or “2.5 cm” or “2.5cm”).tw,kw. (66104)
64 (“25” adjmillimet*).tw,kw. (65)
65 (“2.5” adjcentimet*).tw,kw. (145)
66 (26 mm or 26mm or “2.6 cm” or “2.6cm”).tw,kw. (12500)
67 (“26” adjmillimet*).tw,kw. (20)
68 (“2.6” adjcentimet*).tw,kw. (7)
69 (27 mm or 27mm or “2.7 cm” or “2.7cm”).tw,kw. (11993)
70 (“27” adjmillimet*).tw,kw. (9)
71 (“2.7” adjcentimet*).tw,kw. (12)
72 (28 mm or 28mm or “2.8 cm” or “2.8cm”).tw,kw. (14601)
73 (“28” adjmillimet*).tw,kw. (22)
74 (“2.8” adjcentimet*).tw,kw. (17)
75 (29 mm or 29mm or “2.9 cm” or “2.9cm”).tw,kw. (9474)
76 (“29” adjmillimet*).tw,kw. (8)
77 (“2.9” adjcentimet*).tw,kw. (3)
78 ((“25-29” or “25 to 29”) adj (mm or millimet*)).tw,kw. (128)
79 ((“2.5-2.9” or “2.5 to 2.9”) adj (cm or centimet*)).tw,kw. (50)
80 ((“26-29” or “26 to 29”) adj (mm or millimet*)).tw,kw. (79)
81 ((“2.6-2.9” or “2.6 to 2.9”) adj (cm or centimet*)).tw,kw. (22)
82 ((less than or under) adj (“30” or 30mm or “3.0” or “3.0cm”)).tw,kw. (27693)
83 or/63-82 (136487)
84 abdominal aorta aneurysm/ (22107)
85 abdominal aorta/ (38126)
86 (AAA or AAAs).tw,kw. (25162)
87 “triple A”.tw,kw. (588)
88 (abdominal adj (AA or Aas)).tw,kw. (34)
89 ((infrarenal* or infra renal*) adj3 aort*).tw,kw. (8637)
90 (abdom* adj3 (aneurysm or aort*)).tw,kw. (68542)
91 ((aneurysm* or aort*) adj3 diameter*).tw,kw. (13033)
92 ((aneurysm* or aort*) adj3 dimension*).tw,kw. (3033)

93 ((aneurysm* or aort*) adj3 expan*).tw,kw. (3020)
94 ((aneurysm* or aort*) adj3 measur*).tw,kw. (13785)
95 ((aneurysm* or aort*) adj3 (size? Or sizing)).tw,kw. (8942)
96 ((ectatic* or dilat*) adj1 aort*).tw,kw. (3926)
97 or/84-96 (133211)
98 83 and 97 (2383)
99 62 or 98 (2682)
100 screening/ (243261)
101 mass screening/ (138439)
102 screen*.tw,kw. (1343568)
103 NAAASP.tw,kw. (14)
104 SAAAVE.tw,kw. (14)
105 abdominal aorta aneurysm/pc (249)
106 aorta rupture/pc (170)
107 surveillance.tw,kw. (295707)
108 watchful waiting/ (4362)
109 watchful waiting.tw,kw. (4854)
110 or/100-109 (1674796)
111 99 and 110 (275)
112 exp animal experimentation/ or exp models animal/ or exp animal experiment/ or nonhuman/ or exp vertebrate/ (42532583)
113 exp humans/ or exp human experimentation/ or exp human experiment/ (32828990)
114 112 not 113 (9705251)
115 111 not 114 (275)
116 115 use emczd (162)
117 ((subaneurysm* or sub-aneurysm*) adj2 aort*).tw,kw. (9)
118 ((nonaneurysm* or non-aneurysm*) adj2 aort*).tw,kw. (283)
119 (abdominal aortic aneurysm* adj3 (very small* or tiny* or miniscule* or minute or subsize* or sub-size*)).tw,kw. (6)
120 ((AAA or AAAs) adj3 (very small* or tiny* or miniscule* or minute or subsize* or sub-size*)).tw,kw. (22)
121 or/117-120 (316)
122 (25 mm or 25mm or “2.5 cm” or “2.5cm”).tw,kw. (66104)
123 (“25” adjmillimet*).tw,kw. (65)
124 (“2.5” adjcentimet*).tw,kw. (145)
125 (26 mm or 26mm or “2.6 cm” or “2.6cm”).tw,kw. (12500)
126 (“26” adjmillimet*).tw,kw. (20)
127 (“2.6” adjcentimet*).tw,kw. (7)
128 (27 mm or 27mm or “2.7 cm” or “2.7cm”).tw,kw. (11993)
129 (“27” adjmillimet*).tw,kw. (9)
130 (“2.7” adjcentimet*).tw,kw. (12)
131 (28 mm or 28mm or “2.8 cm” or “2.8cm”).tw,kw. (14601)
132 (“28” adjmillimet*).tw,kw. (22)
133 (“2.8” adjcentimet*).tw,kw. (17)
134 (29 mm or 29mm or “2.9 cm” or “2.9cm”).tw,kw. (9474)
135 (“29” adjmillimet*).tw,kw. (8)
136 (“2.9” adjcentimet*).tw,kw. (3)
137 ((“25-29” or “25 to 29”) adj (mm or millimet*)).tw,kw. (128)
138 ((“2.5-2.9” or “2.5 to 2.9”) adj (cm or centimet*)).tw,kw. (50)
139 ((“26-29” or “26 to 29”) adj (mm or millimet*)).tw,kw. (79)
140 ((“2.6-2.9” or “2.6 to 2.9”) adj (cm or centimet*)).tw,kw. (22)
141 ((less than or under) adj (“30” or 30mm or “3.0” or “3.0cm”)).tw,kw. (27693)
142 or/122-141 (136487)
143 (AAA or AAAs).tw,kw. (25162)

144 "triple A".tw,kw. (588)
145 (abdominal adj (AA or Aas)).tw,kw. (34)
146 ((infrarenal* or infra renal*) adj3 aort*).tw,kw. (8637)
147 (abdom* adj3 (aneurysm or aort*)).tw,kw. (68542)
148 ((aneurysm* or aort*) adj3 diameter*).tw,kw. (13033)
149 ((aneurysm* or aort*) adj3 dimension*).tw,kw. (3033)
150 ((aneurysm* or aort*) adj3 expan*).tw,kw. (3020)
151 ((aneurysm* or aort*) adj3 measur*).tw,kw. (13785)
152 ((aneurysm* or aort*) adj3 (size? Or sizing)).tw,kw. (8942)
153 ((ectatic* or dilat*) adj1 aort*).tw,kw. (3926)
154 or/143-153 (114316)
155 142 and 154 (2329)
156 121 or 155 (2628)
157 exp Screening/ (674772)
158 screen*.tw,kw. (1343568)
159 NAAASP.tw,kw. (14)
160 SAAAVE.tw,kw. (14)
161 surveillance.tw,kw. (295707)
162 watchful waiting.tw,kw. (4854)
163 or/157-162 (1883372)
164 156 and 163 (273)
165 exp Animals/ not (exp Animals/ and Humans/) (14278145)
166 164 not 165 (210)
167 166 use prmz (110)
168 166 use emczd (99)
169 166 not (167 or 168) (1)
170 57 or 116 or 169 (284) [TOTAL RECORDS]
171 remove duplicates from 170 (179) [TOTAL UNIQUE RECORDS]
172 171 use prmz (120) [MEDLINE RECORDS]
173 171 use emczd (59) [EMBASE RECORDS]
174 171 NOT (172 OR 173) (0) [PSYCINFO RECORDS]

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Cochrane Library

Search Name: Subaneurysmal Aorta — Screening
Date Run: 31/03/16 16:59:05.451
Description: OHRI — 2016 Mar 29

ID Search Hits
#1 ((subaneurysm* or (sub next aneurysm*)) near/2 aort*):ti,ab,kw 0
#2 ((nonaneurysm* or (non next aneurysm*)) near/2 aort*):ti,ab,kw 1
#3 ((abdominal aortic next aneurysm*) near/3 ("very small" or tiny* or miniscule* or minute or subsize* or (sub next size*))):ti,ab,kw 0
#4 ((AAA or AAAs) near/3 ("very small" or tiny* or miniscule* or minute or subsize* or (sub next size*))):ti,ab,kw 2
#5 {or #1-#4} 3
#6 ("25 mm" or 25mm or "2.5 cm" or "2.5cm"):ti,ab,kw 980
#7 (25 next millimet*):ti,ab,kw 1
#8 ("2.5" next centimet*):ti,ab,kw 1
#9 ("26 mm" or 26mm or "2.6 cm" or "2.6cm"):ti,ab,kw 329
#10 (26 next millimet*):ti,ab,kw 0

#11 ("2.6" next centimet*):ti,ab,kw 0
#12 ("27 mm" or 27mm or "2.7 cm" or "2.7cm"):ti,ab,kw 306
#13 (27 next millimet*):ti,ab,kw 0
#14 ("2.7" next centimet*):ti,ab,kw 0
#15 ("28 mm" or 28mm or "2.8 cm" or "2.8cm"):ti,ab,kw 427
#16 (28 next millimet*):ti,ab,kw 2
#17 ("2.8" next centimet*):ti,ab,kw 0
#18 ("29 mm" or 29mm or "2.9 cm" or "2.9cm"):ti,ab,kw 279
#19 (29 adjmillimet*):ti,ab,kw 0
#20 ("2.9" next centimet*):ti,ab,kw 0
#21 (("25-29" or "25 to 29") next (mm or millimet*)):ti,ab,kw 2
#22 (("2.5-2.9" or "2.5 to 2.9") next (cm or centimet*)):ti,ab,kw 4
#23 (("26-29" or "26 to 29") next (mm or millimet*)):ti,ab,kw 0
#24 (("2.6-2.9" or "2.6 to 2.9") next (cm or centimet*)):ti,ab,kw 0
#25 (("less than" or under) next (30 or 30mm or "3.0" or "3.0cm")):ti,ab,kw657
#26 {or #6-#25} 2791
#27 [mh "Aortic Aneurysm, Abdominal"] 679
#28 [mh "Aorta, Abdominal"] 326
#29 (AAA or AAAs):ti,ab,kw 358
#30 "triple A":ti,ab,kw 7
#31 (abdominal next (AA or Aas)):ti,ab,kw 0
#32 ((infrarenal* or (infra next renal*)) near/3 aort*):ti,ab,kw 173
#33 (abdom* near/3 (aneurysm or aort*)):ti,ab,kw 1421
#34 ((aneurysm* or aort*) near/3 diameter*):ti,ab,kw 195
#35 ((aneurysm* or aort*) near/3 dimension*):ti,ab,kw 41
#36 ((aneurysm* or aort*) near/3 expan*):ti,ab,kw 43
#37 ((aneurysm* or aort*) near/3 measur*):ti,ab,kw 271
#38 ((aneurysm* or aort*) near/3 (size or sizes or sized or sizing)):ti,ab,kw 106
#39 ((ectatic* or dilat*) near/1 aort*):ti,ab,kw 50
#40 {or #27-#39} 1950
#41 #26 and #40 32
#42 #5 or #41 35
#43 [mh ^"Mass Screening"] 4630
#44 screen*:ti,ab,kw 26841
#45 NAAASP:ti,ab,kw 0
#46 SAAAVE:ti,ab,kw 0
#47 [mh "Aortic Aneurysm, Abdominal"/PC] 19
#48 [mh "Aortic Rupture"/PC] 23
#49 [mh "Population Surveillance"] 709
#50 surveillance:ti,ab,kw 3903
#51 [mh "Watchful Waiting"] 203
#52 "watchful waiting":ti,ab,kw 470
#53 {or #43-#52} 30599
#54 #42 and #53 12

DSR – 1
CENTRAL – 11

CINAHL

#	Query	Limiters/Expanders	Results

S56	S53 NOT S54	Limiters- Exclude MEDLINE records Expanders- Apply related words Search modes- Boolean/Phrase	3
S55	S53 NOT S54	Expanders- Apply related words Search modes- Boolean/Phrase	9
S54	(MH “Animals+”) NOT ((MH “Animals+”) AND (MH “Human”))	Expanders- Apply related words Search modes- Boolean/Phrase	29,421
S53	S43 AND S52	Expanders- Apply related words Search modes- Boolean/Phrase	9
S52	S44 OR S45 OR S46 OR S47 OR S48 OR S49 OR S50 OR S51	Expanders- Apply related words Search modes- Boolean/Phrase	89,020
S51	TI “watchful waiting” OR AB “watchful waiting”	Expanders- Apply related words Search modes- Boolean/Phrase	335
S50	TI surveillance OR AB surveillance	Expanders- Apply related words Search modes- Boolean/Phrase	17,142
S49	MH “Population Surveillance+”	Expanders- Apply related words Search modes- Boolean/Phrase	0
S48	MH “Aortic Aneurysm, Abdominal/PC”	Expanders- Apply related words Search modes- Boolean/Phrase	81
S47	TI SAAAVE OR AB SAAAVE	Expanders- Apply related words Search modes- Boolean/Phrase	4
S46	TI NAAASP OR AB NAAASP	Expanders- Apply related words Search modes- Boolean/Phrase	0
S45	TI screen* OR AB screen*	Expanders- Apply	62,947

		related words Search modes- Boolean/Phrase	
S44	MH "Health Screening"	Expanders- Apply related words Search modes- Boolean/Phrase	21,175
S43	S5 OR S42	Expanders- Apply related words Search modes- Boolean/Phrase	55
S42	S27 AND S41	Expanders- Apply related words Search modes- Boolean/Phrase	54
S41	S28 OR S29 OR S30 OR S32 OR S33 OR S34 OR S35 OR S36 OR S37 OR S38 OR S39	Expanders- Apply related words Search modes- Boolean/Phrase	6,351
S40	S28 OR S29 OR S30 OR S31 OR S32 OR S33 OR S34 OR S35 OR S36 OR S37 OR S38 OR S39	Expanders- Apply related words Search modes- Boolean/Phrase	0
S39	TI ((ectatic* or dilat*) N1 aort*) OR AB ((ectatic* or dilat*) N1 aort*)	Expanders- Apply related words Search modes- Boolean/Phrase	213
S38	TI ((aneurysm* or aort*) N3 (size or sizes or sized or sizing)) OR AB ((aneurysm* or aort*) N3 (size or sizes or sized or sizing))	Expanders- Apply related words Search modes- Boolean/Phrase	240
S37	TI ((aneurysm* or aort*) N3 measur*) OR AB ((aneurysm* or aort*) N3 measur*)	Expanders- Apply related words Search modes- Boolean/Phrase	457
S36	TI ((aneurysm* or aort*) N3 expan*) OR AB ((aneurysm* or aort*) N3 expan*)	Expanders- Apply related words Search modes- Boolean/Phrase	133
S35	TI ((aneurysm* or aort*) N3 dimension*) OR AB ((aneurysm* or aort*) N3 dimension*)	Expanders- Apply related words Search modes- Boolean/Phrase	125
S34	TI ((aneurysm* or aort*) N3 diameter*) OR AB ((aneurysm* or aort*) N3 diameter*)	Expanders- Apply related words Search modes- Boolean/Phrase	397

S33	TI (abdom* N3 (aneurysm or aort*)) OR AB (abdom* N3 (aneurysm or aort*))	Expanders- Apply related words Search modes- Boolean/Phrase	1,566
S32	TI ((infrarenal* or infra renal*) N3 aort*) OR AB ((infrarenal* or infra renal*) N3 aort*)	Expanders- Apply related words Search modes- Boolean/Phrase	154
S31	TI ((abdominal N1 (AA or Aas))) OR AB ((abdominal N1 (AA or Aas)))	Expanders- Apply related words Search modes- Boolean/Phrase	0
S30	TI ("triple A" OR AAA or AAAs) OR AB ("triple A" OR AAA or AAAs)	Expanders- Apply related words Search modes- Boolean/Phrase	3,401
S29	(MH "Aorta, Abdominal")	Expanders- Apply related words Search modes- Boolean/Phrase	393
S28	(MH "Aortic Aneurysm, Abdominal")	Expanders- Apply related words Search modes- Boolean/Phrase	1,547
S27	S6 OR S7 OR S8 OR S9 OR S12 OR S15 OR S16 OR S18 OR S22 OR S25	Expanders- Apply related words Search modes- Boolean/Phrase	2,216
S26	S1 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18 OR S19 OR S20 OR S21 OR S22 OR S23 OR S24 OR S25	Expanders- Apply related words Search modes- Boolean/Phrase	0
S25	TI (("less than" or under) W1 ("30" or 30mm or "3.0" or "3.0cm")) OR AB (("less than" or under) W1 ("30" or 30mm or "3.0" or "3.0cm"))	Expanders- Apply related words Search modes- Boolean/Phrase	890
S24	TI (("2.6-2.9" or "2.6 to 2.9") W1 (cm or centimet*)) OR AB (("2.6-2.9" or "2.6 to 2.9") W1 (cm or centimet*))	Expanders- Apply related words Search modes- Boolean/Phrase	0
S23	TI (("26-29" or "26 to 29") W1 (mm or millimet*)) OR AB (("26-29" or "26 to 29") W1 (mm or millimet*))	Expanders- Apply related words Search modes- Boolean/Phrase	0
S22	TI (("2.5-2.9" or "2.5 to 2.9") W1 (cm or centimet*)) OR AB (("2.5-2.9" or "25 to 2.9") W1 (cm or centimet*))	Expanders- Apply related words Search modes-	2

		Boolean/Phrase	
S21	TI ((“25-29” or “25 to 29”) W1 (mm or millimet*)) OR AB ((“25-29” or “25 to 29”) W1 (mm or millimet*))	Expanders- Apply related words Search modes- Boolean/Phrase	0
S20	TI “2.9” W1 centimet* OR AB “2.9” W1 centimet*	Expanders- Apply related words Search modes- Boolean/Phrase	0
S19	TI “29” W1 millimet* OR AB “29” W1 millimet*	Expanders- Apply related words Search modes- Boolean/Phrase	0
S18	TI (“29 mm” or 29mm or “2.9 cm” or “2.9cm”) OR AB (“29 mm” or 29mm or “2.9 cm” or “2.9cm”)	Expanders- Apply related words Search modes- Boolean/Phrase	119
S17	TI “2.8” W1 centimet* OR AB “2.8” W1 centimet*	Expanders- Apply related words Search modes- Boolean/Phrase	0
S16	TI “28” W1 millimet* OR AB “28” W1 millimet*	Expanders- Apply related words Search modes- Boolean/Phrase	1
S15	TI (“28 mm” or 28mm or “2.8 cm” or “2.8cm”) OR AB (“28 mm” or 28mm or “2.8 cm” or “2.8cm”)	Expanders- Apply related words Search modes- Boolean/Phrase	278
S14	TI “2.7” W1 centimet* OR AB “2.7” W1 centimet*	Expanders- Apply related words Search modes- Boolean/Phrase	0
S13	TI “27” W1 millimet* OR AB “27” W1 millimet*	Expanders- Apply related words Search modes- Boolean/Phrase	0
S12	TI (“27 mm” or 27mm or “2.7 cm” or “2.7cm”) OR AB (“27 mm” or 27mm or “2.7 cm” or “2.7cm”)	Expanders- Apply related words Search modes- Boolean/Phrase	125
S11	TI “2.6” W1 centimet* OR AB “2.6” W1 centimet*	Expanders- Apply related words Search modes- Boolean/Phrase	0
S10	TI “26” W1 millimet* OR AB “26” W1 millimet*	Expanders- Apply	0

		related words Search modes- Boolean/Phrase	
S9	TI (“26 mm” or 26mm or “2.6 cm” or “2.6cm”) OR AB (“26 mm” or 26mm or “2.6 cm” or “2.6cm”)	Expanders- Apply related words Search modes- Boolean/Phrase	143
S8	TI “2.5” W1 centimet* OR AB “2.5” W1 centimet*	Expanders- Apply related words Search modes- Boolean/Phrase	3
S7	TI “25” W1 millimet* OR AB “25” W1 millimet*	Expanders- Apply related words Search modes- Boolean/Phrase	2
S6	TI (“25 mm” or 25mm or “2.5 cm” or “2.5cm”) OR AB (“25 mm” or 25mm or “2.5 cm” or “2.5cm”)	Expanders- Apply related words Search modes- Boolean/Phrase	738
S5	S1 OR S2 OR S3 OR S4	Expanders- Apply related words Search modes- Boolean/Phrase	1
S4	TI ((AAA or AAAs) N3 (very small* or tiny* or miniscule* or minute or subsize* or sub-size*))) OR AB ((AAA or AAAs) N3 (very small* or tiny* or miniscule* or minute or subsize* or sub-size*)))	Expanders- Apply related words Search modes- Boolean/Phrase	1
S3	TI (abdominal aortic aneurysm* N3 (very small* or tiny* or miniscule* or minute or subsize* or sub-size*)) OR AB (abdominal aortic aneurysm* N3 (very small* or tiny* or miniscule* or minute or subsize* or sub-size*))	Limiters- Exclude MEDLINE records Expanders- Apply related words Search modes- Boolean/Phrase	0
S2	TI ((nonaneurysm* or non-aneurysm*) N2 aort*) OR AB ((nonaneurysm* or non-aneurysm*) N2 aort*)	Limiters- Exclude MEDLINE records Expanders- Apply related words Search modes- Boolean/Phrase	0
S1	TI ((subaneurysm* or sub-aneurysm*) N2 aort*) OR AB ((subaneurysm* or sub-aneurysm*) N2 aort*)	Limiters- Exclude MEDLINE records Expanders- Apply related words Search modes- Boolean/Phrase	0

Abdominal Aortic Aneurysms – Screening [expanded for Questions 2 (for staged approach)]

2016 Mar 29

OVID Multifile

Database: EmbaseClassic+Embase<1947 to 2016 March 28>, Ovid MEDLINE® In-Process & Other Non-Indexed Citations and Ovid MEDLINE® <1946 to Present>, PsycINFO<1806 to March Week 4 2016>
Search Strategy:

1 Aortic Aneurysm, Abdominal/ (21831)
2 (abdom* adj2 aneurysm*).tw,kw. (35354)
3 (AAA or AAAs).tw,kw. (25193)
4 "triple A".tw,kw. (588)
5 (abdominal adj (AA or Aas)).tw,kw. (34)
6 or/1-5 (54169)
7 Mass Screening/ (138546)
8 screen*.tw,kw. (1346087)
9 NAAASP.tw,kw. (14)
10 SAAAVE.tw,kw. (14)
11 Aortic Aneurysm, Abdominal/pc (387)
12 Aortic Rupture/pc (427)
13 exp Population Surveillance/ (237228)
14 surveillance.tw,kw. (296380)
15 Watchful Waiting/ (4382)
16 watchful waiting.tw,kw. (4868)
17 or/7-16 (1848436)
18 6 and 17 (5008)
19 exp Animals/ not (exp Animals/ and Humans/) (14330263)
20 18 not 19 (3953)
21 20 use prmz (2195)
22 abdominal aorta aneurysm/ (22132)
23 (abdom* adj2 aneurysm*).tw,kw. (35354)
24 (AAA or AAAs).tw,kw. (25193)
25 "triple A".tw,kw. (588)
26 (abdominal adj (AA or Aas)).tw,kw. (34)
27 or/22-26 (53697)
28 screening/ (243760)
29 mass screening/ (138546)
30 screen*.tw,kw. (1346087)
31 NAAASP.tw,kw. (14)
32 SAAAVE.tw,kw. (14)
33 abdominal aortaaneurysm/pc (250)
34 aorta rupture/pc (170)
35 surveillance.tw,kw. (296380)
36 watchful waiting/ (4382)
37 watchful waiting.tw,kw. (4868)
38 or/28-37 (1677958)
39 27 and 38 (4777)
40 exp animal experimentation/ or exp models animal/ or exp animal experiment/ or nonhuman/ or exp vertebrate/ (42594036)
41 exp humans/ or exp human experimentation/ or exp human experiment/ (32880308)
42 40 not 41 (9715387)

43 39 not 42 (4613)
44 43 use emczd (2791)
45 (abdom* adj2 aneurysm*).tw,kw. (35354)
46 (AAA or AAAs).tw,kw. (25193)
47 “triple A”.tw,kw. (588)
48 (abdominal adj (AA or Aas)).tw,kw. (34)
49 or/45-48 (47673)
50 exp Screening/ (675763)
51 screen*.tw,kw. (1346087)
52 NAAASP.tw,kw. (14)
53 SAAAVE.tw,kw. (14)
54 surveillance.tw,kw. (296380)
55 watchful waiting.tw,kw. (4868)
56 or/50-55 (1886741)
57 49 and 56 (4359)
58 exp Animals/ not (exp Animals/ and Humans/) (14330263)
59 57 not 58 (3431)
60 59 use prmz (1777)
61 59 use emczd (1621)
62 59 not (60 or 61) (33)
63 21 or 44 or 62 (5019)
64 remove duplicates from 63 (3256) [TOTAL UNIQUE RECORDS]
65 64 use prmz (2177) [MEDLINE UNIQUE RECORDS]
66 64 use emczd (1068) [EMBASE UNIQUE RECORDS]
67 64 not (65 or 66) (11) [PSYCINFO UNIQUE RECORDS]

****
Cochrane Library

Search Name: Abdominal Aortic Aneurysms — Screening
Date Run: 31/03/16 14:01:59.983
Description: OHRI — 2016 Mar 29

ID	Search	Hits
#1	[mh “Aortic Aneurysm, Abdominal”]	679
#2	(abdom* near/2 aneurysm*):ti,ab,kw	986
#3	(AAA or AAAs):ti,ab,kw	358
#4	“triple A”:ti,ab,kw	7
#5	(abdominal next (AA or Aas)):ti,ab,kw	0
#6	{or #1-#5}	1061
#7	[mh ^”Mass Screening”]	4630
#8	screen*:ti,ab,kw	26841
#9	NAAASP:ti,ab,kw	0
#10	SAAAVE:ti,ab,kw	0
#11	[mh “Aortic Aneurysm, Abdominal”/PC]	19
#12	[mh “Aortic Rupture”/PC]	23
#13	[mh “Population Surveillance”]	709
#14	surveillance:ti,ab,kw	3903
#15	[mh “Watchful Waiting”]	203
#16	watchful waiting:ti,ab,kw	471
#17	{or #7-#16}	30600
#18	#6 and #17	214

DSR – 6
DARE – 8
CENTRAL – 149
Methods – 1
HTA – 15
NHS EED – 35

CINAHL

#	Query	Limiters/Expanders	Results
S20	S17 NOT S18	Limiters- Exclude MEDLINE records Expanders- Apply related words Search modes- Boolean/Phrase	149
S19	S17 NOT S18	Expanders- Apply related words Search modes- Boolean/Phrase	504
S18	(MH “Animals+”) NOT ((MH “Animals+”) AND (MH “Human”))	Expanders- Apply related words Search modes- Boolean/Phrase	29,421
S17	S6 AND S16	Expanders- Apply related words Search modes- Boolean/Phrase	513
S16	S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15	Expanders- Apply related words Search modes- Boolean/Phrase	89,042
S15	TI “watchful waiting” OR AB “watchful waiting”	Expanders- Apply related words Search modes- Boolean/Phrase	335
S14	TI surveillance OR AB surveillance	Expanders- Apply related words Search modes- Boolean/Phrase	17,142
S13	(MH “Population Surveillance+”)	Expanders- Apply related words Search modes- Boolean/Phrase	2,670
S12	(MH “Aortic Rupture/PC”)	Expanders- Apply related words Search modes- Boolean/Phrase	43
S11	(MH “Aortic Aneurysm, Abdominal/PC”)	Expanders- Apply related words Search modes- Boolean/Phrase	81
S10	TI SAAAVE OR AB SAAAVE	Expanders- Apply related words Search modes- Boolean/Phrase	4
S9	TI NAAASP OR AB NAAASP	Expanders- Apply related words Search modes- Boolean/Phrase	0
S8	TI screen* OR AB screen*	Expanders- Apply related words Search modes- Boolean/Phrase	62,947
S7	(MH “Health Screening”)	Expanders- Apply related words Search modes- Boolean/Phrase	21,175
S6	S1 OR S2 OR S3 OR S4	Expanders- Apply related words Search modes- Boolean/Phrase	4,802
S5	TI ((abdominal N1 (AA or Aas))) OR AB ((abdominal N1 (AA or Aas)))	Expanders- Apply related words Search modes- Boolean/Phrase	0

S4	TI “triple A” OR AB “triple A”	Expanders- Apply related words Search modes- Boolean/Phrase	2,806
S3	TI (AAA or AAAs) OR AB (AAA or AAAs)	Expanders- Apply related words Search modes- Boolean/Phrase	597
S2	TI (abdom* N2 aneurysm*) OR AB (abdom* N2 aneurysm*)	Expanders- Apply related words Search modes- Boolean/Phrase	1,164
S1	(MH “Aortic Aneurysm, Abdominal”)	Expanders- Apply related words Search modes- Boolean/Phrase	1,547

Appendix 3. Full-text exclusions

Level 2, Full-text not available -> Yes

1. Cordts, P. R., LaMorte, W. W., Fisher, J. B., DelGuercio, C., Niehoff, J., Pivacek, L. E., Dennis, R. C., Siebens, H., Georgio, A., and Valeri, C. R. Poor predictive value of hematocrit and hemodynamic parameters for erythrocyte deficits after extensive elective vascular operations. Surgery, Gynecology & Obstetrics 1992; 175 (3): 243-248.
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3. Hafner, F., Haas, E., Gary, T., Froehlich, H., Hackl, G., Fessler, J., Szolar, D., Thonhofer, R., and Brodmann, M. Aortic Aneurysm im Giant Cell Arteritis. Vasa - Journal of Vascular Diseases 2013; 42: 100.
4. Watanabe, Y., Shigematsu, H., Obitsu, Y., Koizumi, N., Saiki, N., and Iwahashi, T. Growth rates of abdominal aortic aneurysms in Japanese patients observed in one institute. International Angiology 2012; 31 (2): 181-186.
5. Screening for abdominal aortic aneurysm: Should it be routine? Medicine Today 2005; 6 (6):8
6. al-Zahrani, H.H. Screening for abdominal aortic aneurysm (AAA): Is it worth it? Saudi Heart Journal. 1995; 6 (1):12
7. The long-term prognosis of patients with small abdominal aortic aneurysm following surgery or surveillance: 12-year final follow-up of patients enrolled in the UK Small Aneurysm Trial. The Vascular Society of Great Britain & Ireland Yearbook 2006:78
8. Kim, L.G., Scott, R.A.P., Ashton, H.A., Thompson, S.G. A prolonged mortality benefit from screening for abdominal aortic aneurysm: seven-year follow-up of the MASS trial. The Vascular Society of Great Britain & Ireland Yearbook 2006:77
9. Leipala, J. Cost-effectiveness and effectiveness of abdominal aortic aneurysm screening. Health Technology Assessment Database 2010; (1)
10. Flynn, K. Guidance for screening for abdominal aortic aneurysms in veterans health administration. Health Technology Assessment Database 2005; (1)
11. Spader, C. Men at risk: abdominal aortic aneurysm. Nursing Spectrum - Greater Chicago 2005 Nov; 18 (24):28

Level 2, Language of article: -> Other

1. Montes, Carmona M., Carbajal, Contreras G., Murillo Barrios, I. E., and Sanchez Escalante, L. R. [Single-center Experience of Endovascular Abdominal Aortic Aneurysm Treatment in Patients with Hostile Neck Anatomy versus Favorable Anatomy]. [Spanish]. Gaceta Medica de Mexico 2014 Dec; 150 Suppl 3: 306-310.
2. Sienz, M., Ignee, A., and Dietrich, C. F. [Sonography today: reference values in abdominal ultrasound: aorta, inferior vena cava, kidneys]. [Review] [German]. Zeitschrift fur Gastroenterologie 2012; 50 (3): 293-315.
3. Zhang, J., Guo, W., Liu, X. P., Yin, T., and Jia, X. [The dilatation of the proximal neck after endovascular repair of abdominal aortic aneurysm]. [Chinese]. Chung-Hua Wai Ko Tsa Chih [Chinese Journal of Surgery] 2011; 49 (5): 392-395.
4. Agard, C., Hamidou, M. A., Said, L., Ponge, T., Connault, J., Chevalet, P., Masseau, A., Pistorius, M. A., Brisseau, J. M., Planchon, B., and Barrier, J. H. [Screening of abdominal aortic involvement using Doppler sonography in active giant cell (temporal) arteritis at the time of diagnosis. A prospective study of 30 patients]. [French]. Revue de Medecine Interne 2007; 28 (6): 363-370.
5. Ruckert, R., Pirlich, M., Rogalla, P., Ismail, M., Kasper, A., Gerl, H., and Muller, J. [Endovascular therapy of non-aneurysmatic infrarenal aortic rupture]. [German]. Zentralblatt fur Chirurgie 2006; 131 (1): 8-12.

6. Chrzanowski, L., Drozdz, J., Jedrzejewski, K., Danilewicz, M., Kasprzak, J. D., Ciesielczyk, M., Lipiec, P., and Krzeminska-Pakula, M. [Intravascular ultrasound imaging and histological evaluation of the aorta]. [Polish]. Przeglad Lekarski 2004; 61 (6): 563-566.

7. Vammen, S., Lindholt, J. S., Ostergaard, L. J., Fasting, H., and Henneberg, E. W. [Reduction of the expansion rate of small abdominal aortic aneurysms with roxithromycin. Results from a randomized controlled trial]. [Danish]. Ugeskrift for Laeger 2002; 164 (50): 5916-5919.

8. Simoni, G., Beghello, A., Buscaglia, M., Ermirio, D., and Caprio, J. [Growth rate of abdominal aortic aneurysms. Ultrasounds study and clinical outcome]. [Italian]. Minerva Cardioangiologica. 2002; 50 (4): 371-377.

9. Lindholt, J. S., Vammen, S., Henneberg, E. W., Fasting, H., and Juul, S. [Optimal interval screening and observation of abdominal aortic aneurysms]. [Danish]. Ugeskrift for Laeger 2001; 163 (37): 5034-5037.

10. Steckmeier, B. [Epidemiology of aortic disease: aneurysm, dissection, occlusion]. [Review] [73 refs] [German]. Radiologe 2001; 41 (8): 624-632.

11. Cirillo, F., Renzulli, A., Leonardo, G., Romano, G., De, Feo M., Della, Corte A., Crescenzi, B., and Cotrufo, M. Associated vascular lesions in patients undergoing coronary artery bypass grafting. Acta Cardiologica 2001; 56 (2): 91-96.

12. Osakabe, T., Okada, N., Wachi, H., Sato, A., Sasaki, S., Wada, N., and Seyama, Y. [Quantitative changes of elastin, fibrillin and collagen in abdominal aortic aneurysms]. [Japanese]. Nippon Ronen Igakkai Zasshi - Japanese Journal of Geriatrics 2000; 37 (12): 979-983.

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15. Jing, Z., Muller-Wiefel, H., Raithel, D., Cao, G., Wang, Z., Tian, J., Zhao, Z., and Bao, J. [Endovascular exclusion of abdominal aortic aneurysm]. [Chinese]. Chung-Hua Wai Ko Tsa Chih [Chinese Journal of Surgery] 1944; 36 (4): 212-214.

16. Pittella, G., Benanti, C. F., Palombo, C., Kozakova, M., Distante, A., and Giunta, F. [Evaluation of cerebral perfusion during aortic clamping and cross-clamping in patients undergoing resection for abdominal aortic aneurysm. A study with transcranial doppler]. [Italian]. Minerva Anestesiologica 1997; 63 (3): 69-75.

17. Lindholt, J. S., Fasting, H., Henneberg, E. W., and Juul, S. [Preliminary results of screening for abdominal aortic aneurysm in the ounty of Viborg]. [Danish]. Ugeskrift for Laeger 1997 Mar; 159 (13): 1920-1923.

18. Molnar, L. J., Langer, B., Serro-Azul, J., Wanjgarten, M., Cerri, G. G., and Lucarelli, C. L. [Prevalence of intraabdominal aneurysm in elderly patients]. [Portuguese]. Revista Da Associacao Medica Brasileira 1995; 41 (1): 43-46.

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21. Natali, J., Kieffer, E., Le, Blevec D., and Koskas, F. [Rupture of abdominal aorta aneurysms. Study of 92 cases operated on over a ten year period (1980-1989)]. [French]. Bulletin de l Academie Nationale de Medecine 1992; 176 (3): 281-293.

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Level 2, Does this article discuss abdominal aortic aneurysms, including infrarenal, suprarenal, juxtarenal, aortoiliac, thoracoabdominal and/or descending aorta? For suprarenal, juxtarenal, thoracoabdominal and descending aortas, it must also include the infrarenal aorta region -> No

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Level 2, Does this article include men (living human) -> Unclear

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Level 2, Does this article include men aged 65 and older -> No

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Level 2, Study design: -> Case report/series

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Level 2, Study design: -> Narrative review

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Level 2, Does this article discuss outcomes relating to surgical intervention -> Yes, with screening starting at aneurysmal (3.0cm)

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Level 2, Does this article discuss outcomes relating to surgical intervention -> Surgery outcomes, but no reference to starting size and/or screening program

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Level 3, Should this article be excluded for any of the following reasons -> Reports those <3.0 cm, but not within the 2.5-2.9cm range

1. Long, A., Bui, H. T., Barbe, C., Henni, A. H., Journet, J., Metz, D., and Nazeyrollas, P. Prevalence of abdominal aortic aneurysm and large infrarenal aorta in patients with acute coronary syndrome and proven coronary stenosis: a prospective monocenter study. Annals of Vascular Surgery 2010; 24 (5): 602-608.

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Level 3, Should this article be excluded for any of the following reasons -> Systematic review (bibliographic search)

1. Thompson, S. G., Brown, L. C., Sweeting, M. J., Bown, M. J., Kim, L. G., Glover, M. J., Buxton, M. J., and Powell, J. T. Systematic review and meta-analysis of the growth and rupture rates of small abdominal aortic aneurysms: implications for surveillance intervals and their cost-effectiveness. [Review]. Health Technology Assessment (Winchester, England) 2013; 17 (41): 1-118.
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Level 3, Should this article be excluded for any of the following reasons -> Unclear/combined men and women

1. d'Audiffret, A., Santilli, S., Tretinyak, A., and Roethle, S. Fate of the ectatic infrarenal aorta: expansion rates and outcomes. Annals of Vascular Surgery 2002; 16 (5): 534-536.
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Level 3, Should this article be excluded for any of the following reasons -> Participants not part of the general population

1. Meyer, M., Dick, F., Masshardt, W., Willenberg, T., Do, D. D., Kucher, N., Baumgartner, I., and Diehm, N. Initial results of a computerized screening alert for abdominal aortic aneurysm in patients undergoing vascular assessment. Vasa 2013; 42 (3): 208-213.
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Level 3, Should this article be excluded for any of the following reasons -> Data not presented in a usable format

1. Bohlin, S., Frojd, C., Wanhainen, A., and Bjorck, M. Change in smoking habits after having been screened for abdominal aortic aneurysm. European Journal of Vascular & Endovascular Surgery 2014; 48 (2): 138-143.
2. Glauser, F., Mazzolai, L., Darioli, R., and Depairon, M. Interaction between widening of diameter of abdominal aorta and cardiovascular risk factors and atherosclerosis burden. Internal & Emergency Medicine 2014; 9 (4): 411-417.
3. Biancari, F., Mosorin, M., Anttila, V., Satta, J., Juvonen, J., and Juvonen, T. Ten-year outcome of patients with very small abdominal aortic aneurysm. American Journal of Surgery 2002; 183 (1): 53-55.
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5. Grimshaw, G. M., Thompson, J. M., and Hamer, J. D. A statistical analysis of the growth of small abdominal aortic aneurysms. European Journal of Vascular Surgery 1994; 8 (6): 741-746.

Level 3, Should this article be excluded for any of the following reasons -> Majority of participants are <65 years of age

1. Wilmink, A. B., Hubbard, C. S., Day, N. E., and Quick, C. R. The incidence of small abdominal aortic aneurysms and the change in normal infrarenal aortic diameter: implications for screening. European Journal of Vascular & Endovascular Surgery 2001; 21 (2): 165-170.
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Level 3, Should this article be excluded for any of the following reasons -> Companion paper

1. Johnsen, S. H., Forsdahl, S. H., Singh, K., and Jacobsen, B. K. Atherosclerosis in abdominal aortic aneurysms: a causal event or a process running in parallel? The Tromso study. Arteriosclerosis, Thrombosis & Vascular Biology 2010; 30 (6): 1263-1268.

2. Forsdahl, S. H., Solberg, S., Singh, K., and Jacobsen, B. K. Abdominal aortic aneurysms, or a relatively large diameter of non-aneurysmal aortas, increase total and cardiovascular mortality: the Tromso study. International Journal of Epidemiology 2010; 39 (1): 225-232.

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4. Lucarotti, M., Shaw, E., Poskitt, K., and Heather, B. The Gloucestershire Aneurysm Screening Programme: the first 2 years' experience. European Journal of Vascular Surgery 1993; 7 (4): 397-401.

5. Lucarotti, M. E., Shaw, E., and Heather, B. P. Distribution of aortic diameter in a screened male population. British Journal of Surgery 1992; 79 (7): 641-642.

Level 3, Should this article be excluded for any of the following reasons -> Outcome not of interest

1. Golledge, J., Wolanski, P., Parr, A., and Buttner, P. Measurement and determinants of infrarenal aortic thrombus volume. European Radiology 2008; 18 (9): 1987-1994.

Appendix 4. Cochrane Risk of Bias tool for Randomized Controlled Trials

RefID

Comparator groups (Experimental vs. Control):

Risk of Bias 1: Sequence generation

(Describe the method used to generate the allocation sequence in sufficient detail to allow an assessment of whether it should produce comparable groups.) **Note:** if no method was stated, enter "Authors did not report on the method used to generate the allocation sequence." Then provide any details in the article.

Judgment (sequence generation):

Select an Answer

Support (sequence generation):

Risk of Bias 2: Allocation concealment

(Describe the method used to conceal the allocation sequence in sufficient detail to determine whether intervention allocations could have been foreseen in advance of, or during, enrolment.) **Note:** if no method was stated, enter "Authors did not report on the method used to conceal the allocation sequence."

Judgment (sequence generation):

Select an Answer

Support (sequence generation):

Risk of Bias 3: Blinding of participants and personnel

(Describe all measures used, if any, to blind study participants and personnel from knowledge of which intervention a participant received. Provide any information relating to whether the intended blinding was effective.) **Note:** if no blinding was stated, enter "Authors did not report any measures used to blind study participants or personnel."

Judgment (sequence generation):

Select an Answer

Support (sequence generation):

Risk of Bias 4: Blinding of outcome assessors

(Describe all measures used, if any, to blind study outcome assessors from knowledge of which intervention a participant received. Provide any information relating to whether the intended blinding was effective.) **Note:** if no blinding was stated, enter "Authors did not report any measures used to blind outcome assessors."

Outcomes:

Judgment (sequence generation):

Select an Answer

Support (sequence generation):

Risk of Bias 5: Incomplete outcome data

(Describe the completeness of outcome data for each main outcome, including attrition and exclusions from the analysis. State whether attrition and exclusions were reported, the numbers in each intervention group (compared with total randomized participants), reasons for attrition/exclusions where reported, and any re-inclusions in analyses performed by the review authors.)

Outcomes:

Judgment (sequence generation):

Select an Answer

Support (sequence generation):

Risk of Bias 6: Selective outcome reporting

(State how the possibility of selective outcome reporting was examined by the review authors, and what was found.)

Judgment (sequence generation):

Select an Answer

Support (sequence generation):

Risk of Bias 7: Other sources of bias

(State any important concerns about bias not addressed in the other domains in the tool. Eg. Sponsorship/funding bias, Baseline imbalance, Recruitment bias, Multi-center trials)

Judgment (sequence generation):

Select an Answer

Support (sequence generation):

Notes:

Appendix 5. *Modified*† Newcastle-Ottawa Quality Assessment Scale – Cohort Studies

Note: A study can be awarded a maximum of one star for each numbered item within the Selection and Outcome categories. A maximum of two stars can be given for Comparability.

Selection

1) Representativeness of the exposed cohort
   a) truly representative of the average *≥65 year old man* in the community ✸
   b) somewhat representative of the average *≥65 year old man* in the community ✸
   c) selected group of users (eg nurses, volunteers)
   d) no description of the derivation of the cohort
   e) not representative of the average ≥65 year old man in the community

2) Selection of the non-exposed cohort
   a) drawn from the same community as the exposed cohort ✸
   b) drawn from a different source
   c) no description of the derivation of the non-exposed cohort
   d) n/a (ie. all men were exposed to ultrasound screening)

3) Ascertainment of exposure
   a) secure record (eg. Surgical records) */ ultrasound screening* ✸
   b) structured interview ✸
   c) written self-report
   d) no description

4) Demonstration that outcome of interest was not present at start of study
   a) yes ✸
   b) no
   c) n/a for cross-sectional prevalence data or for studies evaluating quality of life

Comparability

4) Comparability of cohorts on the basis of the design or analysis
   a) study controls for *sex* ✸
   b) study controls for any additional factor (ie. *smoking, age, ethnicity, other disease/illness*) ✸
   c) *Study does not control for any important factors (only factors deemed not important)*
   d) *Not reported*
   e) n/a for cross-sectional prevalence data

Outcome

4) Assessment of outcome
   a) independent blind assessment */ ultrasound* ✸
   b) record linkage ✸
   c) self-report */ validated structured questionnaire / interview*
   d) no description

2) Was follow-up long enough for outcomes to occur
   a) yes (select an adequate follow up period for outcome of interest) ✸

b) no
c) n/a for cross-sectional prevalence data

Note: Follow-up times: 5 years for growth and quality of life. 30 days post-surgery for surgical outcomes.

3) Adequacy of follow up of cohorts
a) complete follow up — all subjects accounted for ✸
b) subjects lost to follow up unlikely to introduce bias — small number lost less than *20 %* (or description provided of those lost) ✸
c) follow up rate *<80%* and no description of those lost
d) no statement
e) n/a for cross-sectional prevalence data

† Italics denotes modifications from original tool

Appendix 6. *Modified†* Newcastle-Ottawa Quality Assessment Scale – Cohort for Cross-Sectional studies

Selection

4) Representativeness of the exposed cohort

f) truly representative of the average *≥65 year old man* in the community ✸

g) somewhat representative of the average *≥65 year old man* in the community ✸

h) selected group of users (eg nurses, volunteers)

i) no description of the derivation of the cohort

j) not representative of the average ≥65 year old man in the community

3) Ascertainment of exposure

e) secure record (eg. Surgical records) */ ultrasound screening* ✸

f) structured interview ✸

g) written self-report

h) no description

Outcome

4) Assessment of outcome

a) independent blind assessment */ ultrasound* ✸

b) record linkage ✸

c) self-report */ validated structured questionnaire / interview*

d) no description

Appendix 7. Table of characteristics of included studies

Author Year Country; Funding Study design	Dates of data collection	City/State/Region or Cohort/group	Inclusion/Exclusion criteria:	Sample size (% men) Length of follow-up	Age	Method/location of measurement of ultrasound (u/s)	KQ(s)
Meecham 2015 {69} UK; None Cross-sectional	March 2012 — April 2014	Staffordshire & South Cheshire AAA Screening Programme	**Inclusion:** NR **Exclusion:** NR	Staffordshire & South Cheshire AAA Screening Programme: 15,447 (NR) **Follow-up:** N/A	NR	Abdominal u/s, Maximal anteroposterior ITI	1a
Svensjo 2014 {145} Sweden; Swedish Research Council, the Swedish Heart-Lung Foundation, and the Centre for Clinical Research (CKF) Cohort	Baseline: 2006-2007; Follow-up: 2011-2012	Uppsala	**Inclusion:** All men born between 1941 and 1942, identified in the National Population Registry, were invited to screening for AAA with US at age 65 years during the years 2006 and 2007. The cohort of men born in 1941-194 was re-invited during the years 2011-2012 for an US examination of the abdominal aorta at age 70 years. **Exclusion:** Individuals with a history of AAA repair were excluded from invitation.	Baseline: 2736; Follow-up: 2094 (100%) **Follow-up:** 5 years	Baseline: 65 yrs; Follow-up: 70 yrs	Infrarenal u/s, Leading edge to leading edge, the maximum antero-posterior diameter	1a 1b 3a
Wild 2012 {208} UK, Finland, Denmark; NR Cohort	1991 — 2011 (depending on the community)	UK: Bournemouth, Chichester, Gloucester, Leicester, Manchester, Stirling, Oulu (Finland), Viborg (Denmark)	**Inclusion:** Eight community screening and surveillance study datasets were included in the study, which contained serial ultrasound measurements of aortic size in patients found to have an infra-renal aortic diameter between 25 mm and 29 mm at the time of screening. **Exclusion:** NR	1,696 (96.1%) **Follow-up:** median 4 years (0.1-19 years)	Median: 66 yrs Range: 56-71 yrs	Infrarenal u/s, Antero-posterior ITI or OTO	1a 1b
Darwood 2012 {241} UK; Not applicable Cohort	1990-2009	Gloucestershire Aneurysm Screening Programme	**Inclusion**: Men reaching the age of 65 are invited by birth year to ultrasound screening at their GP's surgery. **Exclusion**: NR	52,690 (100%) Follow-up: median 7.9 (2.7-11) years	65-85 yrs	u/s, Inner wall to the inner wall, Maximum anteroposterior diameter in mm	3a 3b (1a, 1b)†
Duncan 2012 {251} UK; Chief Scientist Office, Scotland (CZG/2/485) Cohort	April 2001 — March 2004; Follow-up June 2010	Highland and Western Isles (Highland aortic aneurysm screening programme)	**Inclusion:** Men in Highland and Western Isles aged 65-74 years. Records were linked to the Scottish Morbidity Record dataset to obtain longer term outcomes. **Exclusion:** NR	8,146 (100%) **Follow-up:** median 7.4 (IQR 6.9-8.2) years	65-74 yrs	Abdominal u/s, Maximum antero-posterior diameter	1a
Conway 2011 {270} UK; NR Cross-sectional	April 2009 — June 2010	South West London (National Health Service AAA Screening Programme	**Inclusion:** Men aged 65 years were identified from family doctor lists from five primary care trusts.Self-referrals (men aged over 65 years) who attended a screening session were also scanned.	4,216 (4,054 invited; 162 self-referred) (100%) **Follow-up:** N/A	Median: Invited: 65 yrs; Self-referred: 71.3 (65.8-89.1) years; Range	Abdominal u/s, Maximum measurements taken in the transverse and anterior-posterior longitudinal plan. Internal wall diameters were	1a

† KQ in brackets are not included, as they provide older data of other included studies

ǂ Results provided separately for men

Author Year Country; Funding Study design	Dates of data collection	City/State/Region or Cohort/group	Inclusion/Exclusion criteria:	Sample size (% men) Length of follow-up	Age	Method/location of measurement of ultrasound (u/s)	KQ(s)
		(NAAASP))	**Exclusion:** NR		65-89.1	recorded.	
Solberg 2009 {342} Norway; Norwegian Research Council and the Norwegian Council son Cardiovascular Diseases Cohort	1994-1995	Tromso	**Inclusion:** Inhabitants of the municipality of Tromsø, Norway. In the fourth Tromsø study, in 1994-1995, 6892 men and women aged 25-84 years were examined by ultrasound to measure the aortic diameter and to assess the prevalence of AAA. All subjects aged 55-74 years and a random 5-10% sample in the other age groups were eligible for the ultrasound examination. In the fifth Tromsø study in 2001, 4699 men and women who in 1994-1995 had been subject to ultrasound examination of the abdominal aorta were re-scanned. The present analyses include 4265 subjects who in 1994-1995 had a non-aneurysmatic abdominal aorta with an accurate measurement of the maximal infrarenal aortic diameter. **Exclusion:** NR	Total: 4,265; Men: 1,990 (46.7%) **Follow-up:** 7 years	Mean (SD): 58.7 yrs (9.2)	Infrarenal u/s, Leading edge of the near wall to that of the far wall in the anterior-posterior plane and from the right to the left leading edge in the transverse plane.	1a 1b
Hafez 2008 {394} UK; NHS R&D and local charitable donations Cohort	January 2004 — January 2006	Chichester AAA screening programme	**Inclusion**: Men who initially had a 'normal' aorta (<30mm). **Exclusion**: NR	4,762 (100%) Follow-up: 5 years (median)	65 yrs	Abdominal u/s, Maximum aortic diameter in the antero-posterior and transverse dimensions	3a 3b (1a, 1b)†
Devaraj 2008 {396} UK; NR Cohort	NR (commenced in 1992)	West Midlands Good Hope Hospital NHS Trust	**Inclusion:** The group of patients with ectatic aortas (2.6–2.9cm in diameter) at first scan, with a minimum 1-year follow-up. **Exclusion:** NR	358 (100%) **Follow-up:** >1 year; mean 5.4 yrs (1-14 yrs)	Mean: 74.6 yrs	Abdominal u/s, Anterioposterior diameter	1a 1b
Morris-Stiff 2005 {496} UK; NR Cross-sectional	February 2000 — June 2002	NR	**Inclusion:** Male patients as part of a community AAA ultrasound screening program **Exclusion:** NR	449 (100%) **Follow-up:** N/A	Mean (SD): 67.5 yrs (5.3) Range: 60+	Abdominal u/s, Maximum transverse and anteroposterior diameters	1a
Norman 2004 {527} Australia; National Health and Medical Research Council and the National Heart Foundation of Australia Cohort	NR	Western Australian Abdominal Aortic Aneurysm Screening Program	**Inclusion:** Eligible men were identified and recruited from an electronic copy of the electoral roll, and invited to attend a screening clinic close to their home. **Exclusion:** Women	12,203 (100%) **Follow-up:** 5 yrs (3–7)	Mean (SD): 72.6 yrs (4.7) Range: 65-83 yrs	Abdominal u/s, Maximum transverse and antero-posterior diameter	1a

† KQ in brackets are not included, as they provide older data of other included studies

ǂ Results provided separately for men

Author Year Country; Funding Study design	Dates of data collection	City/State/Region or Cohort/group	Inclusion/Exclusion criteria:	Sample size (% men) Length of follow-up	Age	Method/location of measurement of ultrasound (u/s)	KQ(s)
Lindholt 2000 {649} Denmark; NR Cohort	1994–1998	Viborg county	**Inclusion**: Prospective study: from 1994–1998, 6339 of 12,665 men aged 65–73 years in Viborg county were invited to an abdominal ultrasound scan. Re-screening study of aortic ectasia: Those who initially screened at 25-29mm were offered rescreening **Exclusion**: NR	Baseline: 6,339 invited, 4843 attended; Follow-up: 248 (ectatic), 275 (control) (100%) Follow-up: 5 years	65-73 yrs	Infrarenal u/s, Antero-posteriorly and transversely diameters were measured and recorded at their maximal sizes.	3a (1a, 1b)†
Kyriakides 2000 {667} UK; NR Cohort	January 1993 — April 1997	Oldham and Tameside	**Inclusion:** All registered male patients aged 65 years at the GP practices of the two districts of Oldham and Tameside. **Exclusion:** NR	3,497 (100%) **Follow-up:** 4 years	65 yrs	From the level of the renal arteries to the aortic bifurcation u/s, Maximum anteroposterior or transverse diameter	1a
Vazquez 1998 {693} Belgium; Health Department of La Communaute' Française de Belgique Cross-sectional	December 1995 — November 1996	Liege	**Inclusion:** A personalized letter offering the opportunity to undergo free ultrasound screening for AAA was sent to 1764 men born in 1920 (n= 729) and 1930 (n=1035). Selection was based on birth records for the city of Liege, Belgium. **Exclusion:** NR	727 (65 yrs: 1035; 75 yrs: 729) (100%) **Follow-up:** N/A	65 and 75 yrs old	Infrarenal and iliac bifurcation u/s, both anteroposterior diameter (external edge of the aortic wall) and transverse diameter	1a
Watson 1997 {711} UK; NR Cohort	NR	Oxford, Gloucester	**Inclusion:** AAA were detected during screening or after referral to the vascular services of the John Radcliffe Hospital, Oxford, or Gloucestershire Royal Hospital, Gloucester. Only AAA of initial size below 4.0 cm at presentation were considered. Scans were performed every 6-12 months, with maximum follow-up of 9.5 years. **Exclusion:** Patients with only a single measurement, or two measurements less than 12 months apart, have been excluded from analysis.	Total: 142; Men: 131 (92.3%) **Follow-up:** N/A	Median: 70 yrs Range: 43-86 yrs	Infrarenal u/s, Maximum antero-posterior diameter	1a
Chang 1997 {737} NR, USA (Author affiliation); NR Cohort	NR	NR, study centre (Long Island Vascular Center, Roslyn, NY)	**Inclusion:** Five hundred fourteen patients (376 men and 138 women) between 36 and 92 years of age, with initial size between 2.5 and 6.0 cm. **Exclusion:** NR	Total: 514; Men: 376 (73.2%) **Follow-up:** NR	36-92 *results separated for 60+ (60-70, 70-80, and 80+)	Suprarenal and infrarenal u/s, Anteroposteriorly between the leading edges of the walls and perpendicular to the long axis of the aorta	1a 1b
Takei 1995 {765} Japan; NR Cross-sectional	1992	Ueno	**Inclusion:** All inhabitants of Ueno, Japan between the ages of 60 to 79. **Exclusion:** NR	Total: 348; Men: 128 (36.8%)ǂ **Follow-up:** N/A	Mean: 70 yrs Range: 60-79	Infrarenal abdominal u/s, Maximum anteroposterior internal diameter	1a

† KQ in brackets are not included, as they provide older data of other included studies
ǂ Results provided separately for men

Author Year Country; Funding Study design	Dates of data collection	City/State/Region or Cohort/group	Inclusion/Exclusion criteria:	Sample size (% men) Length of follow-up	Age	Method/location of measurement of ultrasound (u/s)	KQ(s)
Simoni 1995 {766} Italy; Pierrel-Milan, EMAC-Genoa, Vascutek-Rome and Polaroid-Genoa Cohort	March 1991 — March 1994	Genoa	**Inclusion:** All the subjects of one Health Service District in Genoa aged 65-75 years under the care of participating GPs. **Exclusion:** NR	Total: 1,601; Men: 741 (46.3%)ǂ **Follow-up:** N/A	Mean (SD) (26-29 mm): 69.7 (2.7) Overall: 65-75	Suprarenal and infrarenal u/s, Maximal anteroposterior and transverse diameters	1a
Morris 1994 {784} UK; Public Health Operational Research Grant from the East Anglian Regional Health Authority Cohort	NR	Huntingdon Health District	**Inclusion:** Men of 50 years and over registered with the referring physicians. **Exclusion:** Individuals they would not regard as suitable for surgery if an aneurysm should be detected. Suggested criteria are: end-stage carcinoma, end-stage cardiac or respiratory disease, and senile or pre-senile dementia.	Total: 3,030: 65+ yrs: 1,254 (100%) **Follow-up:** N/A	50+ yrs *results separated for 65+ (65-79 and 80+)	Abdominal u/s, NR	1a
Smith 1993 {794} UK; Sheldon Clinical Research Fellowship from the West Midlands Regional Health Authority Cohort	NR	Birmingham Community Aneurysm Screening Project	**Inclusion:** All men aged 65-75 years on the age-sex register from 20 participating urban general practices. **Exclusion:** NR	2,597 (100%) **Follow-up:** Mean: 13 months	65-75 yrs	u/s from the level of the sternum inferiorly to the aortic bifurcation, Maximum anteroposterior or transverse diameter	1a
Collin 1991 {830} UK; NR Cohort	NR	Oxford, Gloucester	**Inclusion:** Men aged 65 to 74, identified in screening programmes in Oxford and Gloucester, and some aneurysms were incidental findings in routine clinical practice. All men included had a baseline aortic diameter of 2.5 to 3.9 cm. **Exclusion:** NR	Total: 106; Men: 102 (96.2%) **Follow-up:** 3 years	Median: 70 yrs Range: 62 – 82 yrs	Abdominal u/s, Maximum external anter-oposterior diameter	1b (1a)†
Hager 2014 {2252} Sweden; NR Cross-sectional	2007-2010	Ostergotland	**Inclusion:** All men in Ostergotland, Sweden becoming 65 (born 1942-44) and 70-year-old (born 1938-1940) during 2007-2010. They were previously not screened for AAA, and they were identified through the National Population Registry. **Exclusion:** All men born 1938-1940 and 1942-44 with an already known AAA identified from local databases and all men in our cohorts who had already been treated for an AAA identified with aid of the Swedish Vascular Registry (SWEDVASC — a nation wide register).	Total: 11,511: 65 yr old: 6,796; 70 year old: 4,715; (100%) **Follow-up:** N/A	65 and 70 yrs	Infrarenal u/s, NR	1a

† KQ in brackets are not included, as they provide older data of other included studies
ǂ Results provided separately for men

Author Year Country; Funding Study design	Dates of data collection	City/State/Region or Cohort/group	Inclusion/Exclusion criteria:	Sample size (% men) Length of follow-up	Age	Method/location of measurement of ultrasound (u/s)	KQ(s)
Scalone 2013 {2356} Italy; Regione Liguria, Medtronic Italy S.p.A Cohort	March 2007 — September 2009	Screening Abdominal aortic aneurysm Genoa	**Inclusion:** People ≥ 65 years living in the urban area of Genoa. **Exclusion:** NR	Baseline with HRQoL (Total): 1,633 (43.8%); Follow-up (Total): 125 (92.8%) **Follow-up:** 6-12 months after u/s scan	Baseline with HRQoL: 74.4 yrs (5.7); Follow-up: 76.6 yrs (5.9)	Abdominal aortic and iliac artery aneurysm u/s, NR	2
Hinterseher 2013 {2424} Germany; NR Cross-sectional	NR	Dresden	**Inclusion:** Patients with small AAAs (diameter 3.0-4.9cm) undergoing surveillance who were recruited from the outpatient ward of the Vascular Center of the University Hospital in Dresden, Germany. Only patients undergoing surveillance with a known diagnosis of a small AAA for at least 1 year; undergoing conservative treatment, including antihypertensive medication; 98on-smoking or at least following reduced smoking advice; and following restriction advice on heavy physical activity (e.g., reduced weight lifting) were chosen to participate. **Exclusion:** Patients with AAAs with a diameter of 5 cm or greater who were not fit enough to undergo operative treatment were not included in the surveillance group of the study.	78; 43 included (NR) **Follow-up:** mean follow-up: 12 months	Mean: 75.4 yrs Range: 61-90 yrs	Abdominal	2
Lesjak 2012 {2495} Australia; NR Cohort	NR	Broken Hill and surrounding communities	**Inclusion:** All men aged 65-74 years enrolled on the Australian electoral commission roll from Broken Hill and surrounding communities. **Exclusion:** NR	Baseline: 516; Follow-up: 133 (100%) **Follow-up:** 6 months	65-74 yrs	Abdominal u/s	1a 2
De Rango 2011 {2710} Italy (author affiliation); Cook Medical (William Cook Europe, Bjaeverskov, Denmark) RCT/cluster RCT	August 2004 — December 2008	NR CAESAR Trial	**Inclusion:** Men and women aged 50-79 years **Exclusion:** NR	Total: 360; Men: 345 (95.8%). Randomized to early EVAR: 182; Surveillance: 178 **Follow-up:** Early EVAR: 31.8 +/- 16.9; Surveillance: 31.7 +/- 18.0	50-79 yrs	NR	3b

† KQ in brackets are not included, as they provide older data of other included studies
ǂ Results provided separately for men

Author Year Country; Funding Study design	Dates of data collection	City/State/Region or Cohort/group	Inclusion/Exclusion criteria:	Sample size (% men) Length of follow-up	Age	Method/location of measurement of ultrasound (u/s)	KQ(s)
Bertero 2010 {2778} Sweden; Medical Research Council of Southeast Sweden (FORSS) Cross-sectional	NR	Smaland and Ostergotland	**Inclusion:** Men aged 65 years old who measured ≥30 mm in the initial ultrasound screening in the fall 2006, at three different hospitals in the counties of Smaland and Ostergotland. Plus, 8 more men with an enlarged aorta were consecutively included from the regular screening program started in 2007 in the county of Ostergotland. **Exclusion:** NR	10 (100%) **Follow-up:** N/A	Screened at 65 yrs. This study took place within 12-months of screening.	Abdominal u/s	2
Brannstrom 2009 {2878} Sweden; NR Cross-sectional	NR	Norsjo	**Inclusion:** The participants were recruited from a study designed to evaluate the effect of QoL on screening for AAA in a population-based AAA screening program conducted in 1999. **Exclusion:** One person suffered from cognitive problems and was excluded.	3 (100%) **Follow-up:** N/A	79-80 yrs	NR	2
Spencer 2004 {3382} Western Australia; Screening programme support by the National Health and Medical Research Council and the National Heart Foundation of Australia Cohort	NR	Perth The Western Australian AAA programme	**Inclusion:** Any man with an infrarenal aortic diameter of 30 mm or more was considered to have an AAA. **Exclusion:** Men with an AAA of ≥ 50 mm in diameter.	365 (100%) **Follow-up:** 12 months	66-84 yrs (Including healthy controls)	NR	2
Wanhainen 2004 {3407} Sweden; The Co-ordinate Centre of the Northern Counties of Sweden (VISARE-NORR), the County of Vasternorrland Research and Development (FoU) Center, the Gore Sweden Research Foundation, the Ture Stenholm Foundation	NR	Norsjo, Vasterbotten	**Inclusion:** The study group was recruited from are recently undertaken population-based AAA screening program in Norsjo, a municipality situated in the province of Vasterbotten in northern Sweden, where a very high prevalence of AAA was found. All men and women aged 65 to 75 years were invited to take part in an ultrasonographic examination at the local health center. **Exclusion:** NR	Total: 69; Men: 55 (79.7%) **Follow-up:** 12 months after u/s	Mean (SD): With AAA: 72 yrs (2.5); No AAA: 70 yrs (2.4)	Abdominal u/s	2

† KQ in brackets are not included, as they provide older data of other included studies

ǂ Results provided separately for men

Author Year Country; Funding Study design	Dates of data collection	City/State/Region or Cohort/group	Inclusion/Exclusion criteria:	Sample size (% men) Length of follow-up	Age	Method/location of measurement of ultrasound (u/s)	KQ(s)
for Surgical Research, and the Swedish Medical Research Council Cohort							
Lederle 2003 {3489} USA; Cooperative Studies Program of the Department of Veterans Affairs Office of Research and Development RCT/cluster RCT	NR	The ADAM Veterans Affairs Cooperative Study	**Inclusion:** Eligible patients were 50 to 79 years of age, had AAAs 4.0 to 5.4 cm in diameter on centrally read computed tomography scans within 12 weeks before randomization, and had neither previous aortic surgery or probable need for aortic surgery (other than abdominal aneurysm repair) within the next 6 months, evidence of AAA rupture, recent rapid AAA expansion, suprarenal or juxtarenal aneurysm or known large thoracic aneurysm, severe heart, lung, liver, or renal disease, recent major surgery or angioplasty, expected survival less than 5 years, probable noncompliance, severe debilitation, nor inability to give informed consent. Patients were recruited over 5 years at 16 Veterans Affairs medical centers and randomized to immediate open surgical repair or surveillance. **Exclusion:** NR	Immediate repair group: 569; Surveillance: 567 (99%) **Follow-up:** mean 4.9 years (3.5-8)	Mean: 68 Range: 50-79 yrs	Abdominal u/s	3b
Lindholt 2000 {3715} Denmark; The Danish Heart Foundation and the Foundation of Asta and Rosa Jensen Study design not identifiable	1994-1996	Viborg	**Inclusion:** Men aged 65–73-years in the county of Viborg. **Exclusion:** NR	Controls: 231; Invited: 439; Non-attenders: 168; Attenders before screening: 271; Attenders after screening: 286; AAA : 106 **Follow-up:** 1 month after scan	65-73 yrs	Abdominal u/s	2
The UK Small Aneurysm Trial Participants 1998 {3806}	Sept 1991 — October 1995	The UK Small Aneurysm Trial	**Inclusion:** In 93 UK hospitals , 1276 patients aged 60–76 years who were fit for elective surgery were identified as having symptomless (non-tender), infrarenal	Baseline: Surveillance: 480; Early surgery: 512; 12 months:	NR	Abdominal u/s	3b

† KQ in brackets are not included, as they provide older data of other included studies

ǂ Results provided separately for men

Author Year Country; Funding Study design	Dates of data collection	City/State/Region or Cohort/group	Inclusion/Exclusion criteria:	Sample size (% men) Length of follow-up	Age	Method/location of measurement of ultrasound (u/s)	KQ(s)
UK; The Medical Research Council and the British Heart Foundation RCT/cluster RCT			abdominal aortic aneurysms of 4·0–5·5 cm in diameter. **Exclusion:** NR	Surveillance: 436; Early surgery: 429 **Follow-up:** 1 year			
Khaira 1998 {3810} UK; NR Study design not identifyable	NR	West Midlands	**Inclusion:** Male subjects attending for AAA screening organized by Good Hope Hospital. **Exclusion:** Incomplete questionnaires were excluded.	Controls (not screened): 11; Controls (screened): 45; AAA (on waiting list): 24; Small aneurysm (at 1 month): 38; Small aneurysm (at 6 months): 29 **Follow-up:** NR	Median: Controls (not screened): 71; Controls (screened): 71; AAA (on waiting list): 69; Small aneurysm (at 1 month): 69; Small aneurysm (at 6 months): 69 Range: 66-78	Abdominal u/s	2
Lucarotti 1997 {3853} UK; NR Cohort	Sept 1990 — June 1994	Gloucestershire Aneurysm Screening Programme	**Inclusion:** As part of the Gloucestershire Aneurysm Screening Programme, men born between 1925 and 1928 and appearing in the Family Practitioner Committee records of 87 Gloucestershire practices were invited for screening during the period September 1990-June 1994. Patients were invited by their general practitioner to attend the surgery for screening by a mobile unit. **Exclusion:** NR	Total: 161 (normal aortas n=100; enlarged aortas n=61) (100%) **Follow-up:** 1 month	NR (born between 1925 and 1928)	Abdominal u/s	2
Hansson 2012 {4528} Sweden; Frybodal Research and Development Council, Region of Vastra Gotaland Cross-sectional	2010	Vastra Gotaland	**Inclusion:** 65-year old men with an enlarged aorta who were recommended annual follow-ups with ultrasound examination **Exclusion:** None	15 **Follow-up:** N/A	65	Abdominal u/s	2
The Muticentre Aneurysm Screening Study Group 2002 {6113} UK; UK Medical	January 1997 — May 1999	Portsmouth, Southampton, Winchester, and Oxford	**Inclusion:** Men aged 65–74 years from four centres (Portsmouth, Southampton, Winchester, and Oxford) in the UK were identified from family doctor lists and Health Authority lists, after obtaining the	Total: 1085; 6-weeks (Neg: 631, Pos: 599, Ctrl: 726; 12 mths: Surveillance: 426; Surgery: 129	Mean (SD): 69.2 (2.9) Range: 65-74	Abdominal u/s, Maximum transverse diameter of the aorta in the transverse plane, and the maximum anterior-posterior diameter	2

† KQ in brackets are not included, as they provide older data of other included studies

ǂ Results provided separately for men

Author Year Country; Funding Study design	Dates of data collection	City/State/Region or Cohort/group	Inclusion/Exclusion criteria:	Sample size (% men) Length of follow-up	Age	Method/location of measurement of ultrasound (u/s)	KQ(s)
Research Council and the Department of Health. T M Marteau was supported by the Wellcome Trust. RCT/cluster RCT		The Multicentre Aneurysm Screening Study Group	family doctor's permission. **Exclusion:** Before randomisation, doctors were asked to list patients they considered unfit to be screened. These were then excluded from the study. The study itself imposed no exclusion criteria other than sex and year of birth, but doctors typically informed the study investigators of recent deaths, and excluded men who were terminally ill, had other serious health problems, and had a previous abdominal aortic aneurysm repair.	 **Follow-up:** 12 months		in the longitudinal plane	

Citations for included studies:

1. [RefID 69] Meecham L, Evans R, Buxton P, Allingham K, Hughes M, Rajagopalan S, Fairhead J, Asquith JR, Pherwani AD. Abdominal Aortic Aneurysm Diameters: A Study on the Discrepancy between Inner to Inner and Outer to Outer Measurements. European Journal of Vascular & Endovascular Surgery 2015; 49 (1): 28-32.
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ǂ Results provided separately for men

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† KQ in brackets are not included, as they provide older data of other included studies

ǂ Results provided separately for men

Appendix 8. Table of results of included studies for KQ1 & KQ3

Author Year Study design	Total sample size (% men)	Length of follow-up	KQ1a. Prevalence, KQ1b. Prevalence and rate of growth, KQ1c. Risk factors for growth KQ3a. Proportion receiving surgery, KQ3b. Harms and benefits of surgery	RoB
Meecham 2015 {69} Cross-sectional	Staffordshire & South Cheshire AAA Screening Programme: 15,447 (NR)	N/A	**KQ1.** 26-29mm: 177/15,447 (1.14%)	2/3
Svensjo 2014 {145} Cohort	Baseline: 2736; Follow-up: 2094 (100%)	5 years	**KQ1.** 25-29mm at baseline: 40/2736 (1.5%); Follow-up: 56/2094 (2.7%) **KQ1b.** <25mm at baseline: 2652/2736 (96.9%) <25mm at follow-up: 1982/2041 (97.1%) 25-29 mm at follow-up: 42/2041 (2.1%; 95%CI: 1.5 to 2.7) 30 mm+ at follow-up: 15/2041 (0.7%; 95%CI: 0.4 to 1.1) 25-29mm at baseline: 40/2736 (1.5%) <25mm at follow-up: 3/38 (7.9%; 95%CI: 1.7 to 21.4) 25-29mm at follow-up: 14/38 (36.8%; 95%CI: 21.8 to 54.0) 30 mm+ at follow-up: 21/38 (55.3%; 95%CI: 38.3 to 71.4). Of these 15 (39.5%; 95%CI: 24.0 to 56.5) were 30-39mm, and 6 (15.8%; 95%CI: 6.0-31.3) were 40-54mm. Total at follow-up (25-29mm): 56/2094 (2.6%; 95%CI: 2.0 to 3.3) **KQ1c.** Univariate analysis (Normal aorta at 70 years vs AAA at 70 years) [% (95%CI)]: Mean aortic diameter (mm) at age 65: 18.0mm (17.9 to 18.1) vs. 24.8mm (23.6 to 26.0); p<.0001 Subaneurysmal aorta (25-29mm): 0.8 (0.4 to 1.2) vs. 58.3 (41.4 to 75.3); p<.0001 Current smoker: 11.7 (10.3 to 13.1) vs 41.7 (24.7 to 58.6); p<.0001 Claudication: 1.1 (0.6 to 1.5) vs 5.6 (0 to 13.4); p=.013 Multivariable Cox proportional hazards regression analysis: The infrarenal aortic diameter at age 65 (HR: 1.66; 95%CI: 1.53 to 1.82, p<.001) A sub-aneurysmal aorta at age 65 (HR: 59.78; 95%CI: 29.87 to 119.63, p<.0001) Current smoking (HR: 2.87; 95%CI: 1.38 to 5.57, p=.004) **KQ3a.** 25-29mm at baseline: intact AAA repair at follow-up 0/40; ruptured AAA at follow-up 0/40 Note: This is the Uppsala cohort data. The original study (RefID 2656) contains five different counties and reports an overall prevalence of 395/22,139 (1.8%; 95%CI: 1.6-2.0) men with an aortic diameter between 25 and 29mm. *as no men received surgery, comparability question in RoB is n/a	3/3 5/6 5/5*
Wild 2012 {208} Cohort	1,696 (96.1% men)	median 4 years (0.1-19 years)	**KQ1a.** 1,696 (39 women) in the 8 communities (no N provided) **KQ1b.** Subaneurysmal to >29mm:	3/3 5/6

Author Year Study design	Total sample size (% men)	Length of follow-up	KQ1a. Prevalence, KQ1b. Prevalence and rate of growth, KQ1c. Risk factors for growth KQ3a. Proportion receiving surgery, KQ3b. Harms and benefits of surgery	RoB
			1,011/1,696 (59.6%) at mean time 4.7 years (95%CI: 4.5-5.0 years) at 5 years: 774/1,143 (67.7%); at 10 years: 983/1024 (96%) were aneurysmsal Subaneurysmal to large (>54mm) 140/1,696 (8.3%) at mean time 13.2 years (95%CI: 12.6-13.7 years) among those who developed large aneurysms 7/140 (5%) occurred after 5 years and 67/140 (47.7%) occurred after 10 years Note: Subaneurysmal to rupture: n=14; mean time 18.7 years (95%CI 18.3-19.1 years) Median aortic diameter at presentation of the patients that went on to rupture was 26 mm (range 25-29 mm)	
Darwood 2012 {241} Cohort	52,690 (100%) (GASP, 20 years)	median 7.9 (2.7-11) years	**KQ3a.** Screen to surgery: 9.4 (7.5-11.3) years Elective AAA repair: 57/547 (9.7%) Ruptured AAA repair: 6 (of the 13 with ruptured AAA) **KQ3b.** Elective AAA death: 4/57 (7%) Death following ruptured AAA repair: 3/6 **KQ1a.** Baseline: 2.6-2.9cm 547/52,690 (1.04%) **KQ1b.** Baseline (2.6-2.9cm): 547/52,690 (1.04%); Follow-up (>4cm): 201/547 (34%) Follow-up (>5.4cm): 87/547 (15%)	4/6 4/6
Duncan 2012 {251} Cohort	8,146 (100%)	median 7.4 (IQR 6.9-8.2) years	**KQ1a.** 25-29mm: 669/8,146 (8.2%) Note: Prevalence is cross-sectional. Follow-up: Mortality 69/654 (10.3%) with a diameter of 25-29 mm	3/3
Conway 2011 {270} Cross-sectional	4,216 (4,054 invited; 162 self-referred) (100%)	N/A	**KQ1a.** 2.5-2.9cm: 69/4,216 (1.6%) (65 invited, 4 self-referred)	3/3
Solberg 2009 {342} Cohort	Total: 4,265; Men: 1,990	7 years	**KQ1a.** 24-26mm: 359/1,990 **KQ1b.** From 24-26mm to ≥30mm at 7 years: 34/359 (9.5%)	2/3 5/6
Hafez 2008 {394} Cohort	4,762 (100%) (CASP)	5 years	**KQ3a.** Elective AAA surgery: 17/108 (15.7%) Emergency AAA surgery: 6/108 (5.5%) **KQ3b.** Post elective operative in-hospital mortality: 3/17 (17.6%) Post emergency operative in-hospital mortality: 3/6 (50%) **KQ1a.** 25-29mm: 119/4,762 (2.5%) **KQ1b.** 108/166 (65%) of the men who developed an AAA after a 'normal' scan had an initial maximum aortic diameter of between 25-29mm	5/6 5/6
Devaraj 2008 {396} Cohort	358 (100%)	>1 year; mean 5.4 yrs (1-14 yrs)	**KQ1a.** Of the 999 with aorta ≥2.6cm, 358 were 2.6-2.9cm **KQ1b.** Ectatic aortas 2.6–2.9 cm at first scan with a minimum 1-year follow-up (mean 5.4 yrs) (n=358):	2/3 4/6

Author Year Study design	Total sample size (% men)	Length of follow-up	KQ1a. Prevalence, KQ1b. Prevalence and rate of growth, KQ1c. Risk factors for growth KQ3a. Proportion receiving surgery, KQ3b. Harms and benefits of surgery	RoB
			Mean growth rate: 1.69 mm/year (95%CI 1.56 to 1.82) (range 0.0–6.67 mm/year) Ectatic aortas (2.6–2.9 cm) at first scan with a minimum of 4 years' follow-up (mean 7.2 yrs) (n=239): Mean growth rate: 1.71 mm/year (95%CI 1.57 to 1.85) (range 0.0–5.75 mm/year) Ectatic aortas 2.6–2.9 cm at first scan with a mean follow-up 5.4 years (range 1-14 years): 314/358 (88%) expanded into ≥ 3.0 cm 45/358 (13%) expanded to ≥ 5.0 cm 8/358 (2%) expanded to ≥ 5.5 cm Note: No ectatic aortas expanded to ≥ 5.0 cm within the first 4 years of surveillance Ectatic aortas (2.6–2.9 cm) at first scan with a minimum of 4 years' follow-up: 45/239 (18%) expanded to ≥ 5.0 cm 194/239 (82%) expanded to < 5.0 cm Ectatic aortas less than 5.0 cm at last scan with a minimum of 4 years' follow-up (mean 7.0 yrs) (n=194) Mean growth rate: 1.94 mm/year (95%CI 1.23 to 1.44) (range 0.0 to 4.0 mm/year) Ectatic aortas ≥5.0 cm at last scan with a minimum of 4 years' follow-up (mean 8.0 yrs) (n=45) Mean growth rate: 3.33 mm/year (95%CI 3.05 to 3.61) (range 2.0 to 5.8 mm/year)	
Morris-Stiff 2005 {496} Cross-sectional	449 (100%)	N/A	**KQ1a.** 2.5-2.9cm: 23/449 (5.1%)	2/3
Norman 2004 {527} Cohort	12,203 (100%)	5 yrs (3–7)	**KQ1a.** 2.7-3.0 cm: 674/12,203 (5.5%) Note: Prevalence is cross-sectional. Follow-up: all-cause mortality not specific to subAA	3/3
Kyriakides 2000 {667} Cohort	3,497 (100%)	4 years	**KQ1a.** 2.6-3.0cm: 196/3,497 (5.6%) Note: Prevalence data is cross-sectional. Follow-up: growth in those who initially measured 3.0cm or more	3/3
Lindholt 2000 {649} Cohort	6,339 (100%) (VC)	5 years	**KQ3a.** Operated: 0/248 **KQ1a.** 25-29mm: 348/4843 (7.2*%) *article has 7.5% prevalence **KQ1b.** Initial size 25–29 mm: 0.7 (SD 1.0) mm/year Relative size defined ectasia: Ratio >1.2 & <25 mm: 3/86 (3.5%) (AAA range 31-34 mm) Ratio >1.2 & 25-29 mm: 23/70 (33%) (AAA range 30-41 mm) Absolute size defined ectasia: 25-29 mm & ratio <1.2: 22/92 (24%) (range 30-48 mm) 25-29 mm & ratio>1.2: 23/70 (33%) (range 30-41 mm) 25–29 mm & total: 45/162 (28%) (range 30-48 mm) 48*/248 (19%) had become aneurysmal (range 30-48 mm); *3 of these men were <25 mm, ratio >1.2 at baseline	5/6

Author Year Study design	Total sample size (% men)	Length of follow-up	KQ1a. Prevalence, KQ1b. Prevalence and rate of growth, KQ1c. Risk factors for growth KQ3a. Proportion receiving surgery, KQ3b. Harms and benefits of surgery	RoB
			Initial size 25-29 mm: >4.5cm at 3 & 4 years: 0 >5 cm: 3rd yr 0/48, 4th yr: 0/46, 5th yr: 0/44 Expansion rates compared to initial AAA [Expansion rates mm/year (SD) (range)] Expansion rate, All participants: 25-29 mm, ratio <1.2 (n=92): 0.7 mm/yr (1.2) (-2.0 to 4.6) 25-29 mm, ratio >1.2 (n=70): 0.5 mm/yr (0.9) (-2.0 to 2.9) Ectasia (n=248): 0.5 mm/yr (0.9) (-2.0 to 4.7) Expansion rate, AAA participants: 25-29 mm, ratio <1.2 (n=22): 2.2 mm/yr (1.1) (0.9 to 4.7) 25-29 mm, ratio >1.2 (n=23): 1.4 mm/yr (0.6) (0.5 to 2.9) Frequency of AAA and their expansion rates Expansion rate, All participants [Expansion mm/year (SD) (range)]: 25 mm (n=47): 0.5 mm/yr (0.7) (-1.4 to 3.4) 26 mm (n=47): 0.8 mm/yr (1.3) (-2.0 to 4.7) 27 mm (n=34): 0.6 mm/yr (0.8) (-0.9 to 3.1) 28 mm (n=26): 0.5 mm/yr (0.98) (-1.3 to 2.7) 29 mm (n=8): 0.6 (1.76) (-2.0 to 3.1) p-value (between the five groups)=0.9 (expansion rates mm/year) Expansion rate, AAA [Mean-size (range), %; Expansion rate, mm/year (SD) (range)]: 25 mm (n=5): 33 (30-37), 10%; 1.9 (0.9) (0.9 to 3.4) 26 mm (n=16): 36 (30-48), 24%; 2.2 (1.1) (0.7-4.7) 27 mm (n=11): 33 (31-41), 32%; 1.4 (0.6) (0.7 to 3.1) 28 mm (n=10): 34 (30-41), 38%; 1.4 (0.5) (0.9 to 2.7) 29 mm (n=3): 38 (32-42), 37%; 2.1 (1.3) (0.5 to 3.1) p-value (between the five groups)=0.32 (mean size)	
Vazquez 1998 {693} Cross-sectional	727 (65 yrs: 1035; 75 yrs: 729) (100%)	N/A	**KQ1a.** 26-30mm: Total: 25/727; 65 yrs: 15/262 ; 75 yrs: 10/465	2/3
Watson 1997 {711} Cohort	Total: 142; Men: 131 (92.3%)	48 months (12-114)	**KQ1a.** 2.6-2.9cm: 46/142 (among those who measured 2.6 to 3.9 cm at baseline) Note: Prevalence not specifc to men. Follow-up growth has those <3.0 cm, but it is not clear if it is only those 2.6 to 2.9 cm	3/3
Chang 1997 {737} Cohort	Total: 514; Men: 376 (73.2%)	NR	**KQ1a.** Initial size 2.5-3.0 cm 60-70 yrs: 112/221 70-80 yrs: 72/163 >80 yrs: 12/28 **KQ1b.** Rapid expansion (expansion rate ≥ 1.0 cm/year) with initial size 2.5-3.0 cm 60-70 yrs: 2/112 (1.8%) 70-80 yrs: 3/72 (4.8%) >80 yrs: 0/12 (0%)	2/3 4/6

Author Year Study design	Total sample size (% men)	Length of follow-up	KQ1a. Prevalence, KQ1b. Prevalence and rate of growth, KQ1c. Risk factors for growth KQ3a. Proportion receiving surgery, KQ3b. Harms and benefits of surgery	RoB
			Note: Results include both men and women, with no details on proportion of men and women in the age subgroups that are reported.	
Takei 1995 {765} Cross-sectional	Total: 348; Men: 128 (36.8%)	N/A	**KQ1a.** 25-30 mm: 5/128 (3.9%)	2/3
Simoni 1995 {766} Cohort	Total: 1,601; Men: 741 (46.3%)	N/A	**KQ1a.** 26-29 mm: 22/741 Note: Follow-up information just provided information on one individual who died of stroke, and 2 individuals who refused follow-up (this is for men and women).	2/3
Morris 1994 {784} Cohort	Total: 3,030: 65+ yrs: 1,254 (100%)	N/A	**KQ1a.** 2.5-2.9 cm 65+ yrs: 107/1,254 (8.5%) 65-79 yrs: 85/1,061 (8%) 80+ yrs: 22/193 (11.4%) Note: Prevalence is cross-sectional. Follow-up: growth rates, but not specific to SubAA group.	3/3
Smith 1993 {794} Cohort	2,597 (100%)	Mean: 13 months	**KQ1a.** 25-29 mm: 181†/2,597 (7%) Note: Prevalence is cross-sectional. Follow-up: growth rates, but not specific to SubAA population. †values obtained using Engauge Digitizer	3/3
Collin 1991 {830} Cohort	Total: 106; Men: 102 (96.2%)	3 years	**KQ1b.** 1 yr mean annual rate of change (mean +/- SE): +0.11cm +/- 0.03 1 yr maximum observed annual change: +1.2 cm Mean incremental growth rate (SE): +0.19 cm +/- 0.06 **KQ1a.** 2.5-2.9 cm: 54/106 (50.9%) *includes men who measured 2.5 cm or greater at baseline	3/6
Hager 2014 {2252} Cross-sectional	Total: 11,511: 65 yr old: 6,796; 70 year old: 4,715; (100%)	n/a	**KQ1a.** 25-29 mm: 65 year old men: 286/6,796 (4.2%) 70 year old men: 203/4,715 (4.3%)	2/3
De Rango 2011 {2710} RCT/cluster RCT	Total: 360; Men: 345 (95.8%). Randomized to early EVAR: 182; Surveillance: 178	Early EVAR: 31.8 +/- 16.9; Surveillance: 31.7 +/- 18.0	**KQ3b.** **SF-36** [Baseline EVAR mean (SD) (n=173) vs Surveillance mean (SD) (n=166)] Total score 73 (17.9) vs 75.5 (16.2); p=0.1869 Physical health Physical Health summary scale 71.4 (18.1) vs 73.3 (17.4); p=0.3353 Physical functioning 75.4 (22.4) vs 77.2 (20.1); p=0.4386 Role-physical 75.6 (36.1) vs 78.5 (35); p=0.4556 Bodily pain 78.5 (23.9)vs 84.4 (20.8); p=0.0152 General health 60.6 (20.7) 59.1 (20.3); p=0.5013 Mental health Mental Health summary scale 70.9 (18.9) vs 72.7 (17); p=0.3395 Vitality 67.8 (20.7) vs 68.1 (20.3); p=0.8933 Social functioning 78.1 (22.6) vs 83.3 (21.1); p=0.0302 Role emotional 78.2 (35.9) vs 82.5 (32.8); p=.2498 Mental health 69.5 (19.3) vs 70.6 (18.8); p=0.6193 **SF-36**	M

Author Year Study design	Total sample size (% men)	Length of follow-up	KQ1a. Prevalence, KQ1b. Prevalence and rate of growth, KQ1c. Risk factors for growth KQ3a. Proportion receiving surgery, KQ3b. Harms and benefits of surgery	RoB
			EVAR: Baseline; 6-months [mean difference from baseline (95%CI), p-value]; Final [mean difference from baseline (95%CI), p-value] Total score 74; 79 [4.6 (2.3 to 7), p=0.0002]; 70 [-3.9 (-6.9 to -1.0),p=0.0093] Physical health Physical Health summary scale 73; 76 [3.1 (0.8 to 5.5), p=0.0094]; 67 [-5.8 (-8.7 to -2.9), p<0.0001 Physical functioning 78; 77 [-0.6 (-3.7 to 2.4), p=0.6755]; 66 [-11.5 (-15.3 to -7.7), p=0.0001] Role-physical 78; 77 [-0.2 (-5.7 to 5.3), p=0.9406]; 71 [-6.1 (-12.7 to 0.4), p=0.0677] Bodily pain 80; 79 [-2 (-5.6 to 1.6), p=0.2733]; 80 [0.3 (-4.1 to 4.7), p=0.8992] General health 61; 66 [4.4 (1.3 to 7.4), p=0.0055]; 58 [-3.3 (-6.7 to 0.1), p=0.0603] Mental health Mental Health summary scale 71; 77 [5.2 (2.8 to 7.5), p<0.0001]; 68 [-2.8 (-5.9 to 0.3), p=0.0763] Vitality 69; 69 [0.1 (-2.9 to 3.2), p=0.9449]; 61 [-8.3 (-11.7 to -5.0), p<0.0001] Social functioning 78; 86 [7.5 (3.9 to 11.1), p+0.0001]; 76 [-1.3 (-5.6 to 3.0), p=0.5424] Role emotional 78; 89 [9.1 (2.1 to 16.0), p=0.0115]; 78 [0.5 (-6.9 to 8.0), p=0.8928] Mental health 70; 75 [4.8 (1.7 to 7.8), p=0.0024]; 68 [-1.4 (-4.8 to 2.0), p=0.4078] SF-36 Surveillance: Baseline; 6-months [mean difference from baseline (95%CI), p-value]; Final [mean difference from baseline (95%CI), p-value] Total score 76; 75 [-0.8 (-3.2 to 1.6), p=0.5132]; 69 [-6.3 (-9.3 to -3.4), p<0.0001] Physical health Physical Health summary scale 74; 73 [-0.7 9-3.1 to 1.7), p=0.5545]; 67 [-7.3 (-10.1 to -4.4), p<0.0001] Physical functioning 78; 73 [-4.3 (-7.3 to -1.2), p=0.0059]; 70 [-8.2 (-12.0 to -4.4), p<0.0001] Role-physical 79; 72 -7.4 (-12.9 to -1.8), p=0.0093]; 71 [-8.5 (-15.0 to -1.9), p=0.0115] Bodily pain 86; 75 [-10.7 (-14.3 to -7.1), p<0.0001]; 76 [-10 (-14.4 to -5.7), p<0.0001] General health 59; 60 [0.6 (-2.4 to 3.7), p=0.6932]; 56 [-2.7 (-6.1 to 0.7), p=0.1183] Mental health Mental Health summary scale 72; 72 [-0.8 (-3.2 to 1.5), p=0.4853]; 68 [-4.8 (-7.9 to -1.7), p=0.0027] Vitality 69; 66 [-2.4 (-5.4 to 0.7), p=0.1280]; 62 [-0.7 (-10.4 to -3.7), p<0.0001] Social functioning 83; 84 [0.4 (-3.2 to 4.0), p=0.8179]; 75 [-7.2 (-11.5 to -2.9), p=0.0010] Role emotional 82; 79 [-3.2 (-10.2 to 3.8), p=0.3756]; 78 [-3.8 (-11.2 to 3.7), p=0.3222] Mental health 70; 71 [0.3 (-2.7 to 3.4), p=0.8353]; 67 [-3.2 (-6.6 to 0.2), p=0.0689] Changes in quality of life from baseline in EVAR vs surveillance patients at 6 months and final assessment [6 months EVAR vs Surveillance; ≥12 months EVAR vs Surveillance mean score change (95%CI), p-value] Total score 5.4 (2.1 to 8.8), p=0.0017; 2.4 (-1.7 to 6.6), p=0.2525 Physical health Physical Health summary scale 3.8 (0.5 to 7.2), p=0.0241; 1.5 (-2.6 to 5.5), p=0.4792 Physical functioning 3.6 (-0.7 to 7.9), p=0.0968; -3.3 (-8.7 to 2.0), p=0.2240 Role-physical 7.1 (-0.7 to 15.0), p=0.0730; 2.4 (-6.9 to 11.6), p=0.6183 Bodily pain 8.7 (3.6 to 13.7), p=0.0009; 10.3 (4.1 to 16.5), p=0.0011 General health 3.7 (-0.6 to 8.1), p=0.0903; -0.6 (-5.4 to 4.3), p=0.8218 Mental health Mental Health summary scale 6.0 (2.7 to 9.3), p=0.0005; 2.0 (-2.4 to 6.4), p=0.3808 Vitality 2.5 (-1.8 to 6.8), p=0.2602; -1.3 (-6.0 to 3.4), p=0.5921	

Author Year Study design	Total sample size (% men)	Length of follow-up	KQ1a. Prevalence, KQ1b. Prevalence and rate of growth, KQ1c. Risk factors for growth KQ3a. Proportion receiving surgery, KQ3b. Harms and benefits of surgery	RoB
			Social functioning 7.1 (2.0 to 12.2), p=0.0067; 5.9 (-0.2 to 12.0), p=0.0574 Role emotional 12.2 (2.3 to 22.1), p=0.0158; 4.3 (-6.3 to 14.8), p=0.4264 Mental health 4.4 (0.1 to 8.8), p=0.0446; 1.7 (-3.1 to 6.5), p=0.4822	
Lederle 2003 {3489} RCT/cluster RCT	Immediate repair group: 569; Surveillance: 567	mean 4.9 years (3.5-8)	**KQ3b.** **SF36 (S**urveillance vs Immediate repair at Baseline; 1 yr; 5 yrs; 7 yrs) Physical Component Summary: 43 vs 42; 40 vs 41; 38 vs 37; 36 vs 35 Physical functioning: 64 vs 64; 62 vs 62; 54 vs 48; 46 vs 43 Role: Physical: 64 vs 62; 57 vs 55; 43 vs 41; 35 vs 30 Bodily Pain: 67 vs 67; 64 vs 64; 59 vs 61; 55 vs 54 General Health: 64 vs 64; 60 vs 65; 56 vs 55; 53 vs 49 (p<.0001* favouring immediate repair group) Mental Component Summary: 52 vs 52; 52 vs 52; 51 vs 51; 49 vs 51 Vitality: 57 vs 57; 55 vs 55; 51 vs 49; 44 vs 49 (p<.05* favouring surveillance group) Social Functioning: 94 vs 83; 78 vs 80; 74 vs 74; 69 vs 71 Role: Emotional: 76 vs 76; 74 vs 70; 65 vs 66; 55 vs 65 Mental Health: 75 vs 75; 73 vs 73; 74 vs 74; 72 vs 74 *at repeated measures analysis Note: Numbers read from graph. Available data at Time 0-7.5 yrs.	M
The UK Small Aneurysm Trial Participants 1998 {3806} RCT/cluster RCT	Baseline: Surveillance: 480; Early surgery: 512; 12 months: Surveillance: 436; Early surgery: 429	1 year	**KQ3b.** **MOS subscales (20-item short-form patients' health survey)** Mean (SD) at baseline: Surveillance (n=480) vs Early surgery (n=512); Mean difference (95% CI) Physical functioning: 66.5 (29.3) vs 64.2 (30.7); -2.3 (-6.0 to 1.5) Role functioning: 76.7 (37.6) vs 71.9 (39.5); -4.8 (-9.6 to 0) Social functioning: 89.8 (20.4) vs 89.2 (20.8); -0.6 (-3.2 to 1.9) Mental health: 79.5 (17.0) vs 80.2 (17.2); 0.7 (-1.5 to 2.8) Health perceptions: 62.4 (24.6) vs 62.4 (24.3); 0 (-3.0 to 3.0) Bodily pain: 64.3 (32.1) vs 64.1 (31.5); -0.2 (-4.1 to 3.8) Mean (SD) at 12 months: Surveillance (n=436) vs Early surgery (n=429); Mean difference (95% CI) Physical functioning: 60.3 (30.2) vs 62.1 (29.9); 1·7 (-2.3 to 5.7) Role functioning: 71.4 (40.2) vs 69.8 (39.3); -1.7 (-7·0 to 3.6) Social functioning: 88.1 (22.7) vs 89.3 (21.2); 1.2 (-1.8 to 4.1) Mental health: 79.6 (18.6) vs 81.7 (17.9); 2.1 (-0.4 to 4.5) Health perceptions: **61.1 (26.4) vs 69.2 (25.4); 8.1 (4.6 to 11.6)** Bodily pain: **59.2 (35.4) vs 64.5 (33.2); 5.2 (0.7 to 9.8)** **MOS subscales (20-item short-form patients' health survey)** Mean score change (95%CI), Standardized response mean: Surveillance (n=399) vs Early surgery (n=391) Physical functioning: -6.2 (-8.8 to -3.7), 0.24 vs -3.5 (-6.1 to -0.8), 0.13 Role functioning: -4.9 (-8.8 to -1.0), 0.12 vs -3.9 (-8.1 to 0.3), 0.10 Social functioning: -2.2 (-4.2 to -0.2), 0.11 vs -1.0 (-3.1 to 1.2), 0.05 Mental health: 0 (-1.5 to 1.5), 0 vs 0 (-1.7 to 1.8), 0 Health perceptions: -1.0 (-3.2 to 1.3), 0.04 vs **5.7 (3.3 to 8.1), 0.24** Bodily pain: **-4.7 (-8.2 to -1.1), 0.13** vs -1.0 (-4.5 to 2.5), 0.03	M

Appendix 9. Table of results of included studies for KQ2

Author Year	Total sample size	Length of follow-up	KQ2. Dimensions of harm	RoB
Scalone 2013 {2356} Cohort	Baseline with HRQoL (Total): 1,633 (43.8%); Follow-up (Total): 125 (92.8%)	6-12 months after u/s scan	**EQ-5D** Participants at Screening (n=1,633) vs Follow-up* (n=125) No problem %, Some problems %, Severe problems % Mobility: 76.4%, 23.5%, 0.1% vs 76.8%, 23.2%, 0% Self-care: 95.3%, 4.3%, 0.4% vs 92.8%, 7.2%, 0% Usual activities: 92.8%, 6.8%, 0.4% vs 91.2%, 8.8%, 0% Pain/Discomfort: 34.8%, 64.5%, 0.7% vs 38.4%, 61.6%, 0% Anxiety/Depression: 53.7%, 42.4%, 3.9% vs 64.0%, 35.2%, 0.8% No significant change in any HRQoL domain after adjusting for age and gender. Mean + SD at screening, median (range); Mean + SD at follow-up, median (range) Utility Index: 0.78 + 0.18, 0.80 (range -0.17 to 1.00); 0.81 + 0.14, 0.81 (range 0.22-1.00) VAS: 72.9 + 14.2, 75 (range 0 to 100); 73 + 12.4, median 75 (range 10 to 100) *Those at follow-up are also included in those at screening.	3/5
Hinterseher 2013 {2424} Cross-sectional	78; 43 included (NR)	mean follow-up: 12 months	**WHOQOL-BREF** AAA surveillance group vs. age- and sex-matched general population Physical health QOL: 60.71 ± 19.68 vs 66.48 ± 16.67; p=0.04*; t -2.05 Psychological health: 69.67 ± 16.95 vs 70.53 ± 14.18; =0.72; t -0.36 Social relationships: 66.47 ± 16.28 vs 68.41 ± 15.48; p=0.45; t -0.76 Environment: 73.38 ± 12.76 vs 70.20 ± 13.01; p=0.14; t 1.49 Global QOL: 57.27 ± 19.14 vs 62.13 ± 16.12; p=0.08; t -1.79 **SF-36** AAA surveillance group vs. age- and sex-matched general population Physical health domain: Physical functioning: 51.98 ± 32.11 vs 58.74 ± 25.76; p=0.18; t -1.34 Role-physical: 36.54 ± 44.00 vs 54.63 ± 40.15; p=0.02*; t -2.38 Bodily pain: 61.45 ± 28.64 vs 57.21 ± 26.93; p=0.40; t 0.85 General health: 48.48 ± 18.32 vs 51.89 ± 21.74; p=0.39; t -0.86 Mental health domain: Vitality: 40.00 vs 52.89 ± 21.74 Social functioning: 85.23 ± 13.48 vs 82.81 ± 19.76; p=0.46; t 0.73 Role-emotional: 56.76 ± 48.35 vs 79.05 ± 35.78; p=0.003*; t -3.05 Mental health: 84.00 vs 72.07 ± 17.04 t is above or below the standard value	2/3
Lesjak 2012 {2495} Cohort	Baseline: 516; Follow-up: 133	6 months	**KQ1a.** 2.6-2.9 cm: 28/516 (5.4%; 95%CI 3.4-7.3%) **KQ2.** **MOSF36**	2/3 2/5

Author Year	Total sample size	Length of follow-up	KQ2. Dimensions of harm	RoB
			Abnormal Pre-screen (n=47); Post-screen mean (n=35) (SD) vs Normal men Pre-screen (n=431); Post-screen (n=89) mean (SD) Physical functioning 40.4 (10.7); 41.1 (11.7) vs 41.3 (11.7); 44.3 (10.2) Social functioning 47.3 (11.0); 44.4 (13.1) vs 48.9 (10.6); 50.6 (9.3) Role: physical 42.4 (12.3); 40.5 (12.4) vs 42.6 (11.6); 44.0 (12.5) Role: emotional 44.0 (14.2); 43.1 (13.8) vs 45.4 (13.2); 46.4 (12.7) Mental health 49.6 (11.1); 49.8 (11.9) vs 51.6 (10.5); 51.8 (10.7) Vitality 49.8 (9.9); 48.2 (11.6); 50.6 (10.5); 50.7 (10.4) Pain 45.4 (11.6); 43.1 (10.6) vs 46.0 (10.8); 48.0 (11.6) General health 42.9 (10.0); 44.9 (11.5) vs 45.6 (9.6); 49.4 (8.4) **HADS** Abnormal Pre-screen (n=51); Post-screen mean (n=33) (SD) vs Normal men Pre-screen (n=432); Post-screen (n=93) mean (SD) Depression (0.21) [clinical cutoff=15] 5.1 (4.1); 5.5 (4.6) vs 4.2 (3.3); 4.1 (3.6) Anxiety [clinical cutoff=15] 5.1 (3.9); 5.9 (4.9) vs 5.3 (3.8); 4.8 (3.7) General Health [Pre mean score; Post mean score, Difference in score (95%CI)] Men with normal aorta (n=81) 48.0; 49.8, 1.9 (0.2 to 3.5) Men with abnormal aorta (n=33) 42.9; 45.2, 2.3 (-0.4 to 5.0) Physical summary measure Men with normal aorta (n=74) 44.9; 45.7, 0.52 (-0.7 to 1.7) Men with abnormal aorta (n=30) 40.6; 40.6, 0 (-2.1 to 2.0) Mental summary measure Men with normal aorta (n=74) 53.4; 52.7, -0.5 (-2.6 to 1.5) Men with abnormal aorta (n=30) 48.9; 49.2, 04 (-3.5 to 4.3)	
Bertero 2010 {2778} Cross-sectional	10 (100%)	1 year	Qualitative data	1/3
Brannstrom 2009 {2878} Cross-sectional	3 (100%)	n/a	Qualitative data	1/3
Spencer 2004 {3382} Cohort	365 (100%)	N/A	286 who completed both pre-screening and post-screening questionnaires Pre-screening mean score (SD); Post-screening mean score (SD); Difference in score (95%CI) Men with AAA (n=97): 62.1 (14.3); 64.5 (20.0); +2.4 (–1.0 to 5.8) Men with normal aorta (n=189): 64.1 (13.2); 65.8 (20.0); +1.7 (–0.8 to 4.3) All men (n=286): 63.4 (13.6); 65.4 (19.8); +2.0 (0 to 4.0) MOS SF-36 (0–100)† Men with AAA mean (SD) (n = 120) compared to Men with normal aorta mean (SD) (n=245) [Cross-sectional at 12 months] Functional status Physical functioning: 62.9 (27.4) vs 68.9 (25.8); p=0.04 Social functioning: 85.2 (22.0) vs 84.4 (24.2); NS Role: physical: 60.8 (39.7) vs 63.0 (39.8); NS Role: emotional: 74.4 (37.4) vs 73.5 (36.9); NS	3/6

Author Year	Total sample size	Length of follow-up	KQ2. Dimensions of harm	RoB
			Well-being Mental health: 81.3 (15.9) vs 78.3 (17.7); NS Energy: 61.8 (21.3) vs 62.5 (20.6); NS Pain: 73.4 (24.0) vs 71.5 (25.0); NS Overall evaluation of health Health perception: 64.4 (20.7) vs 66.1 (20.3); NS The anxiety sub-scale of the Hospital Anxiety and Depression Scale (HADS)†† Men with AAA mean (SD) (n = 120) compared to Men with normal aorta mean (SD) (n=245) [Cross-sectional at 12 months] (0–21) [clinical cutoff = 15] 3.6 (3.0) vs 3.6 (3.2); NS EuroQol EQ-5D Men with AAA mean (SD) (n = 120) compared to Men with normal aorta mean (SD) (n=245) [Cross-sectional at 12 months] Health states score (0–1)†: 0.83 (0.18) vs 0.80 (0.21); NS Thermometer score (0–100)†: 68.8 (25.5) vs 71.3 (24.7); NS † higher scores denote better states †† higher scores denote poorer states	
Wanhainen 2004 {3407} Cohort	Total: 69; Men: 55 (79.7%)	12 months after u/s	**SF-36 Scale** Norms (95% CI); Mean score in AAA group (before screening, after screening, p-value) vs Mean score in control group (before screening, after screening, p-value) Physical Functioning: 72.5 (70.9-74.2); 73, 68, p=0.033 vs 81, 76, p=0.543 Role-Physical: 65.3 (62.5-68); 65, 62, p=0.798 vs 66, 68, p=0.514 Bodily Pain: 69.2 (67.4-71); 68, 73, p=0.083 vs 65, 68, p=0.477 General Health: 66.0 (64.4-67.6); 69, 66, p=0.091 vs 65, 68, p=0.085 Vitality: 69.1 (67.4-70.7); 68, 64, p=0.081 vs 69, 70, p=0.57 Social Functioning: 86.5 (85.0-88); 89, 82, p=0.046 vs 88, 88, p=1 Role-Emotional: 77.4 (74.9-79.8); 69, 69, p=1 vs 71, 76, p=0.259 Mental Health: 81.3 (79.9-82.7); 86, 79, p=0.019 vs 82, 83, p=0.693 Physical Health Cluster: Not available; 43, 43, p=0.67 vs 46, 44, p=0.909 Mental Health Cluster: Not available; 52, 49, p=0.029 vs 51, 52, p=0.272 Mental Health Cluster: AAA group (before screening vs after screening); Control group (before screening vs after screening) All individuals: 52 vs 49; 51 vs 51 Normal: 55 vs 55; 50, 53 Low score (a scale score within the 25th percentile in at least four scales): 41 vs 33; 51 vs 51	3/6
Lindholt 2000 {3715} Study desing not identifiable	Controls: 231; Invited: 439; Non-attenders: 168; Attenders before screening:	1 month after scan	**Validated generic and global anonymous quality of life (QL) questionnaire by self-assessment (ScreenQL)** Quality of life scores among random samples of all invited (non-attenders and attenders before screening and subgroups of invited men) compared with non-invited controls Controls (n=231); Invited (n=439); Non-attenders (n=168); Attenders before screening (n=271); Attenders after screening (n=286); AAA (n=106)	NR

Author Year	Total sample size	Length of follow-up	KQ2. Dimensions of harm	RoB
	271; Attenders after screening: 286; AAA : 106		Emotional: 15.1; 14.9; 15.1; 14.8; 15.5; 15.0 Health: 15.7; 15.3; 15.5; 15.2; 16.1; 14.4* (p<0.05 favouring control (non-invited) to those with AAA) Psychosomatic distress: 21.0; 20.9; 21.2; 20.7; 21.7; 20.5 Social and family: 10.3; 10.1; 9.9; 10.2; 10.6; 10.4 Marriage: 15.4; 14.4; 14.0; 14.6; 15.3; 14.7 Quality of life: 81.4; 79.5; 79.9; 79.2; 83.2; 78.6* (p<0.05 favouring control (non-invited) to those with AAA) Quality of life among attenders and non-attenders compared between the groups Non-attenders (n=168); Attenders before (n=271); Attenders after (n=286); AAA (n=106) Emotional: 15.1; 14.8; 15.5 (p=0.02*); 15.0 (p= 0.22) Health: 15.5; 15.2; 16.1 (p=0.08); 14.4 (p= 0.34) Psychosomatic distress: 21.2; 20.7; 21.7 (p=0.00*); 20.5 (p= 0.00**) Social and family: 9.9; 10.2; 10.6 (p=0.07); 10.4 (p= 0.63) Marriage: 14.0; 14.6; 15.6 (p=0.07); 14.7 (p= 0.31) Quality of life: 79.9; 79.2 (p=0.20); 83.2 (p=0.00*); 78.6 (p= 0.00**) *Wilcoxon's rank sum test between attenders before and after screening; p-value <0.05 (unpaired data) **Wilcoxon's rank sum test between attenders after screening and the group of small AAAs; p-value <0.05 (unpaired data) Prospective study of changes in quality of life during conservative treatment of AAA and after surgery First observation; Difference†; Last observation‡; Difference⍰; After surgery; Controls Emotional: 15.1; -0.67%; 15.0; +8.07%; 16.2; 15.10 Health: 14.6; -7.92%*; 13.6; +15.2%*; 15.6; 15.7 Psychosomatic distress: 20.7; -17.3%*; 18.1; +9.33%*; 19.5; 21.0 Social and family: 10.3; -1.00%; 10.0; +9.67%; 10.9; 10.3 Marriage: 15.7; -1.43%; 15.3; +7.56%; 16.7; 15.4 Quality of life: 79.6; -2.06%*; 78.3; +6.97%*; 82.7; 81.4 †Relative difference between first and last observation during u/s surveillance ‡Observation 3-6 months after surgery ⍰Relative difference between last observation during u/s surveillance and observation 3-6 months after surgery (*: p<0.05 by Mann-Whitney test)	
Khaira 1998 {3810} Study desing not identifiable	Controls (not screened): 11; Controls (screened): 45; AAA (on waiting list): 24; Small aneurysm (at 1 month): 38; Small aneurysm (at 6 months): 29	NR	**HADS questionnaire** Normal for Anxiety score (A), Depression score (D); Borderline + case (%) for A, D) Controls (not screened): 8, 10; 3 (27), 1 (9) Controls (screened): 34, 38; 11 (24), 7 (15) AAA (on waiting list): 15, 20; 9 (37), 4 (17) Small aneurysm at 1 month: 23, 29; 15 (39), 9 (23) Small aneurysm at 6 month: 21, 26; 8 (27), 3 (10)	NR
Lucarotti 1997 {3853} Cohort	Total: 161 (normal aortas n=100; enlarged aortas n=61) (100%)	1 month	**The 28-item General Health Questionnaire (GHQ)** Differences between normal and abnormal groups in GHQ score Pre-screen scores: Difference (Group 1-Group 2): -0.19; 95% CI: -3.01 to 2.62; p= 0.89 Post-screen scores: Difference (Group 1-Group 2): 0.11; 95% CI: -2.27 to 2.50; p=0.92	3/6

Author Year	Total sample size	Length of follow-up	KQ2. Dimensions of harm	RoB
			Differences between pre- and post-screening GHQ scores in normal and abnormal groups [Mean (95%CI); SD] Group 1 (normal patients) Pre (n=100): 15.51 (13.71 to 17.37); 9.17 Post (n=100): 14.36 (12.93 to 15.79); 7.28 Difference (n=100): -1.15 (-0.14 to -2.16); 6.16; p=0.03 Group 2 (abnormal patients) Pre (n=61): 15.71 (13.67 to 17.74); 9.13 Post (n=61): 14.25 (12.32 to 16.17); 7.68 Difference (n=61): -1.46 (-0.08 to -2.84); 5.49; p=0.04	
Hansson 2012 {4528} Cross-sectional	15	N/A	Qualitative data	1/3
The Muticentre Aneurysm Screening Study Group 2002 {6113} RCT/cluster RCT	Total: 1085; 6-weeks (Neg: 631, Pos: 599, Ctrl: 726; 3&12 mths: Surveillance: 426; Surgery: 129	12 months	**Short-form state anxiety scale of the Spielberger state-trait anxiety scale** State anxiety: (20–80), clinical cutoff=42 (higher score denotes poorer state) Negative n=631, Positive n=599; p; Controls (*p compares men with – and + screening results) 6 weeks after screening: 29.5, 30.9; p=0·020; 31.5 3 and 12 months after detection of aneurysm or surgery (Surveillance, Surgery; p) 3 months: 28.9, 29.1; p= 0.292; 12 months: 29.6, 28.6; p= 0.323 **Depression scale of the hospital anxiety and depression scale (HADS)** Depression: (0–21), clinical cutoff=15 (higher score denotes poorer state) Negative n=631, Positive n=599; p; Controls (*p compares men with – and + screening results) 6 weeks after screening: 3.0, 3.3; p=0.092; 3.5 3 and 12 months after detection of aneurysm or surgery (Surveillance, Surgery; p) 3 months: 3.0, 3.0; p=0.835; 12 months: 3.2, 3.1; p=0.394 **SF-36:** (0–100) Physical health Negative n=631, Positive n=599; p; Controls (*p compares men with – and + screening results) 6 weeks after screening: 51.2, 49.7; p=0.003; 50.0 3 and 12 months after detection of aneurysm or surgery (Surveillance, Surgery; p) 3 months: 51.0, 50.0; p=0.295; 12 months: 49.8, 51.1; p=0.086 Mental health Negative n=631, Positive n=599; p; Controls (*p compares men with – and + screening results) 6 weeks after screening: 51.5, 49.8; p=0.003; 50.0 3 and 12 months after detection of aneurysm or surgery (Surveillance, Surgery; p) 3 months: 51.7, 48.4; p=0.004; 12 months: 50.1, 50.6; p=0.311 **EuroQol EQ-5D** Weighted health index (0–1) Negative n=631, Positive n=599; p; Controls (*p compares men with – and + screening results) 6 weeks after screening: 0.83, 0.81; p=0.045; 0.80 3 and 12 months after detection of aneurysm or surgery (Surveillance, Surgery; p) 3 months: 0.83, 0.85; p=0.084; 12 months: 0.83, 0.85; p=0.577	M

Author Year	Total sample size	Length of follow-up	KQ2. Dimensions of harm	RoB
			Self-rating: (0–100) Negative n=631, Positive n=599; p; Controls (*p compares men with – and + screening results) 6 weeks after screening: 80, 76; p=0.0003; 78 3 and 12 months after detection of aneurysm or surgery (Surveillance, Surgery; p) 3 months: 77, 80; p=0.0003; 12 months: 76, 81; p=0.0007	

Appendix 10. Table of results for qualitative studies

Themes/Sub-themes	*Hansson 2012*	*Bertero 2010*	*Brannstrom 2009*
Is being aware of having an AAA a good thing?			
It's good to be examined/Feeling secure being under care	p. 348		
Positive about the health care system and its efforts/health care would take necessary action	p. 348	p.99	
Welcomed the ultrasound	p. 347		
Varied knowledge about aortic aneurysms / knowledge about surgery	p. 347 (knowledge about AAA) Unsupported (no knowledge about AAA)		Unsupported
Live as usual, not think much about it, high confidence that follow-up check could be relied on, and felt secure that healthcare providers knew what was best for them	p. 347	p. 99	p.72
Having a relationship of trust with the surgeon		p. 99	p. 72
It's good to get to know that one has an AAA		p. 99	
No regrets in taking part in the tests and it was good to get to know they had AAA	p. 348, 349		
- Preventing an early death from a serious disease - Follow-up checks should start early, as it would be good if AAA could be detected as early as	p. 349		Unsupported

Themes/Sub-themes	*Hansson 2012*	*Bertero 2010*	*Brannstrom 2009*
possible.			
Information the professionals provided at the ensuing check-ups gave them reassurance and a sense of security	Unsupported		Unsupported
Attitude of relatives was important / Relatives felt that it was good that the condition had been discovered	Unsupported		
Families don't talk about such things / Relatives not worried about condition	Unsupported		
Having no physical symptoms			p. 72
Knowing that one has an AAA is worrying			
Varied feeling about the meaning of the screening results			
Having been told of enlarged aorta was manageable; but continuing growth produced some unpleasant feelings		Unsupported	
Shocked/disillusioned by the information they had been given when they were first examined	P. 349	p. 99	
Had thoughts of catastrophe and a fear of death	P. 349		
Difficulty in waiting to talk to a doctor about their result, with having many thoughts and speculations about the condition	Unsupported		

Themes/Sub-themes	***Hansson 2012***	***Bertero 2010***	***Brannstrom 2009***
Felt calmer after they had talked to the doctor	Unsupported		p.72
Anxious because they realised they had something that they could not control / disappointed that aorta was expanding	Unsupported	p. 99	
Difficult decision of whether or not to have an operation	p. 349		
Worries about physical symptoms/growth			
Having physical symptoms, especially around their stomach, and thinking that it might come from their aorta	p. 350	p. 99	
Thoughts about aorta expanding or stopping / consequences of growth (ie. surgery and its consequences)		p. 99	Unsupported
Worries about exertion			
Worried about exertion / not worried about restrictions in the form of physical exertion	p. 350 (worried about exertion and handing over heavier tasks to others) Unsupported (not worried)	p. 99	
Worries because of unanswered questions			
Given too little information / Wanting to know more about the prognosis (how quickly it was swelling, what could be done to stop further swelling, should they restrict their everyday activities,	p. 350		

Themes/Sub-themes	*Hansson 2012*	*Bertero 2010*	*Brannstrom 2009*
how long would they have to go for check-ups			
Doctor could be withholding information for some reason or other	Unsupported		
Knowledge and information was the only thing that could reassure them / information given was easily understood	Unsupported		Unsupported
Having a relative along for the consultation so that several people could take in the same message	Unsupported		Unsupported
Concerns about relatives			
Families were worried about their condition	p. 350		
Awareness of the AAA and concerns about the future of life			Unsupported
Impact on time for frequent screenings		Unsupported	
The diagnosis as a reminder of the fragility of life and of mortality			
Being told that they had an AAA reminded them that they were growing old and their life was at risk	p. 351		
Aware of people around them, both relatives and in the neighbourhoods, who died because of the condition			p.72
Those with other illnesses already	Unsupported		

Themes/Sub-themes	***Hansson 2012***	***Bertero 2010***	***Brannstrom 2009***
had limited expectations of the future			
Feeling marginalised; either lonely or no longer wanted at work / a reminder of their own mortality	Unsupported		
A long life has no intrinsic value			
For those who experienced illness or suffering of family members, sudden death from a burst aneurism could be preferable to such dependency	Unsupported		
Not necessary to live a long low quality of life	p. 348, 351		
It would have been better not to have known			
Would have been just as good not to know about something that they did not think they could do anything about / philosophy of life was that it was better to know as little as possible	p. 348, 351	p. 100	
Coping strategies due to the knowledge that one has an AAA			
Wanting to change your lifestyle			
Wanting to make lifestyle changes, like losing weight and stopping smoking	p. 352		
Talking to others			
One way to cope was to talk to family and friends / talking about	p. 352		

Themes/Sub-themes	***Hansson 2012***	***Bertero 2010***	***Brannstrom 2009***
and comparing specific dimensions of the aneurysm			
One does not want to think or talk about it			
Avoided talking about it, as it might induce anxiety and fear / seeking further information would generate even more anxiety	p. 352 (two quotes)		
Not wanting to see oneself as ill			
Did not want to behave as if they were sick	p. 352		
One should not seek care unnecessarily	p. 352		
Rationalising and intellectualising			
Distancing themselves from the diagnosis / discussing in an objective depersonalised way / regard the condition as a technical problem	p. 353		
Focussing on another 'more serious' illness			
No time to think about their AAA as they had other more serious disease that had to be checked out	p. 353		p.72
Overriding concerns for sick relatives or other family problems	Unsupported		
One does not let it affect life			
Had lived a fairly unhealthy life for a long time (fruitless attempts to give up smoking or to change their			

Themes/Sub-themes	*Hansson 2012*	*Bertero 2010*	*Brannstrom 2009*
lifestyle)			
Changes in lifestyle demanded too great a sacrifice and were not worth the bother	p. 353		
Decided in advance not to listen to public health advice about diet, exercise and smoking / did not want to be preached at by their doctor / felt criticized		p. 99	
Living life as usual, but always being in the back of their minds		P. 99	