Table 1A. Number of operations over the five years of follow-up collected from registries in as treated groups.

	Early ACL reconstruction (n=59) **		Delayed ACL reconstruction (n=30)		Rehabilitation (n=29)	
	Length of stay = 0	Length of stay > 0	Length of stay = 0	Length of stay > 0	Length of stay = 0	Length of stay > 0
Cruciate ligament operation (NGE41) as main operation	36	28	22	10	0	0
Meniscus operation (NGD)	26	19	24	6	24	1
As main operation	9	1	12	3	20	1
As secondary operation	17	18	12	3	4	0
Other knee- and leg-related operations (NGE 11, NGA, NGF, NGH, NGK, NGM, NGR, NGT, NGU, TNG, QD)	86	4	33	0	27	0
As main operation	78	2	32	0	27	0
As secondary operation	8	2	1	0	0	0
Other operations (not knee and leg-related)	78	39	40	14	24	3
As main operation	41	9	20	4	16	2
As secondary operation	37	30	20	10	8	1

*Out of 61 subjects in early ACL reconstruction, one person did not undergo ACL reconstruction and one person had less than 10 rehabilitation visits resulting in 59 patients in as treated analysis.

Table 2A. Results of sensitivity analyses using full-analysis set principle.

Scenario	Between-group difference in costs (BBC 95% CI), SEK	Between-group difference in QALYs (BBC 95% CI)	INMB for a WTP of SEK 500 000 (BBC 95% CI), SEK
Excluding productivity losses (A)	16 391 (-5 543 to 39 917)	0.13 (-0.03 to 0.29)	47 615 (-39 098 to 133 522)
Including 50% costs of secondary operations (B)	51 772 (-14 609 to 115 335)	0.13 (-0.03 to 0.29)	12 155 (-103 667 to 127 160)
Excluding cost outliers (C)	31 457 (-10 776 to 73 768)	0.16 (-0.00 to 0.32)	48 063 (-47 704 to 144 068)
Excluding QALY outliers (D)	31 068 (-31 828 to 86 452)	0.11 (-0.03 to 0.24)	22 068 (-74 868 to 121 262)
Excluding second ACL reconstructions (E)	41 033 (-23 734 to 103 463)	0.13 (-0.03 to 0.28)	22 457 (-88 951 to 133 370)
Excluding operations not-related to knee/leg (F)	38 872 (-24 195 to 97 501)	0.13 (-0.03 to 0.29)	24 365 (-85 721 to 135 105)
Combination of A & B	**25 833 (94 to 51 253)**	0.13 (-0.03 to 0.29)	38 339 (-50 890 to 126 731)
Combination of A & C	11 945 (-5 088 to 29 705)	0.16 (-0.00 to 0.31)	65 880 (-18 514 to 149 080)
Combination of B & C	**41 462 (1 070 to 81 556)**	**0.16 (0.01 to 0.33)**	40 493 (-54 085 to 134 346)
Combination of A & B & C	**21 298 (1 333 to 41 466)**	0.16 (-0.00 to 0.32)	56 356 (-29 708 to 140 490)
Combination of A & D	13 725 (-9 374 to 37 795)	0.11 (-0.03 to 0.24)	39 413 (-37 650 to 113 141)
Combination of B & D	39 810 (-24 438 to 99 363)	0.11 (-0.03 to 0.24)	14 211 (-86 744 to 116 696)
Combination of A & B & D	22 467 (-2 955 to 48 234)	0.11 (-0.03 to 0.24)	31 045 (-46 406 to 108 518)
Combination of A & E	15 094 (-7 139 to 38 524)	0.13 (-0.03 to 0.28)	49 155 (-37 274 to 132 620)
Combination of B & E	50 475 (-13 517 to 113 391)	0.13 (-0.03 to 0.28)	13 349 (-99 955 to 124 453)
Combination of A & B & E	**24 536 (228 to 49 183)**	0.13 (-0.03 to 0.29)	39 624 (-47 412 to 126 095)
Combination of A & F	12 933 (-6 381 to 32 517)	0.13 (-0.03 to 0.28)	51 277 (-34 433 to 136 248)
Combination of E & F	37 575 (-25 666 to 97 114)	0.13 (-0.03 to 0.29)	25 918 (-86 433 to 136 837)
Combination of A & E & F	11 636 (-7 356 to 30 596)	0.13 (-0.03 to 0.29)	52 641 (-32 150 to 138 803)

Bold figures show statistically significant results ($p < 0.05$); INMB: incremental net monetary benefit; BBC 95% CI: bootstrap bias-corrected 95% confidence interval.

Table 3A. Results of the base case cost-effectiveness analysis using as treated analysis principle.

	Early ACL reconstruction (n=59)	Delayed ACL reconstruction (n=30)	Rehabilitation alone (n=29)	Difference (BBC 95%CI): early vs. delayed ACL	Difference (BBC 95%CI): early ACL vs. rehabilitation alone
Mean discounted QALYs	3.95	3.81	3.87	0.14 (-0.04 to 0.32)	0.08 (-0.13 to 0.31)
Mean discounted costs (SEK)	240 731	266 420	117 858	-25 689 (-119 812 to 50 724)	**122 872 (68 625 to 179 469)**
Main operation costs [a]	55 614	55 874	21 188		
Cruciate ligament operation (NGE41)	35 181	32 290	0		
Meniscus operation (NGD)	2 932	9 355	14 417		
Other knee- and leg-related operations (NGE 11, NGA, NGF, NGH, NGK, NGM, NGR, NGT, NGU, TNG, QD)	8 077	6 285	2 918		
Other operations (not knee and leg-related)	9 424	7 944	3 853		
Inpatient/outpatients visits costs	70 645	90 983	45 756		
Physician contact	18 978	22 606	14 529		
Physiotherapist contact [b]	44 846	58 228	24 189		
Nurse contact	2 090	2 019	1 221		
Other health care contact	4 731	8 130	5 817		
Medication costs	839	648	256		
Productivity losses	113 631	118 915	50 658		
INMB (SEK) for a WTP of SEK 500 000				98 002 (-36 513 to 231 202)	-81 791 (-208 649 to 49 922)

QALY: quality-adjusted life years; INMB: Incremental net monetary benefit; WTP: willingness to pay; BBC 95% CI: bootstrap bias-corrected 95% confidence interval.

[a] This includes inpatient health services during surgery;

[b] Includes rehabilitation visits.

Table 4A. The results of sensitivity analyses using as treated analysis principle.

	Between-group difference in costs SEK (BBC 95% CI)		Between-group difference in QALYs (BBC 95% CI)		INMB (BBC 95% CI), SEK	
	Early vs. delayed ACL reconstruction	Early ACL reconstruction vs. rehabilitation alone	Early vs. delayed ACL reconstruction	Early ACL vs. rehabilitation alone	Early vs. delayed ACL reconstruction	Early ACL reconstruction vs. rehabilitation alone
Excluding productivity losses (A)	-20 405 (-47 665 to 6 270)	**59 899 (39 455 to 81 434)**	0.14 (-0.03 to 0.32)	0.08 (-0.12 to 0.31)	92 666 (-2 712 to 187 216)	-17 855 (-126 713 to 100 658)
Including 50% costs of secondary operations (B)	-18 779 (-120 361 to 59 778)	**135 991 (79 197 to 192 993)**	0.14 (-0.03 to 0.33)	0.08 (-0.12 to 0.30)	90 863 (-44 279 to 229 907)	-95 245 (-224 036 to 34 348)
Excluding cost outliers (C)	-10 598 (-64 690 to 40 557)	**117 595 (79 836 to 156 725)**	**0.18 (0.00 to 0.36)**	0.09 (-0.11 to 0.32)	99 150 (-8 737 to 210 210)	-73 271 (-188 184 to 48 565)
Excluding QALY outliers (D)	-33 370 (-131 786 to 41 100)	**116 829 (64 524 to 167 339)**	0.15 (-0.01 to 0.30)	-0.01 (-0.16 to 0.16)	108 482 (-12 398 to 234 138)	**-120 796 (-222 275 to -18 792)**
Excluding second ACL reconstructions (E)	-26 322 (-120 309 to 51 383)	**120 747 (65 390 to 178 391)**	0.14 (-0.03 to 0.32)	0.08 (-0.12 to 0.31)	98 493 (-37 377 to 235 948)	-80 570 (-209 5007 to 49 138)
Excluding operations not-related to knee/leg (F)	-27 169 (-120 943 to 49 569)	**117 302 (64 182 to 174 637)**	0.14 (-0.03 to 0.32)	0.08 (-0.12 to 0.31)	98 755 (-34 437 to 230 888)	-76 362 (-206 924 to 53 621)
Combination of A & B	-13 495 (-42 423 to 14 069)	**73 018 (49 607 to 96 890)**	0.14 (-0.03 to 0.32)	0.08 (-0.12 to 0.31)	85 962 (-9 197 to 179 118)	-32 084 (-142 979 to 85 722)
Combination of A & C	**-20 488 (-38 349 to - 2 386)**	**56 501 (42 141 to 70 879)**	0.17 (-0.01 to 0.35)	0.06 (-0.14 to 0.28)	**107 626 (14 746 to 201 343)**	-27 670 (-129 760 to 81 075)
Combination of B & C	-11 406 (-66 377 to 40 019)	**123 099 (85 304 to 162 633)**	0.18 (-0.00 to 0.36)	0.09 (-0.12 to 0.33)	99 719 (-11 275 to 216 445)	-79 480 (-195 238 to 44 278)
Combination of A & B & C	-13 806 (-33 875 to 7 076)	**60 980 (41 695 to 80 392)**	0.17 (-0.01 to 0.36)	0.11 (-0.09 to 0.34)	**100 822 (6 068 to 195 654)**	-5 867 (-114 371 to 109 424)
Combination of A & D	-23 577 (-52 071 to 2 817)	**59 985 (40 679 to 81 218)**	0.15 (-0.01 to 0.31)	-0.01 (-0.16 to 0.15)	**99 007 (15 014 to 181 267)**	-63 665 (-147 301 to 21 077)
Combination of B & D	-27 149 (-124 849 to 47 457)	**129 565 (77 725 to 180 430)**	0.15 (-0.01 to 0.30)	-0.01 (-0.17 to 0.15)	101 618 (-18 232 to 228 976)	**-133 596 (-238 603 to -31 652)**
Combination of A & B & D	-17 356 (-47 120 to 10 748)	**72 722 (50 744 to 96 866)**	0.15 (-0.01 to 0.30)	-0.01 (-0.16 to 0.16)	**92 772 (4 805 to 178 544)**	-77 219 (-162 974 to 10 841)
Combination of A & E	-21 037 (-47 861 to 5 194)	**57 774 (37 646 to 79 965)**	0.14 (-0.03 to 0.32)	0.08 (-0.12 to 0.30)	93 219 (-4 262 to 184 792)	-16 512 (-125 739 to 97 997)
Combination of B & E	-19 412 (-112 551 to 60 524)	**133 866 (78 565 to 192 066)**	0.14 (-0.03 to 0.32)	0.08 (-0.12 to 0.30)	91 416 (-42 256 to 226 030)	-93 652 (-223 475 to 37 942)
Combination of A & B & E	-14 128 (-41 713 to 13 017)	**70 893 (49 133 to 95 011)**	0.14 (-0.03 to 0.32)	0.08 (-0.12 to 0.30)	86 185 (-9 221 to 179 574)	-30 102 (-141 250 to 87 085)
Combination of A & F	**-21 884 (-43 300 to – 1 067)**	**54 329 (37 151 to 71 580)**	0.14 (-0.03 to 0.32)	0.08 (-0.12 to 0.31)	**93 507 (165 to 184 764)**	-13 239 (-122 783 to 102 470)
Combination of E & F	-27 801 (-122 876 to 47 830)	**115 177 (61 876 to 173 100)**	0.14 (-0.04 to 0.32)	0.08 (-0.12 to 0.30)	100 504 (-31 443 to 235 702)	-74 058 (-201 346 to 56 587)
Combination of A & E & F	**-22 517 (-43 256 to - 3 014)**	**52 204 (35 358 to 69 928)**	0.14 (-0.03 to 0.32)	0.08 (-0.12 to 0.30)	**94 733 (2 450 to 187 079)**	-10 855 (-120 395 to 104 287)

Bold figures show statistically significant results ($p < 0.05$); INMB: incremental net monetary benefit; BBC 95% CI: bootstrap bias-corrected 95% confidence interval.

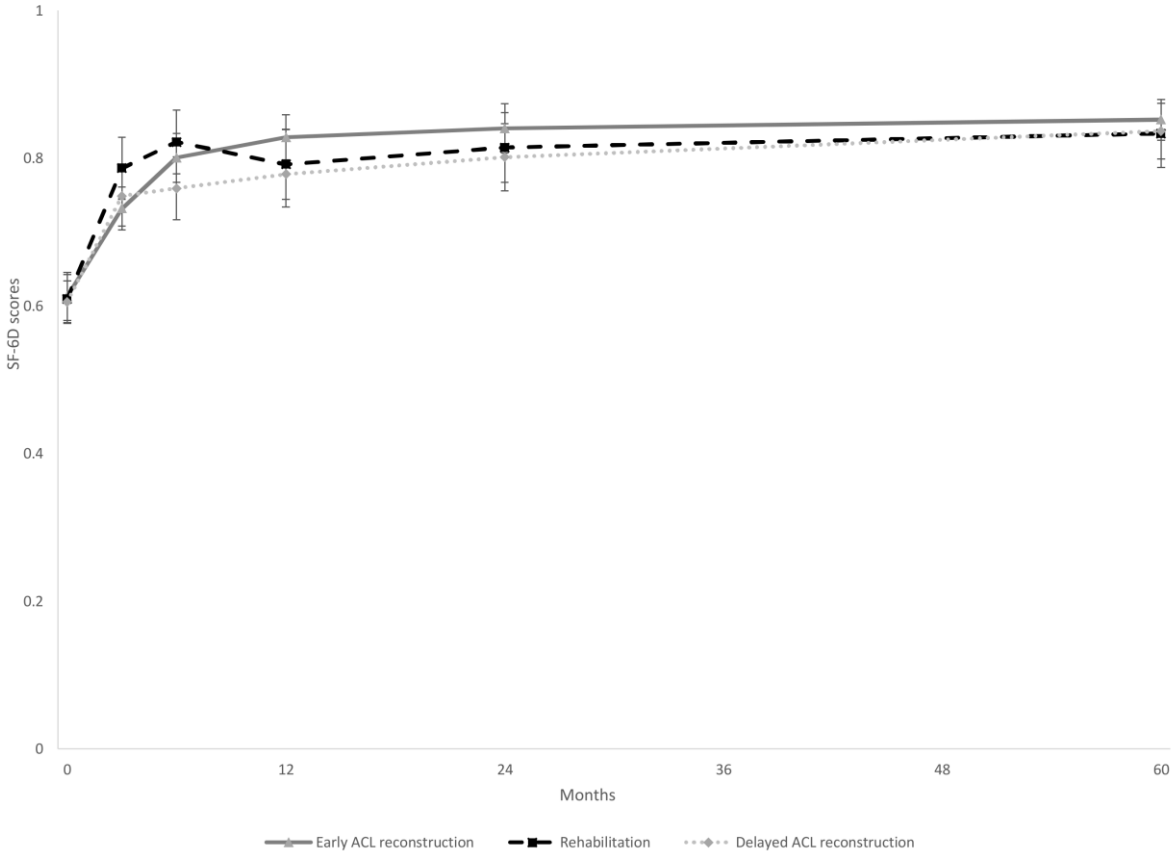

Figure 1A. The SF-6D scores in the treatment groups (as treated analysis) over 5-year study period.

The bars indicate 95% confidence intervals.

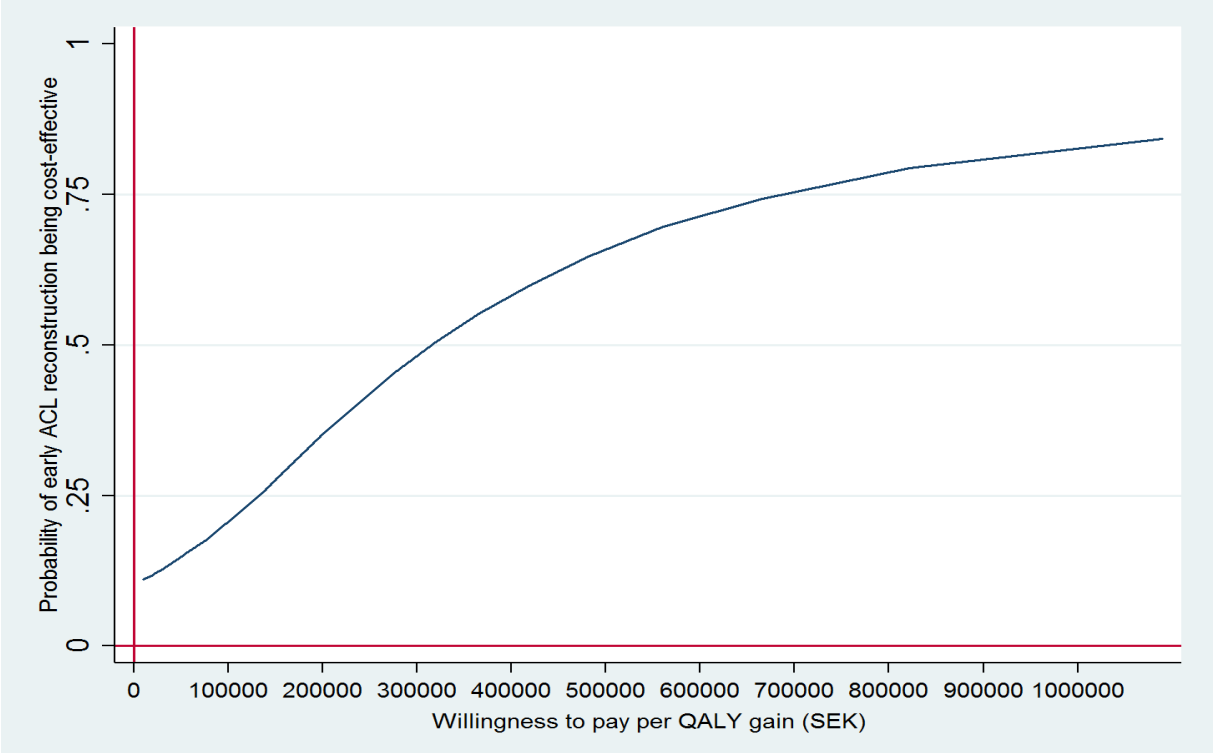

Figure 2A. Cost-effectiveness acceptability curve for early ACL reconstruction vs. delayed optional ACL reconstruction (full-analysis set).

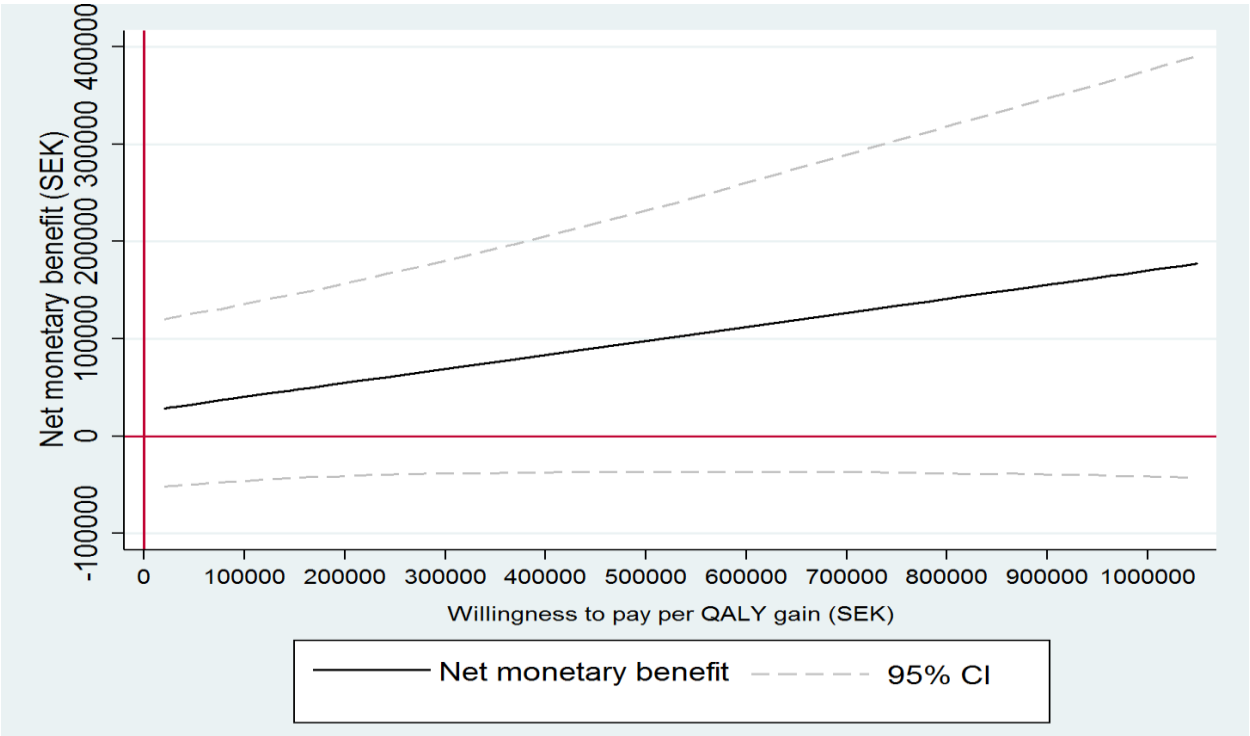

Figure 3A. Incremental net monetary benefit graph for the early ACL reconstruction vs. delayed ACL reconstruction (as treated analysis).

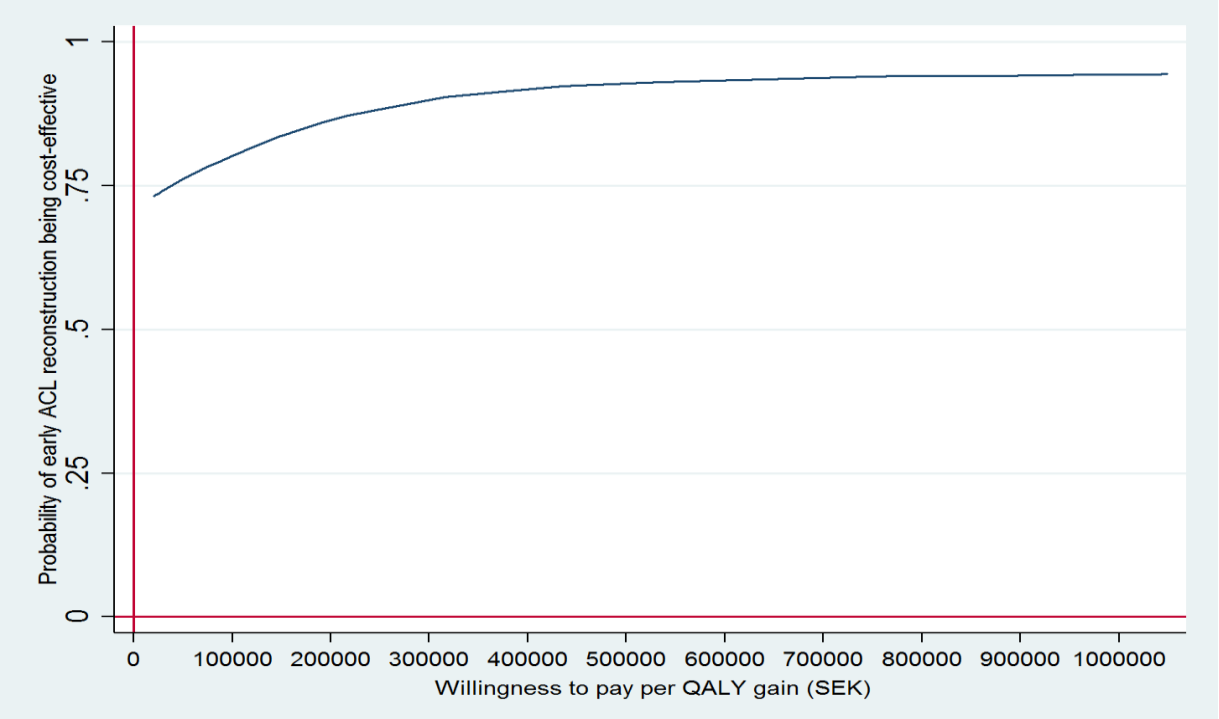

Figure 4A. Cost-effectiveness acceptability curve for early ACL reconstruction vs. delayed ACL reconstruction (as treated analysis).

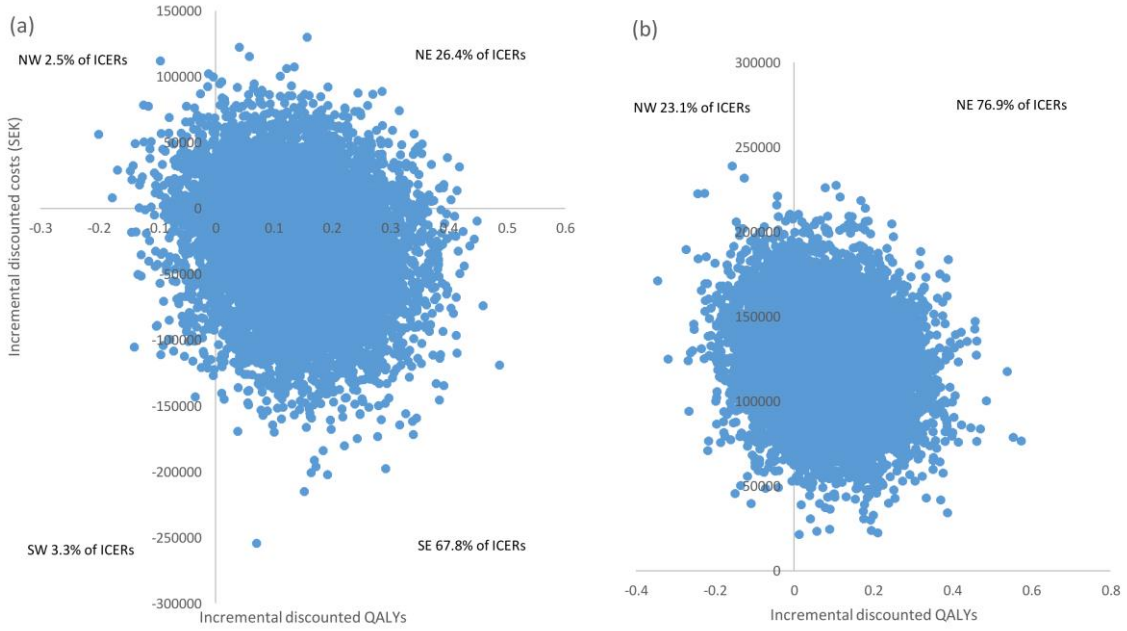

Figure 5A. Cost-effectiveness plane of a) the early ACL reconstruction vs. delayed ACL reconstruction, and b) the early ACL reconstruction vs. rehabilitation alone (as treated analysis).

NE quadrant: early ACL reconstruction more costly and more effective; NW quadrant: early ACL reconstruction more costly and less effective; SE quadrant: early ACL reconstruction less costly and more effective; SW quadrant: early ACL reconstruction less costly and less effective.

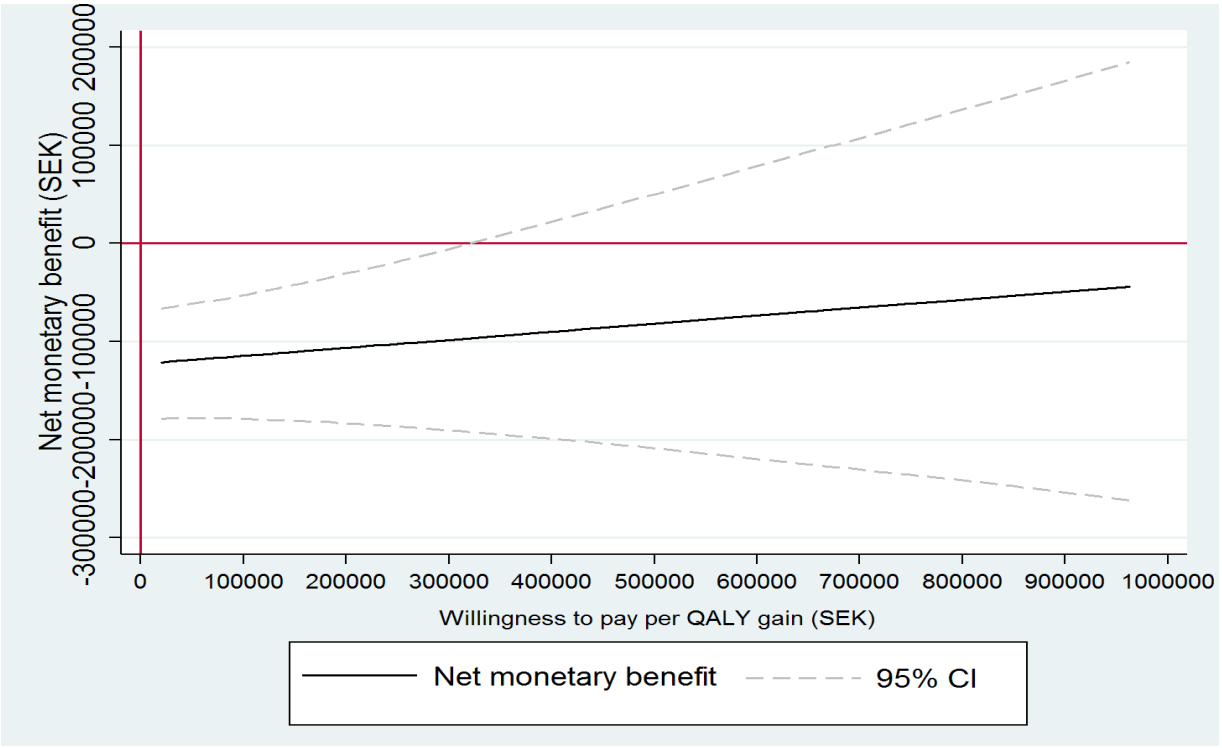

Figure 6A. Incremental net monetary benefit graph for the early ACL reconstruction vs. rehabilitation alone (as treated analysis).

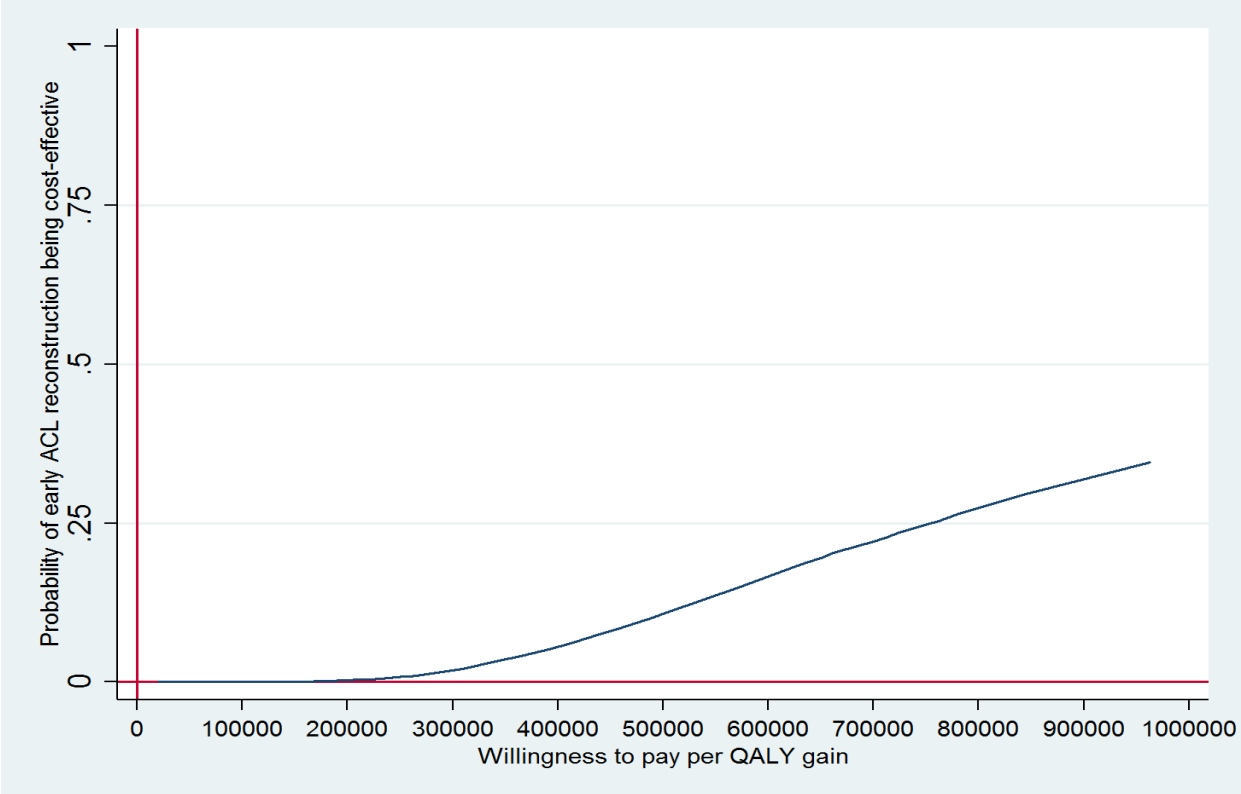

Figure 7A. Cost-effectiveness acceptability curve for early ACL reconstruction vs. rehabilitation alone (as treated analysis).