Title: The Efficacy and Safety of Knotless Barbed Sutures in the Surgical Field: A Systematic Review and Meta-analysis of Randomized Controlled Trials

Authors

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Appendix Figure 3: A forest plot of operative time of different surgeries with or without barbed suture

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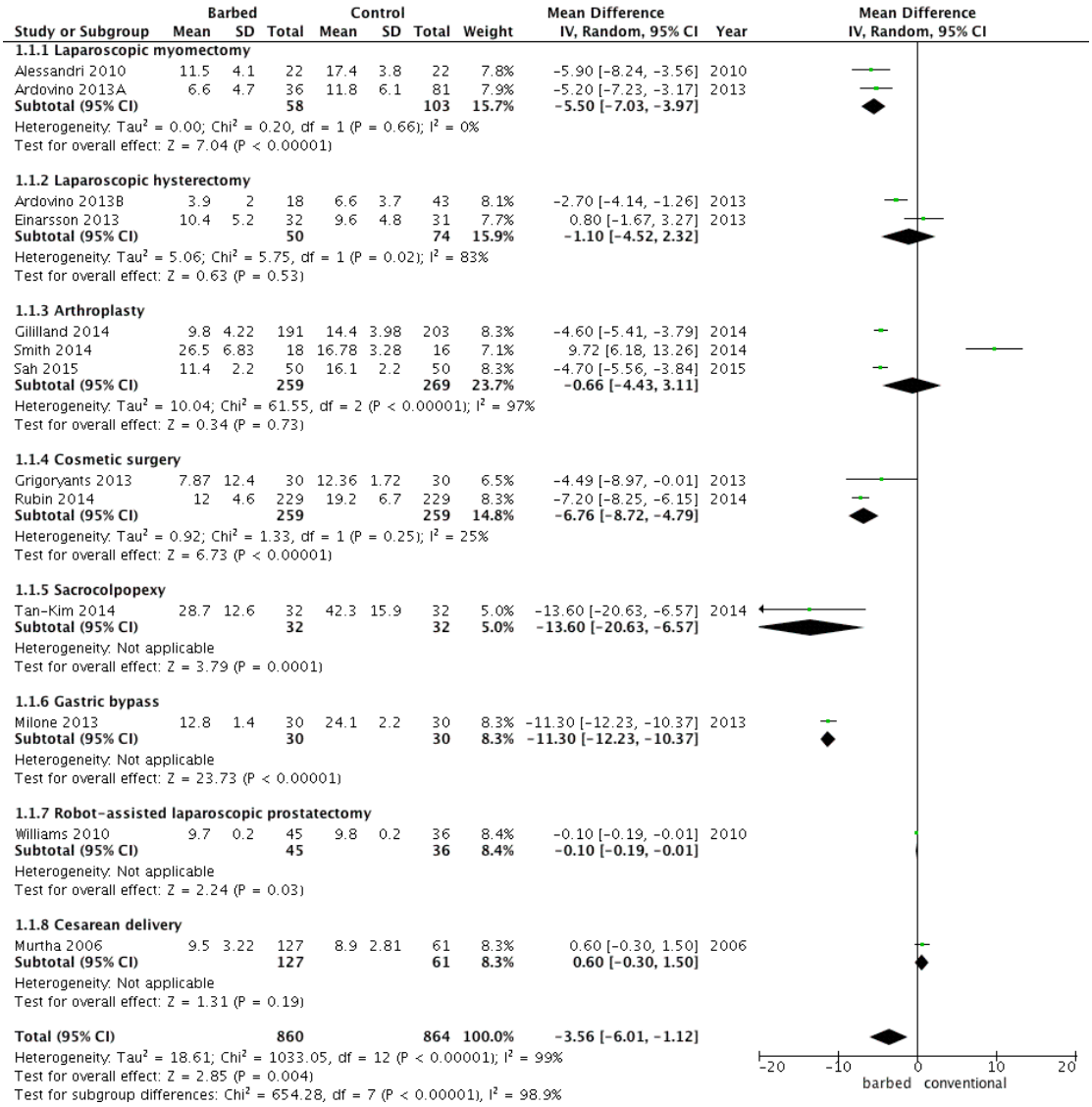
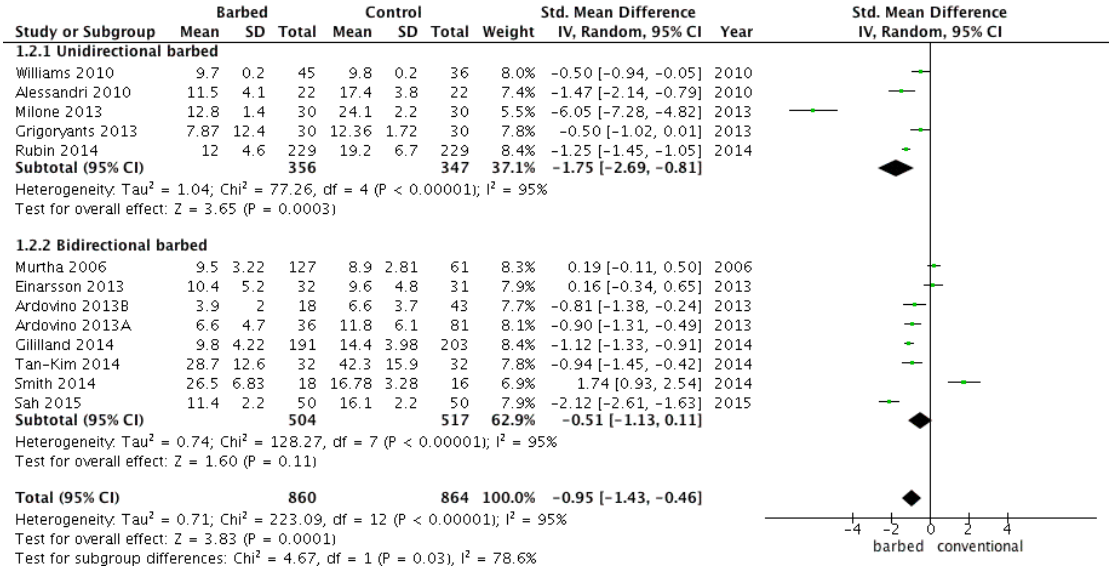
Appendix Table 1: Quality assessment of studies in the meta-analysis based on Cochrane recommendations

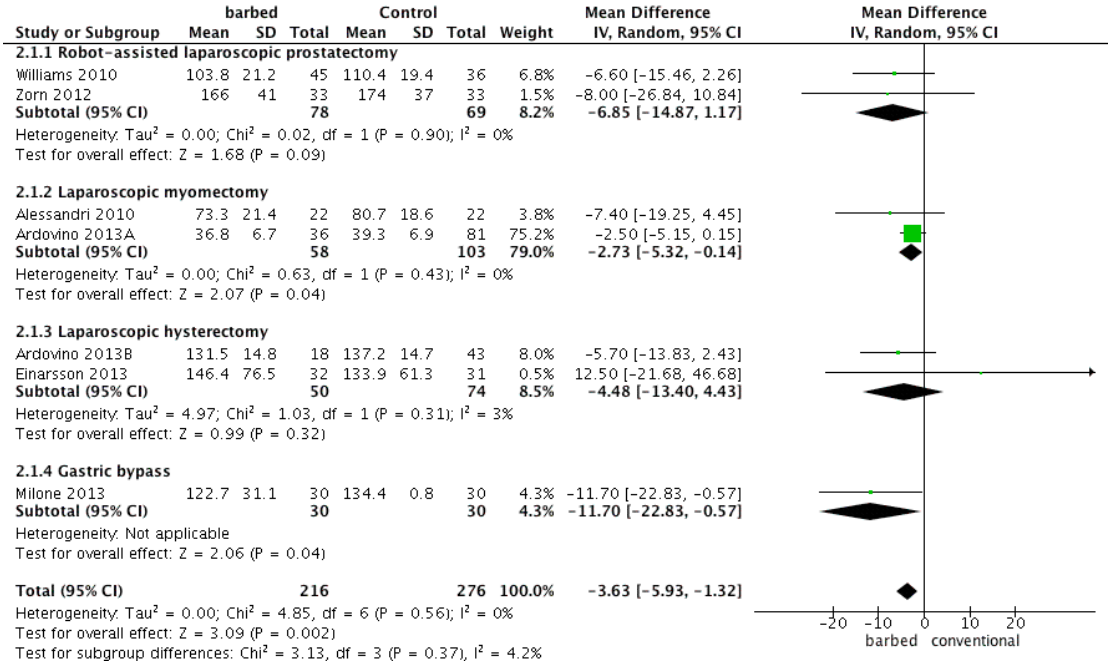
Appendix Figure 1: A forest plot of suturing time of different surgeries with or without barbed suture



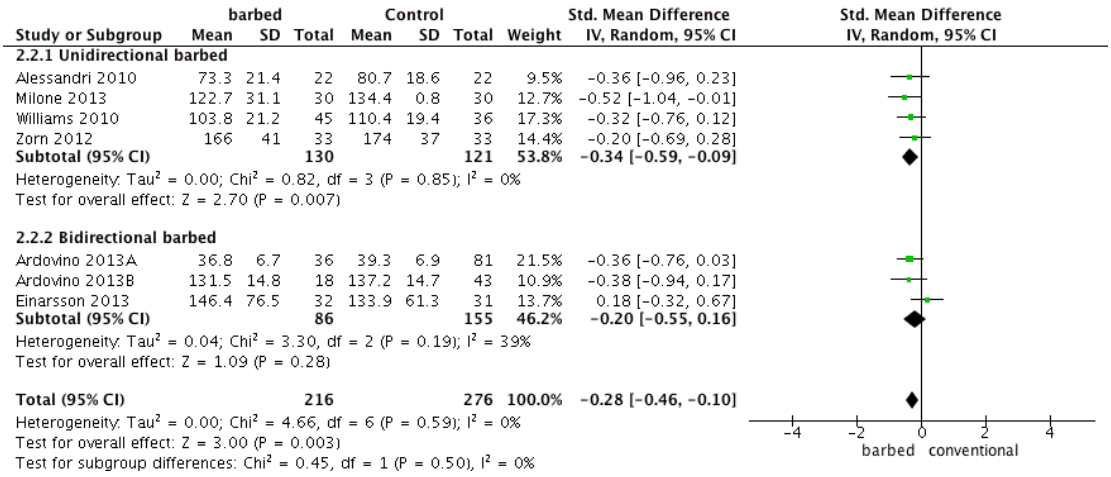
Appendix Figure 2: A forest plot of suturing time of different barbed types with or without barbed suture



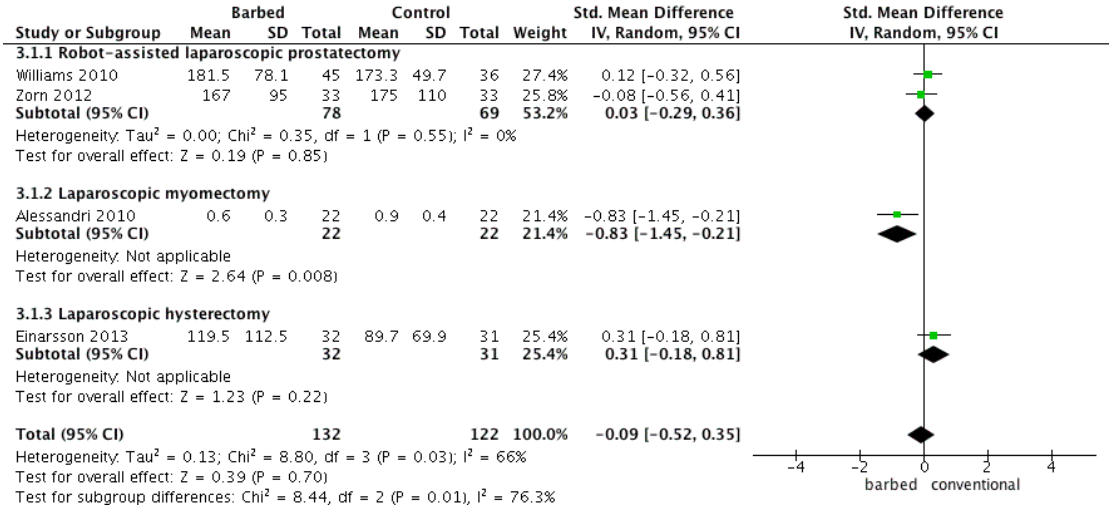
Appendix Figure 3: A forest plot of operative time of different surgeries with or without barbed suture



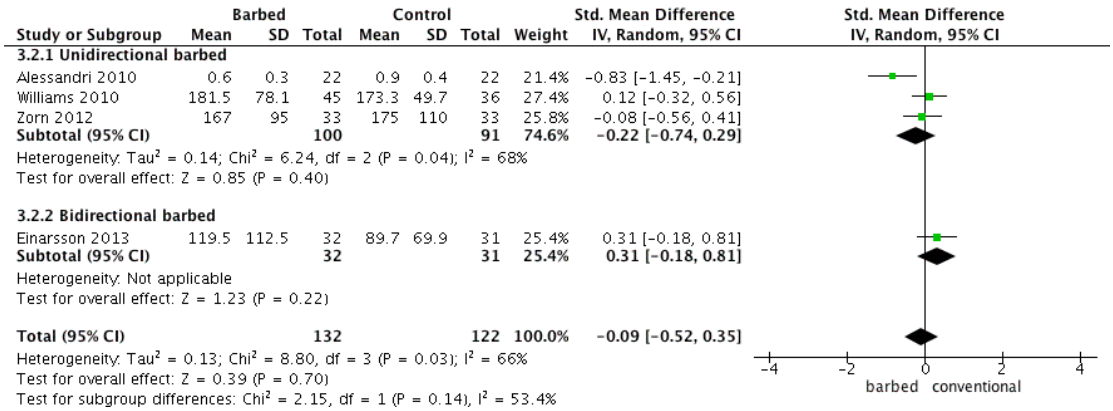
Appendix Figure 4: A forest plot of operative time of different barbed types with or without barbed suture



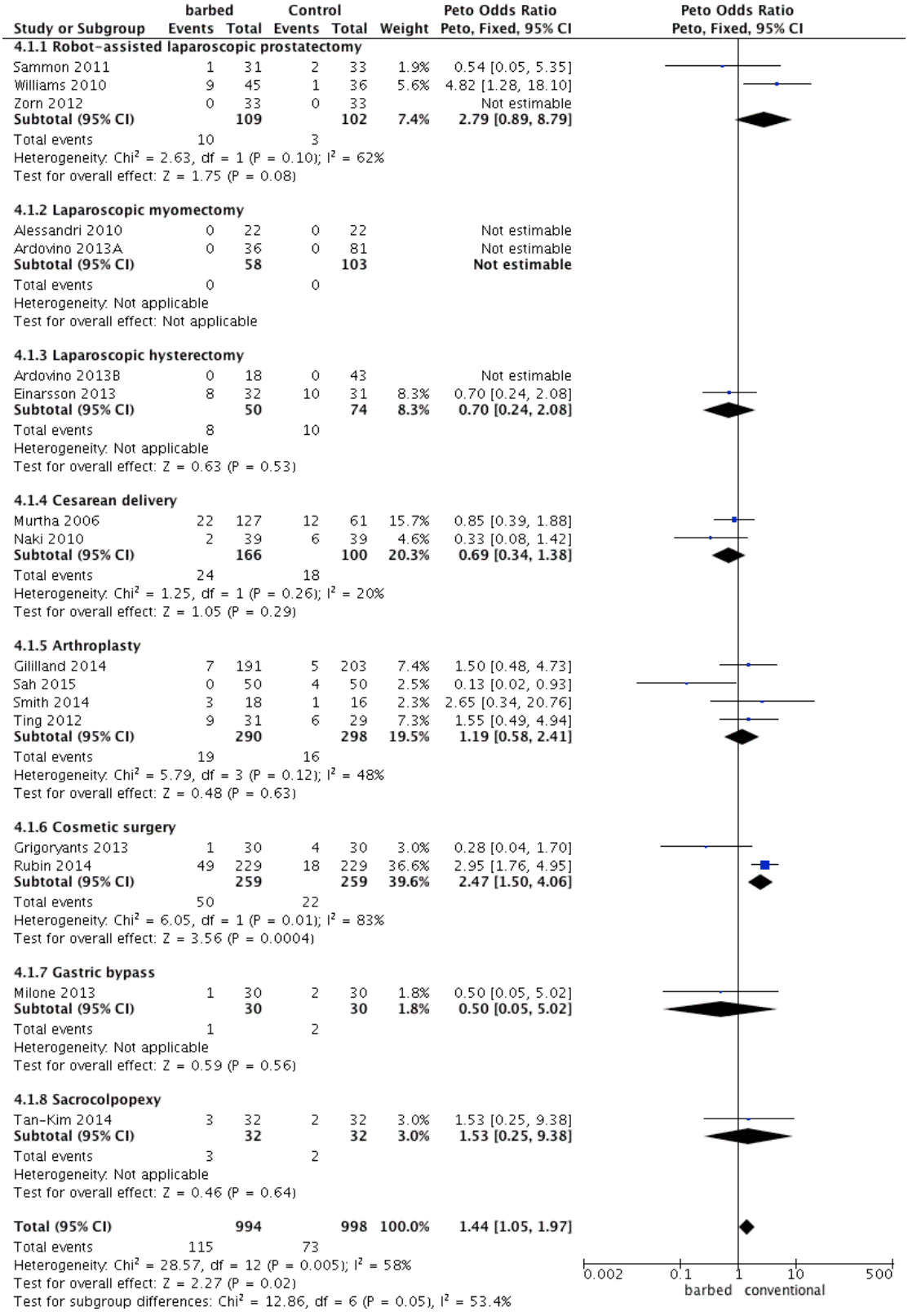
Appendix Figure 5: A forest plot of estimated blood loss of different surgeries with or without barbed suture



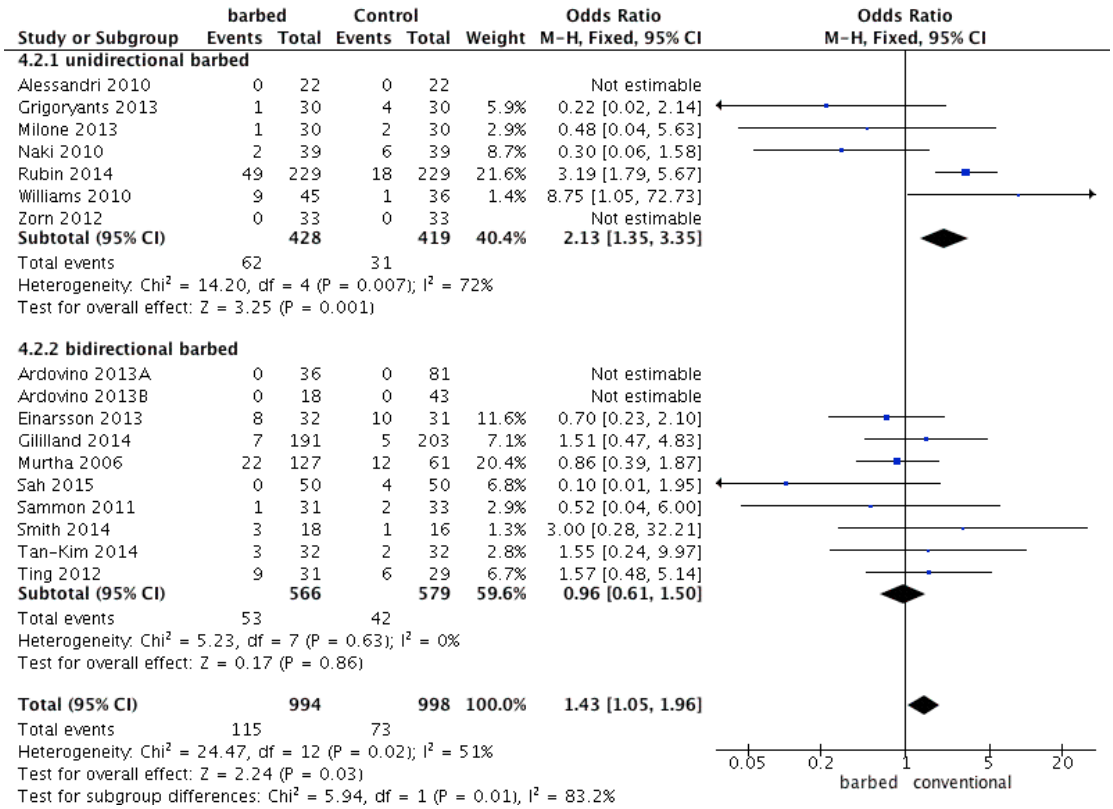
Appendix Figure 6: A forest plot of estimated blood loss of different barbed types with or without barbed suture



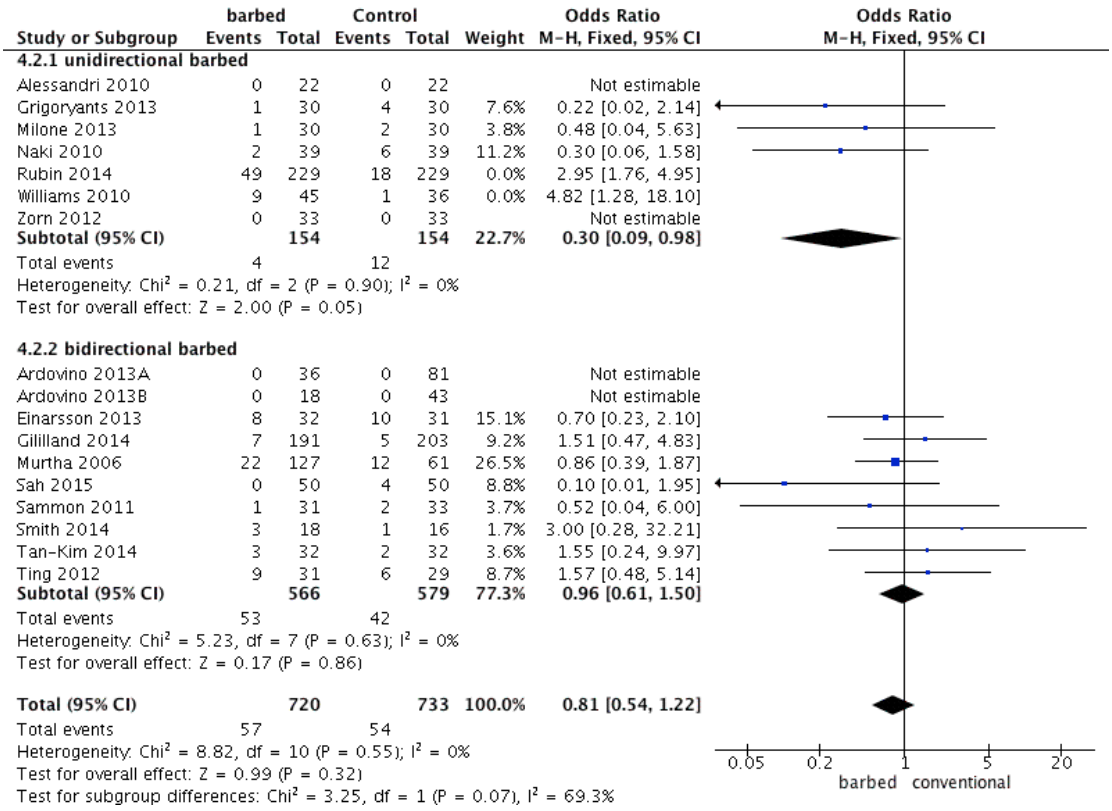
Appendix Figure 7: A forest plot of postoperative complications of different surgeries with or without barbed suture



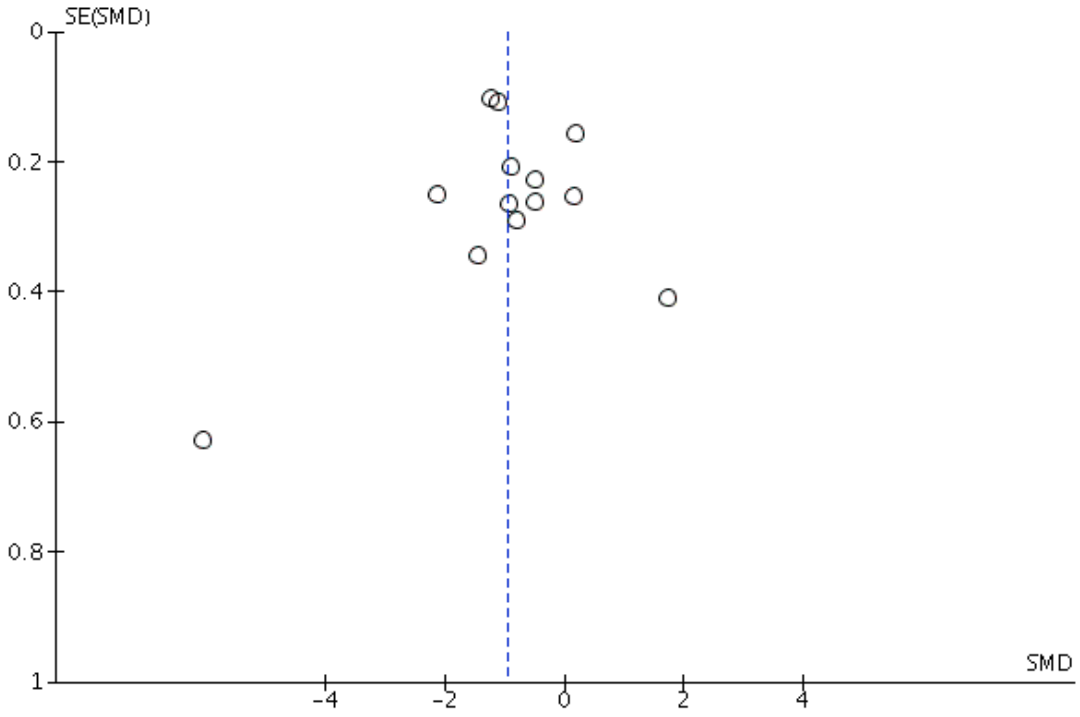
Appendix Figure 8: A forest plot of postoperative complications of different barbed types with or without barbed suture



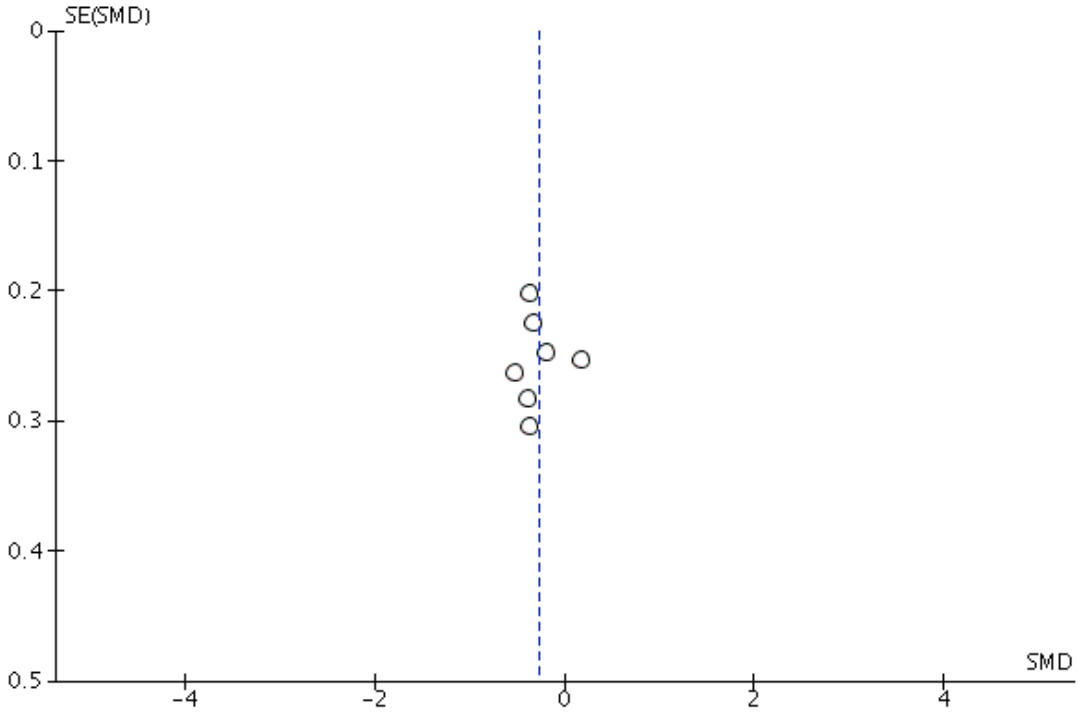
Appendix Figure 9: Sensitivity analyses of postoperative complications of different barbed types with or without barbed suture



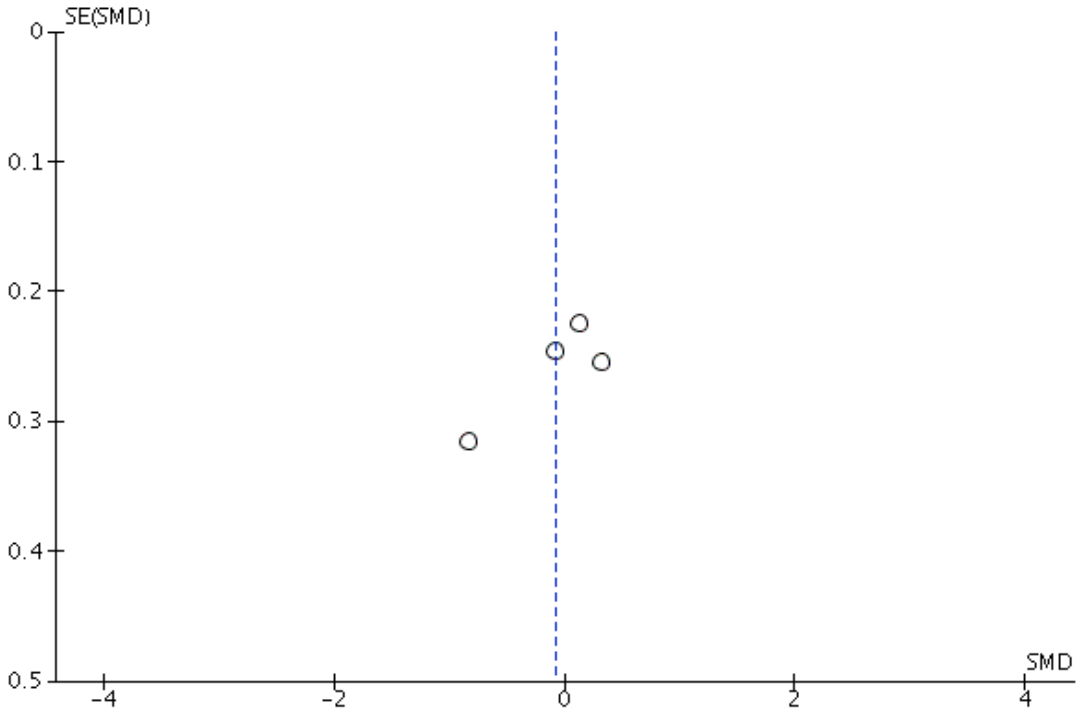
Appendix Figure 10: Funnel plot of suturing time in all included studies



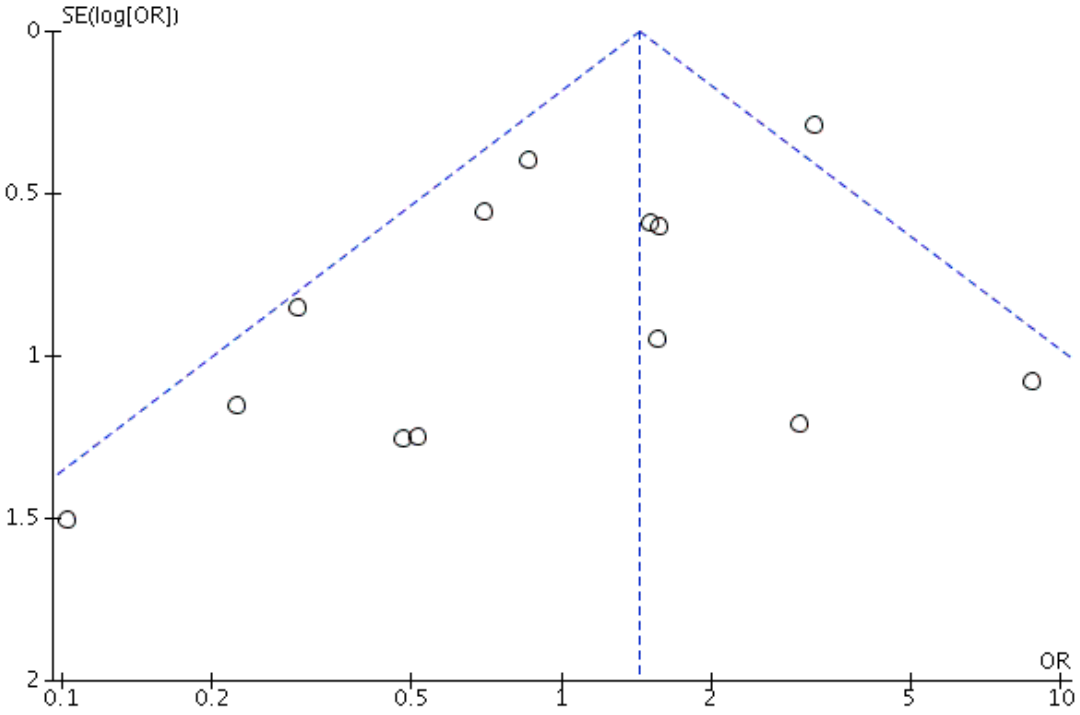
Appendix Figure 11: Funnel plot of operative time in all included studies



Appendix Figure 12: Funnel plot of estimate blood loss in all included studies



Appendix Figure 13: Funnel plot of postoperative complications in all included studies


SE(log[OR])
0
0.5
1
1.5
2
0.1
0.2
0.5
1
2
5
10
OR

Appendix Table 1: Quality assessment of studies in the meta-analysis based on Cochrane recommendations

Author year	Random sequence generation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective reporting
Murtha 2006	Subjects were randomized within strata in the ratio of two barbed suture subjects for every one control subject	Using a closed envelope system	Subjects, but not the operating surgeon/investigators, were blinded	Primary endpoint assessment was blinded	Lost follow-up in barbed/control group N(%)：4(3.1) / 2(3.2)	Not stated
Alessandri 2010	Computer generated	Sealed opaque envelope	Not stated	Not stated	No	Not stated
Naki 2010	Computer generated	Sealed opaque envelopes	Neither subjects nor the operating surgeon/ investigators were blinded	No	No	No
Williams 2010	Computer generated	Not stated	Not stated	Not stated	Lost follow-up in barbed/control group N(%)：1(2.2)/0	Not stated
Sammon 2011	Computer generated	Not stated	Not stated	Not stated	No	Not stated
Ting 2012	Computer generated	Sealed opaque envelopes	Patients	No	No	No
Zorn 2012	After specimen entrapment, patients were randomized to either double-armed monofilament or barbed suture for PR and VUA	Not stated	Not stated	Not stated	No	Not stated
Ardovino 2013	Computer generated	Not stated	Not stated	Not stated	No	Not stated
Ardovino 2013	Computer generated	Not stated	Not stated	Not stated	No	Not stated
Einarsson 2013	Computer generated	Opaque sealed envelopes	Not stated	Not stated	No	No
Grigoryants 2013	Coin toss	Not stated	Not stated	A blinded evaluator	No	Not stated
Milone 2013	Computer generated	Sealed envelopes	Not stated	Not stated	No	Not stated

Gililland 2014	The randomization occurred in the operating room	Not stated	All patients were blinded	Not stated	No	Not stated
Rubin 2014	Computer generated	Not stated	Patients	Evaluated by an independent blinded plastic surgeon.	Lost follow-up in barbed/control group N(%)：21(18.2)/4(3.5)	No
Smith 2014	A random envelope was drawn which dictated the type of suture to be used	Sealed envelopes	Blinding the patients to the type of suture they received.	Not stated	No	Not stated
Tan-Kim 2014	Computer generated	The sealed envelope	Not stated	Blinded examiner	No	No
Sah 2015	Computer generated	Not stated	Not stated	Blind evaluation.	No	Not stated