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1 PNB vs NO-PNB

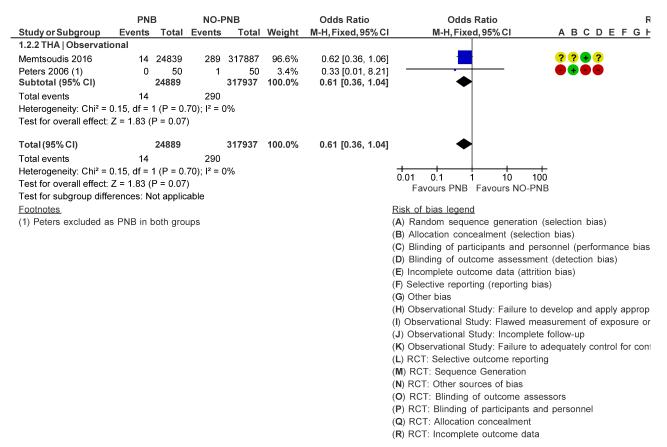
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# 1.1 Mortality | GA/NA (THA/TKA)

	PNB		NO-PNB		Odds Ratio		Odds Ratio					
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Fixed, 95% CI	M-H, Fixed, 95% CI	ABCDEFG				
1.1.2 GA + NA												
Amundson 2017	0	50	0	107		Not estimable		$\bullet \bullet \bullet \bullet \bullet \bullet \bullet$				
Lovald 2015	3	3425	23	30272	0.6%	1.15 [0.35, 3.84]	-	+ 🤊 🤊 🛑				
McIsaac 2017	156	61588	282	116626	26.3%	1.05 [0.86, 1.27]	<b>+</b>	lacktriangle				
Memtsoudis 2016	82	110237	408	609189	16.9%	1.11 [0.88, 1.41]	+	??+?				
Memtsoudis 2016	14	24839	289	317887	5.7%	0.62 [0.36, 1.06]	<del> </del>	??+?				
Peters 2006 (1)	0	50	1	50	0.2%	0.33 [0.01, 8.21]						
Wall 2017	1	127	1	130	0.1%	1.02 [0.06, 16.55]		+ $+$ $?$ $+$ $?$ $?$				
Subtotal (95% CI)		200316		1074261	49.9%	1.02 [0.88, 1.18]	•					
Total events 256 1004												
Heterogeneity: Chi² = 4.40, df = 5 (P = 0.49); l² = 0%												
Test for overall effect: 2	Z = 0.25 (	P = 0.80)										
1.1.2 NA only												
Akkaya 2014	0	12	0	15		Not estimable		++++				
Barrington 2005	0	53	0	55		Not estimable		+++				
Campbell 2008	0	26	1	30	0.2%	0.37 [0.01, 9.51]	•	+??+++				
Wu 2014	0	30	0	30	0.00/	Not estimable		++?++				
Subtotal (95% CI)	_	121		130	0.2%	0.37 [0.01, 9.51]						
Total events			1									
Heterogeneity: Not app		D 0.55)										
Test for overall effect: 2	Z = 0.60 (	P = 0.55)										
1.1.2 GA												
Amundson 2017	0	50	0	107		Not optimable						
Lovald 2015	3	3425	23	30272	0.6%	Not estimable 1.15 [0.35, 3.84]		+ ? ? =				
McIsaac 2017	156	61588	282	116626	26.3%	1.05 [0.86, 1.27]	<u> </u>					
Memtsoudis 2016	82	110237	408	609189	16.9%	1.11 [0.88, 1.41]	Į.	??+?				
Memtsoudis 2016	14	24839	289	317887	5.7%	0.62 [0.36, 1.06]	<del></del>	??+?				
Peters 2006 (2)	0	50	1	50	0.2%	0.33 [0.01, 8.21]						
Wall 2017	1	127	1	130	0.1%	1.02 [0.06, 16.55]		++?+?+				
Subtotal (95% CI)	•	200316		1074261	49.9%	1.02 [0.88, 1.18]	<b>•</b>					
Total events	256		1004									
Heterogeneity: Chi <sup>2</sup> = 4		5 (P = 0.4	$9$ ); $I^2 = 0$	6								
Test for overall effect: 2		•	**									
Total (95% CI)		400753		2148652	100.0%	1.02 [0.92, 1.13]	•					
Total events	512		2009									
Heterogeneity: Chi <sup>2</sup> = 9	9.19, df =	12 (P = 0.	.69); $I^2 = 0$	1%			0.01 0.1 1 10	<del> -</del> 100				
Test for overall effect: 2	,						Favours PNB Favours NO-F					
Test for subgroup differ	rences: C	$hi^2 = 0.37$	, df = 2 (F	P = 0.83), $P$	2 = 0%							
<u>Footnotes</u>							Risk of bias legend					
(1) Peters excluded as		-					(A) Random sequence generation (selection bias)					
(2) Peters excluded as	PNB in I	ooth grou	ps				(B) Allocation concealment (selection bias)					
							(C) Blinding of participants and p	**				
							(D) Blinding of outcome assessm	,				
							(E) Incomplete outcome data (atti	,				
							(F) Selective reporting (reporting	olas)				
							(G) Other bias					
							(H) Observational Study: Flavor to					
							(I) Observational Study: Flawed n	·				
							<ul><li>(J) Observational Study: Incomple</li><li>(K) Observational Study: Failure t</li></ul>					
							(L) RCT: Selective outcome repor					
							(M) RCT: Sequence Generation	ung				
							(N) RCT: Other sources of bias					
							(O) RCT: Blinding of outcome as	sessors				
							(P) RCT: Blinding of participants					
							(Q) RCT: Allocation concealment	pereenne!				
							(R) RCT: Incomplete outcome date	ta				
							( , , , , , , , , , , , , , , , , , , ,					

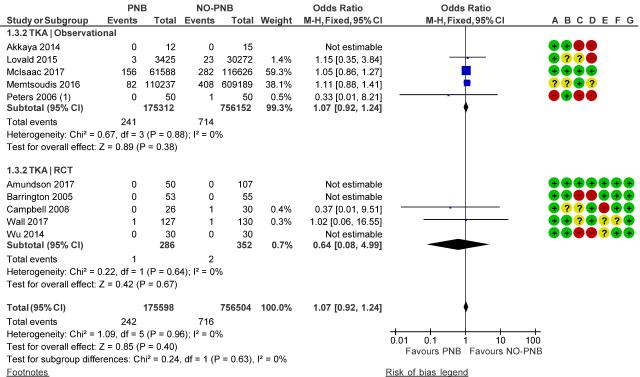
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#### 1.2 Mortality | THA



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### 1.3 Mortality | TKA

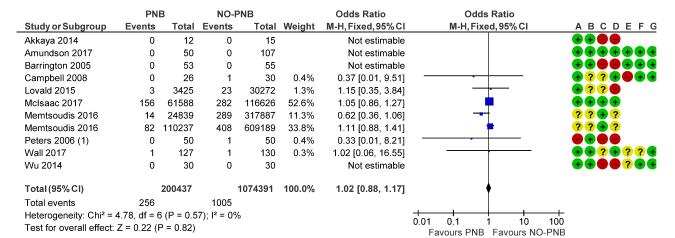


(1) Peters excluded as PNB in both groups

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bia
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appro
- (I) Observational Study: Flawed measurement of exposure c
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for co
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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### 1.4 Mortality | Total



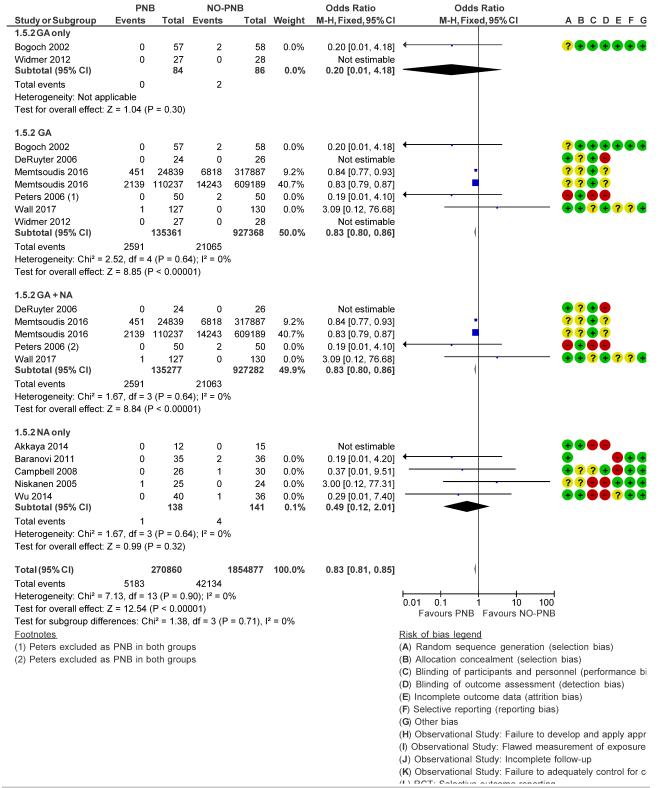
#### <u>Footnotes</u>

(1) Peters excluded as PNB in both groups

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bi
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appr
- (I) Observational Study: Flawed measurement of exposure
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for c
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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# 1.5 Cardiac Composite without MI | GA/NA (THA/TKA)



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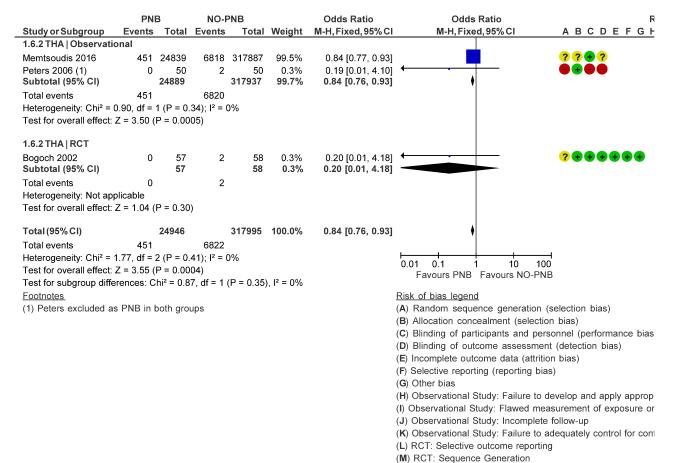
(L) RCT. Selective outcome reporting
(M) RCT: Sequence Generation
(N) RCT: Other sources of bias

(O) RCT: Blinding of outcome assessors (P) RCT: Blinding of participants and personnel

(Q) RCT: Allocation concealment (R) RCT: Incomplete outcome data

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## 1.6 Cardiac Composite without MI | THA

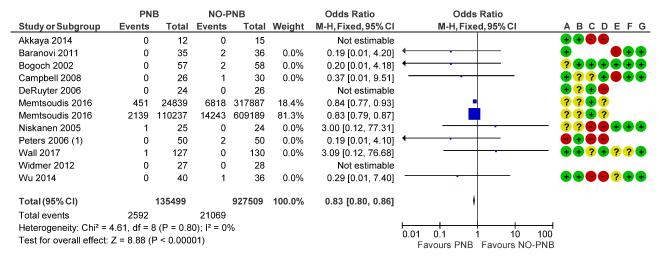


(N) RCT: Other sources of bias(O) RCT: Blinding of outcome assessors(P) RCT: Blinding of participants and personnel

(Q) RCT: Allocation concealment (R) RCT: Incomplete outcome data

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## 1.7 Cardiac Composite without MI | Total



#### **Footnotes**

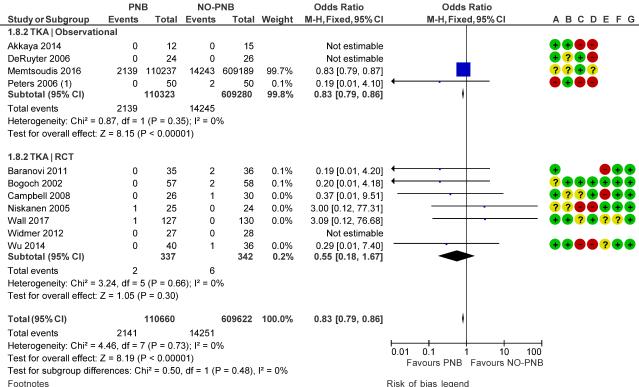
(1) Peters excluded as PNB in both groups

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bia
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appro
- (I) Observational Study: Flawed measurement of exposure  $\ensuremath{\varepsilon}$
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for co
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors(P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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## 1.8 Cardiac Composite without MI | TKA

(1) Peters excluded as PNB in both groups

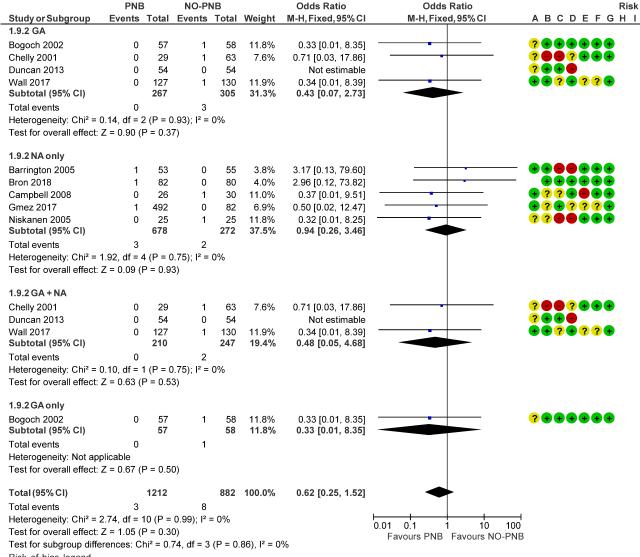


### Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bia
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appro
- (I) Observational Study: Flawed measurement of exposure c
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for co
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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## 1.9 Myocardial infarction | GA/NA (THA/TKA)



#### Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- $(\mbox{\bf C})$  Blinding of participants and personnel (performance bias)
- $(\mbox{\bf D})$  Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- $\textbf{(F)} \ \ \text{Selective reporting (reporting bias)}$
- $(\mathbf{G})$  Other bias
- $\textbf{(H)} \ \ \textbf{Observational Study: Failure to develop and apply appropriate eligibility criteria} \\$
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mbox{\bf K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- $(\mbox{\bf O})$  RCT: Blinding of outcome assessors
- $(\mbox{\bf P})$  RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (D) DCT- Incomplete cutcome det

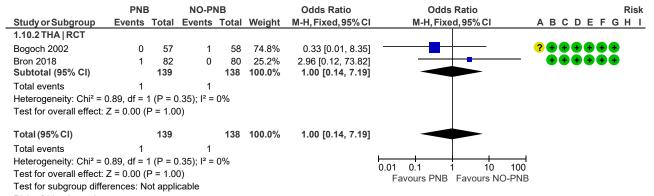
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(**n**) **n**o i : incomplete outcome data

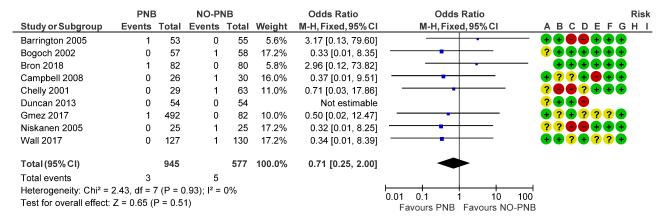
### 1.10 Myocardial infarction | THA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- $(\mbox{\bf D})$  Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mbox{\bf K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- $(\mbox{\bf P})$  RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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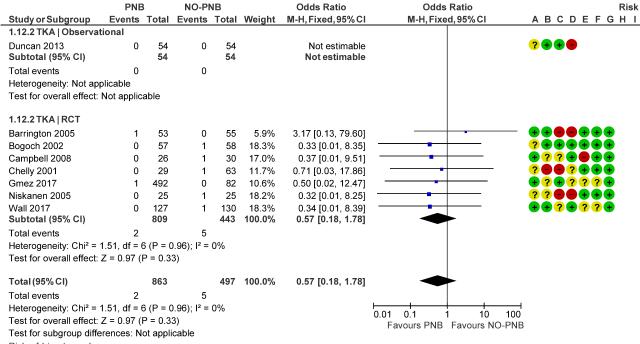
## 1.11 Myocardial infarction | Total



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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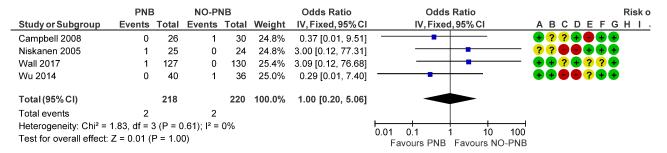
## 1.12 Myocardial infarction | TKA



- Risk of bias legend
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- $(\mbox{\bf N})$  RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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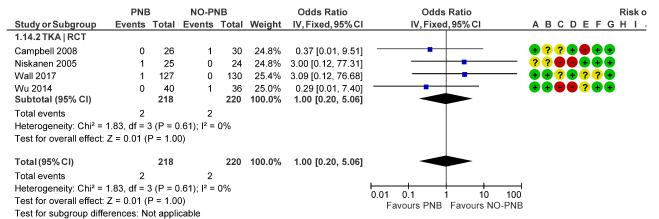
### 1.13 Atrial fibrillation | Total



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- $(\mathbf{G})$  Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- $(\mbox{\bf M})$  RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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### 1.14 Atrial fibrillation | TKA



Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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## 1.15 Atrial fibrillation | GA/NA (THA/TKA)

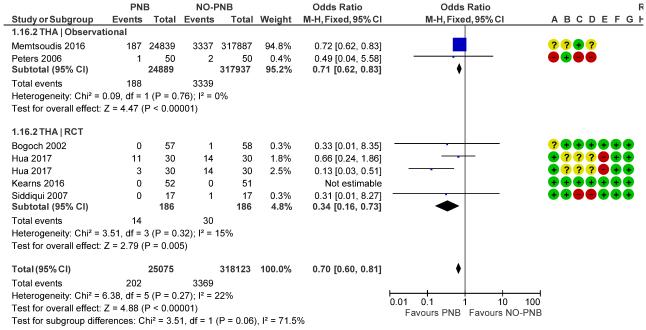
	PNB		NO-PNB		Odds Ratio		Odds Ratio		Risk c	
Study or Subgroup	Events	Total	Events	Total	Weight	IV, Fixed, 95% CI	IV, Fixed, 95%	CI	ABCDEFGHI	
1.15.2 NA only									_	
Campbell 2008	0	26	1	30	19.8%	0.37 [0.01, 9.51]	-	_	<b>+??++</b> +	
Niskanen 2005	1	25	0	24	19.7%	3.00 [0.12, 77.31]	-		?? + + +	
Wu 2014	0	40	1	36	20.0%	0.29 [0.01, 7.40]	-	_	<b>++?+</b>	
Subtotal (95% CI)		91		90	59.5%	0.69 [0.11, 4.45]				
Total events	1		2							
Heterogeneity: Chi² = 1.20, df = 2 (P = 0.55); l² = 0%										
Test for overall effect: Z = 0.40 (P = 0.69)										
1.15.2 GA										
Wall 2017	1	127	0	130	20.20/	3.09 [0.12, 76.68]			++?+?+	
Subtotal (95% CI)	'	127	U	130		3.09 [0.12, 76.68]				
Total events	1		0	100	20.270	0.00 [0.12, 10.00]				
Heterogeneity: Not app			U							
Test for overall effect:		P = 0 4	9)							
rest for overall effect.	2 - 0.00 (	i – 0. <del>4</del>	0)							
1.15.2 GA + NA										
Wall 2017	1	127	0	130	20.2%	3.09 [0.12, 76.68]	-		++?+?+	
Subtotal (95% CI)		127		130	20.2%	3.09 [0.12, 76.68]				
Total events	1		0							
Heterogeneity: Not applicable										
Test for overall effect:	Z = 0.69 (	P = 0.4	9)							
Total (95% CI)		345		350	100.0%	1.26 [0.30, 5.34]				
Total events	3	040	2	550	100.070	1.20 [0.00, 0.04]				
	•	4 (D - (		<b>Λ</b> 0/-						
0 ,		•	, .	U 70	0.01 0.1 1	10 100				
	,		,	Favours PNB Favou	ırs NO-PNB					
Heterogeneity: Chi <sup>2</sup> = 2 Test for overall effect: Test for subgroup diffe	2.21, df = 4 Z = 0.32 (	P = 0.7	).70); I <sup>2</sup> = 5)			10 100 urs NO-PNB				

Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- $(\mathbf{J})$  Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- $(\mbox{\bf M})$  RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- $({\bf Q})$  RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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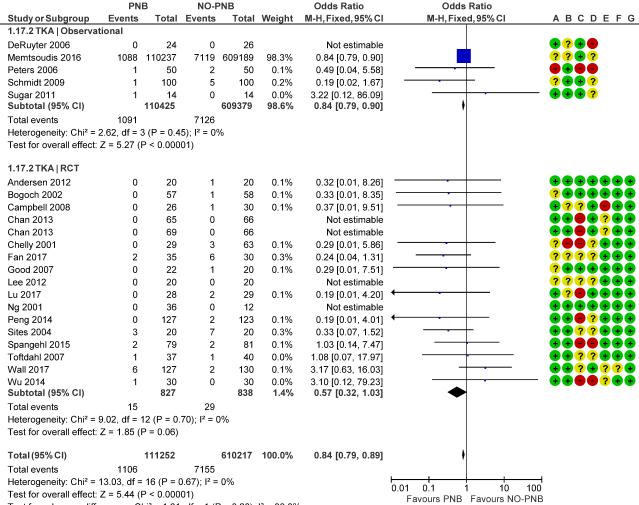
## 1.16 Pulmonary Composite | THA



- Risk of bias legend
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- $\textbf{(C)} \ \ \text{Blinding of participants and personnel (performance bias)}$
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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## 1.17 Pulmonary Composite | TKA



Test for subgroup differences: Chi<sup>2</sup> = 1.61, df = 1 (P = 0.20),  $I^2$  = 38.0%

### Risk of bias legend

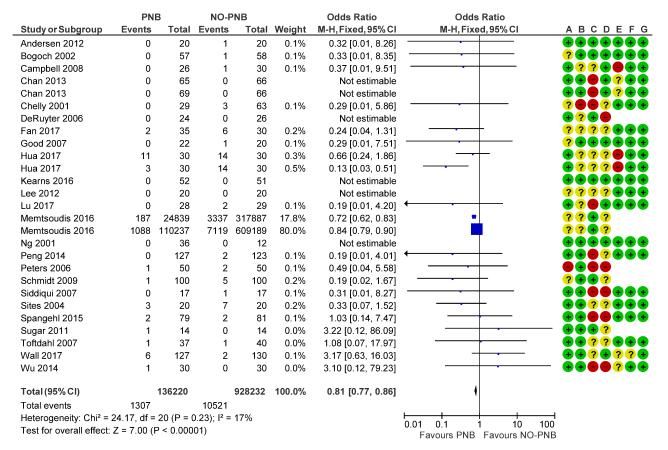
- $\textbf{(A)} \ \ \text{Random sequence generation (selection bias)}$
- $\textbf{(B)} \ \, \text{Allocation concealment (selection bias)}$
- $(\mbox{\bf C})$  Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- $\textbf{(F)} \ \ \text{Selective reporting (reporting bias)}$
- (G) Other bias
- $\textbf{(H)} \ \ \textbf{Observational Study: Failure to develop and apply appropriate eligibility criteria} \\$
- $\textbf{(I)} \ \textbf{Observational Study: Flawed measurement of exposure or outcome}$
- $(\boldsymbol{J})$  Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- $(\mbox{\it M})$  RCT: Sequence Generation
- $(\mbox{\bf N})$  RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- $({\bf Q})$  RCT: Allocation concealment
- $(\mbox{\bf R})$  RCT: Incomplete outcome data

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## 1.18 Pulmonary Composite | Total

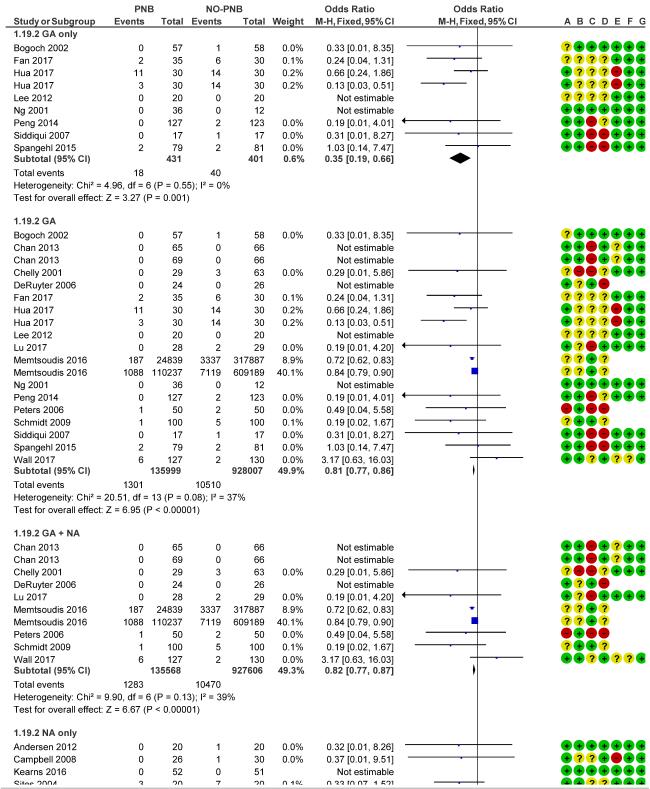


#### Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- $(\boldsymbol{C})$  Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- $(\mbox{\bf N})$  RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

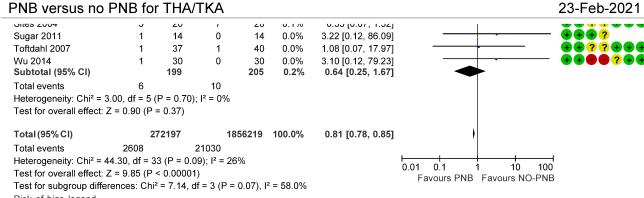
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## 1.19 Pulmonary Composite | GA/NA (THA/TKA)



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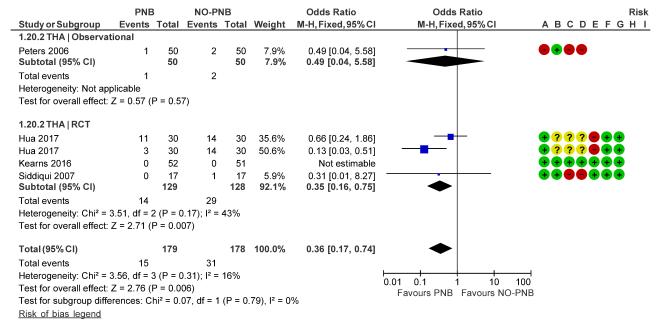
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- Risk of bias legend
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mbox{\bf K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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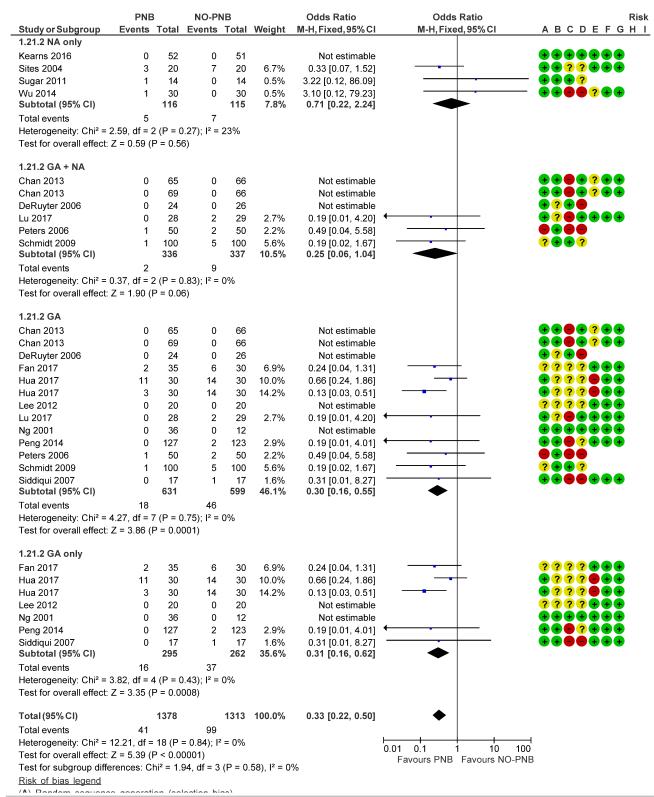
## 1.20 Respiratory failure (composite) | THA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- $(\boldsymbol{C})$  Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- $\textbf{(E)} \ \ \text{Incomplete outcome data (attrition bias)}$
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- $(\textbf{O})\ \text{RCT:}$  Blinding of outcome assessors
- $(\mathbf{P})$  RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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1.21 Respiratory failure (composite) | GA/NA (THA/TKA)



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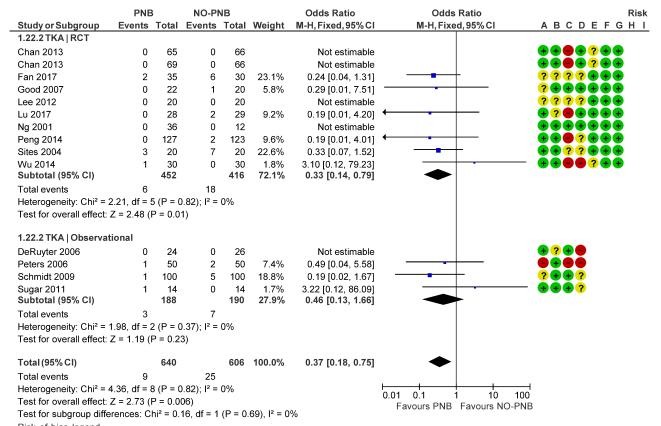
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- (A) random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- $(\boldsymbol{L})$  RCT: Selective outcome reporting
- $(\mathbf{M})$  RCT: Sequence Generation
- $(\mbox{\bf N})$  RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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## 1.22 Respiratory failure (composite) | TKA

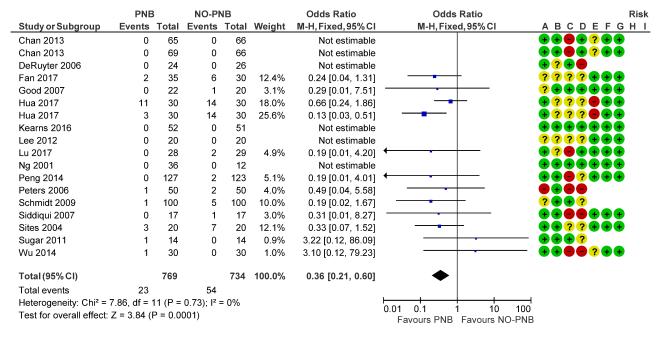


Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- $\textbf{(I)} \ \ \textbf{Observational Study:} \ \ \textbf{Flawed measurement of exposure or outcome}$
- (J) Observational Study: Incomplete follow-up
- $(\mbox{\bf K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- $(\mbox{\bf M})$  RCT: Sequence Generation
- $(\mbox{\bf N})$  RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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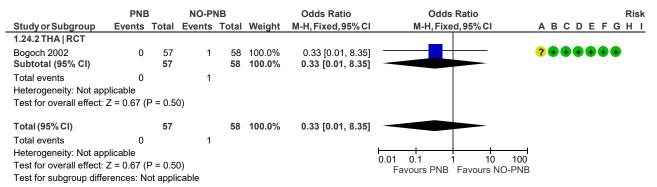
## 1.23 Respiratory failure (composite) | Total



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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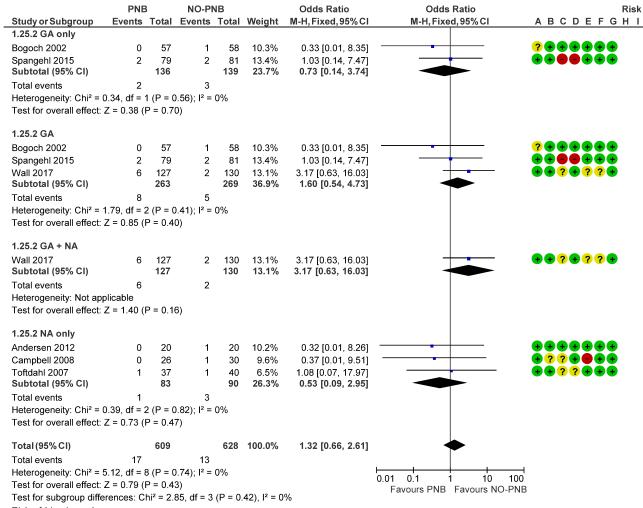
### 1.24 Pneumonia | THA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- $(\mathbf{J})$  Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- $(\mbox{\bf N})$  RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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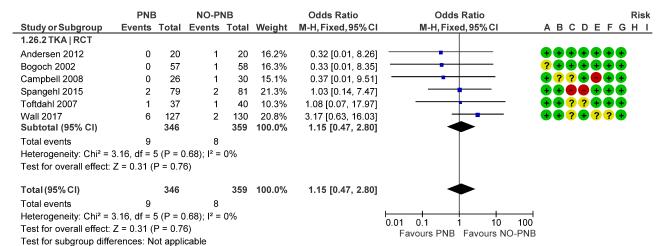
## 1.25 Pneumonia | GA/NA (THA/TKA)



- Risk of bias legend
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- $(\mbox{\bf D})$  Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- $\textbf{(F)} \ \ \text{Selective reporting (reporting bias)}$
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- $(\mbox{\bf N})$  RCT: Other sources of bias
- $(\mbox{\bf O})$  RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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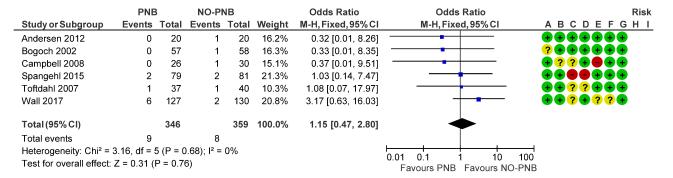
### 1.26 Pneumonia | TKA



- $({f A})$  Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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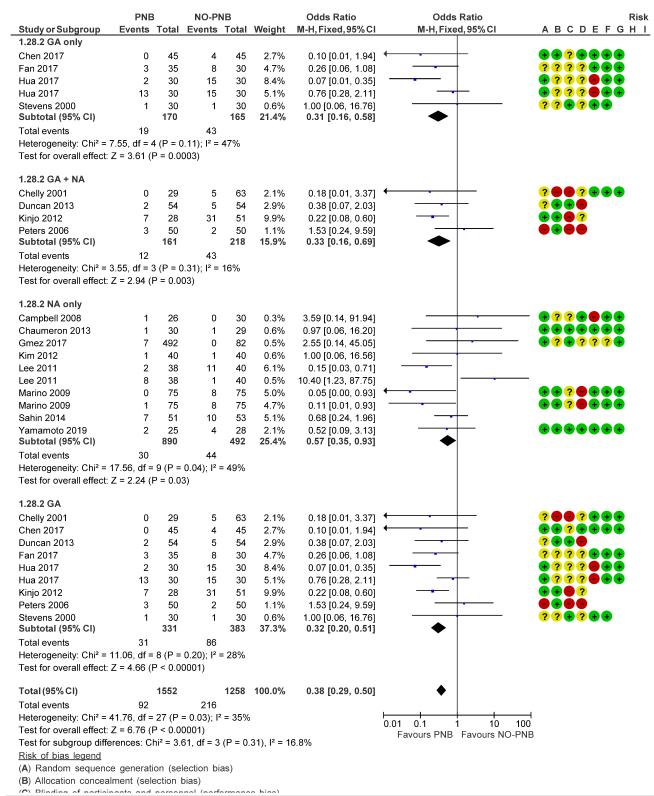
### 1.27 Pneumonia | Total



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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1.28 Cognitive dysfunction (composite) | GA/NA (THA/TKA)



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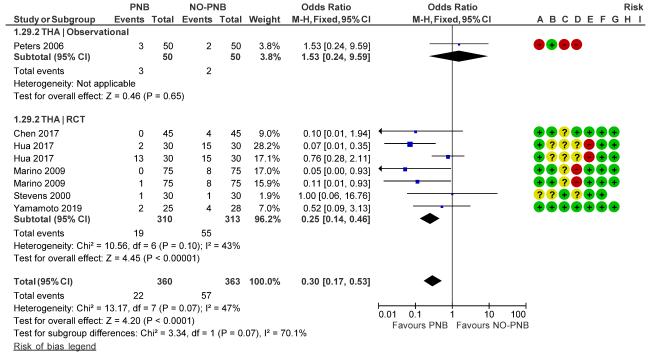
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- (C) billioning of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- $(\mathbf{J})$  Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- $(\mbox{\bf N})$  RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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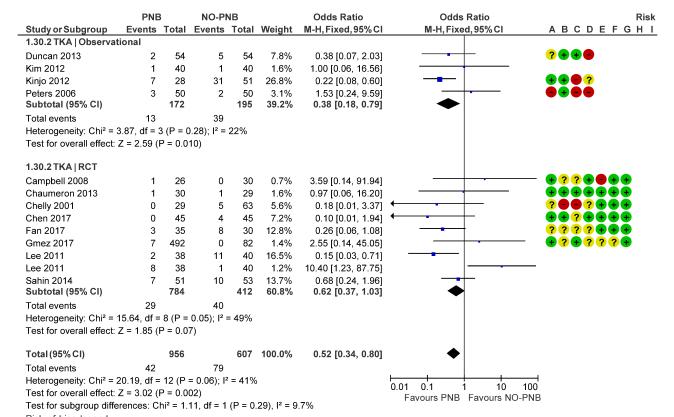
## 1.29 Cognitive dysfunction (composite) | THA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- $(\mbox{\bf N})$  RCT: Other sources of bias
- $(\mathbf{O})$  RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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# 1.30 Cognitive dysfunction (composite) | TKA



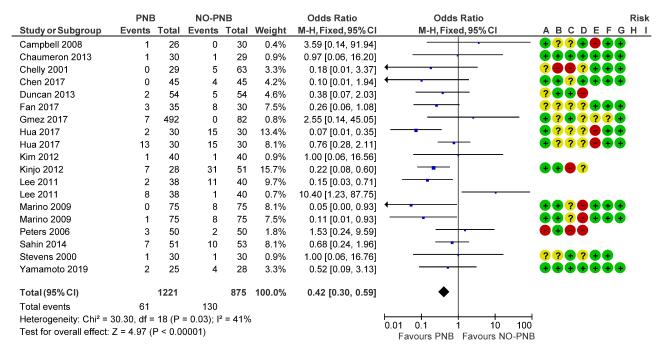
Risk of bias legend

(A) Random sequence generation (selection bias)

- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- $(\mbox{\bf M})$  RCT: Sequence Generation
- $(\mbox{\bf N})$  RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- $({\bf Q})$  RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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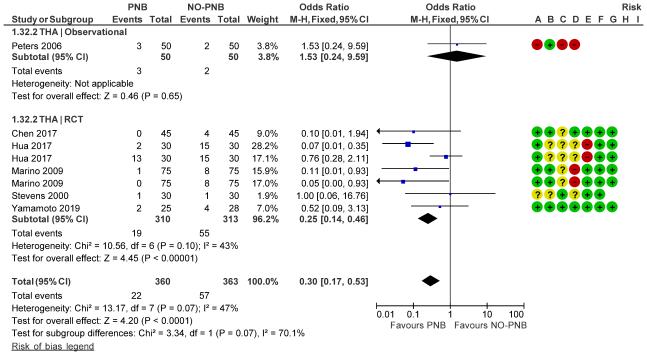
## 1.31 Cognitive dysfunction (composite) | Total



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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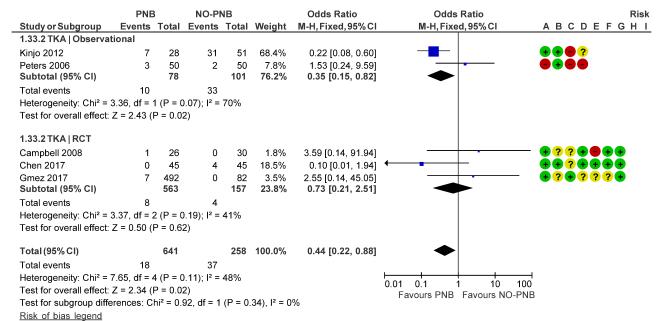
#### 1.32 Delirium | THA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- $(\mathbf{O})$  RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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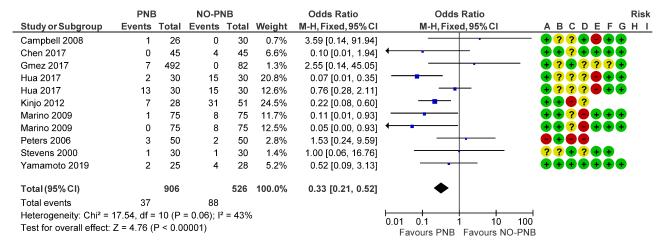
### 1.33 Delirium | TKA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- $(\boldsymbol{C})$  Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- $(\mathbf{P})$  RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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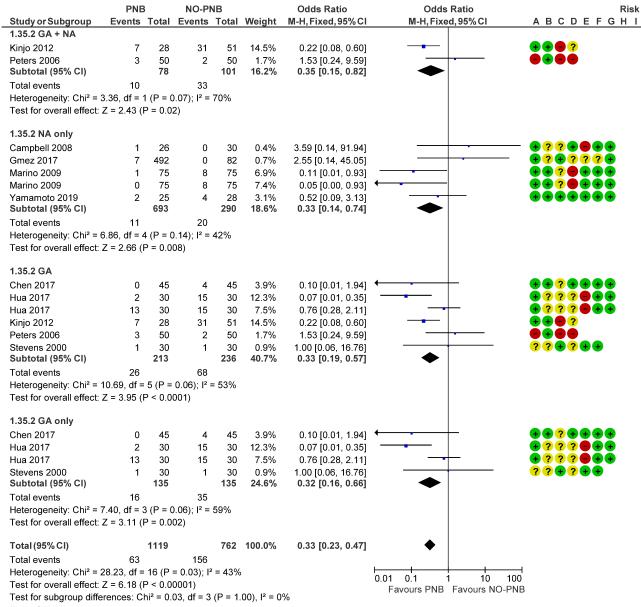
#### 1.34 Delirium | Total



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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### 1.35 Delirium | GA/NA (THA/TKA)



- Risk of bias legend
- $\textbf{(A)} \ \ \text{Random sequence generation (selection bias)}$
- $\textbf{(B)} \ \, \text{Allocation concealment (selection bias)}$
- $(\mbox{\bf C})$  Blinding of participants and personnel (performance bias)
- $(\mbox{\bf D})$  Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- $(\textbf{F}) \ \ \textbf{Selective reporting (reporting bias)}$
- (G) Other bias
- $\textbf{(H)} \ \textbf{Observational Study: Failure to develop and apply appropriate eligibility criteria} \\$
- (I) Observational Study: Flawed measurement of exposure or outcome
- $(\boldsymbol{J})$  Observational Study: Incomplete follow-up
- $(\mbox{\bf K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation

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(N) KCT. Other sources of plas

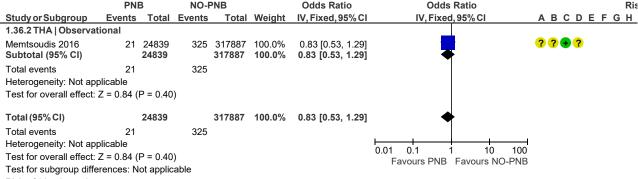
(O) RCT: Blinding of outcome assessors

 $(\mbox{\bf P})$  RCT: Blinding of participants and personnel

(Q) RCT: Allocation concealment

(R) RCT: Incomplete outcome data

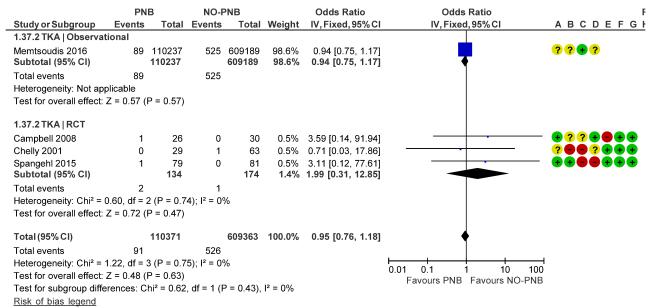
#### 1.36 Stroke | THA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- $(\boldsymbol{\mathsf{J}})$  Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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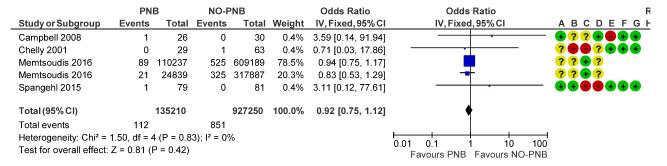
### 1.37 Stroke | TKA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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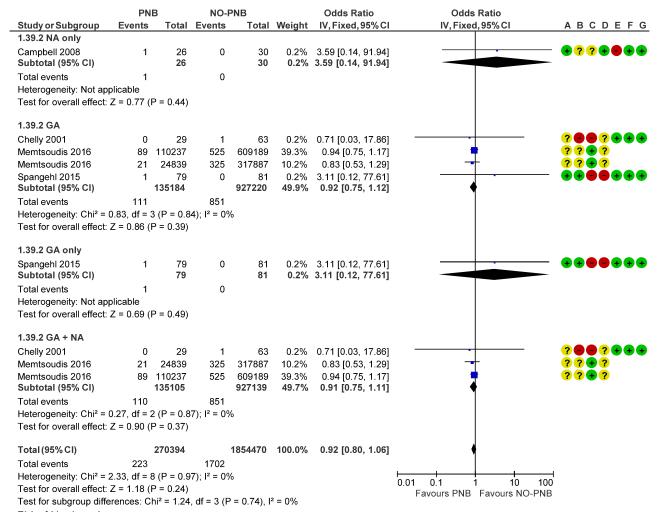
#### 1.38 Stroke | Total



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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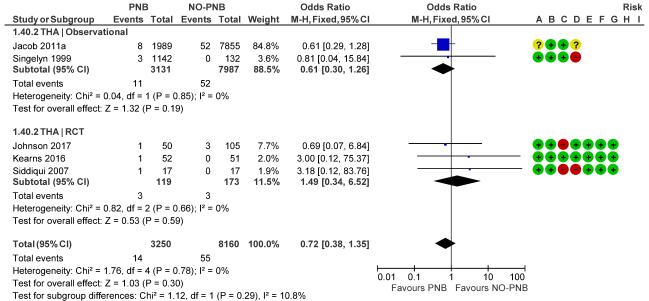
### 1.39 Stroke | GA/NA (THA/TKA)



- Risk of bias legend
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- $(\mbox{\bf D})$  Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- $(\mbox{\bf N})$  RCT: Other sources of bias
- $(\mbox{\bf O})$  RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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### 1.40 Perioperative Nerve Injury | THA

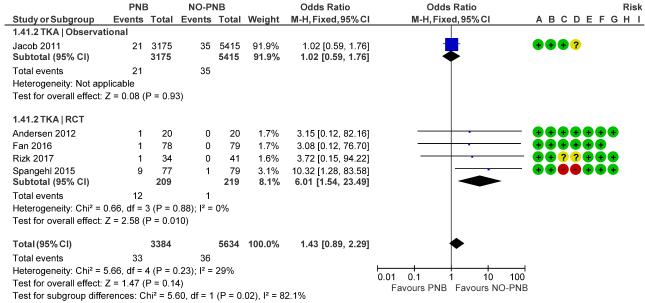


Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- $(\boldsymbol{C})$  Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- $(\mathbf{P})$  RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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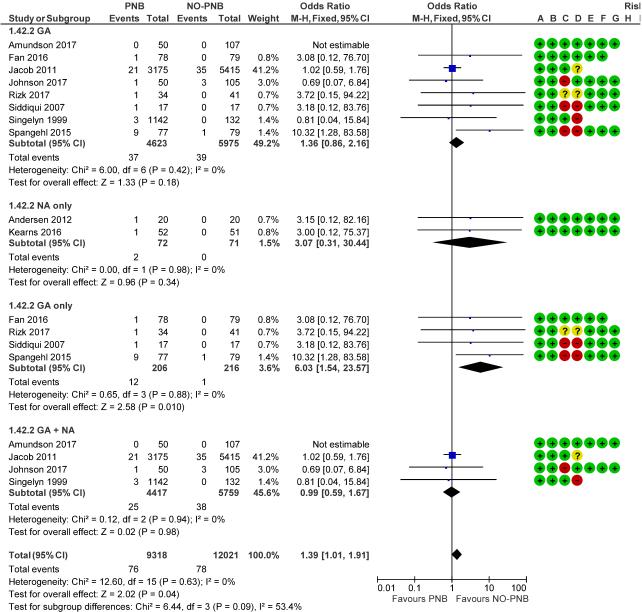
### 1.41 Perioperative Nerve Injury | TKA



- Risk of bias legend
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- $(\boldsymbol{C})$  Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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### 1.42 Perioperative Nerve Injury | GA/NA (THA/TKA)



Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- $(\boldsymbol{C})$  Blinding of participants and personnel (performance bias)
- $(\mbox{\bf D})$  Blinding of outcome assessment (detection bias)
- $\textbf{(E)} \ \ \text{Incomplete outcome data (attrition bias)}$
- $\textbf{(F)} \ \ \text{Selective reporting (reporting bias)}$
- (**G**) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- $\textbf{(I)} \ \ \textbf{Observational Study: Flawed measurement of exposure or outcome}$
- $(\boldsymbol{J})$  Observational Study: Incomplete follow-up
- $(\mbox{\bf K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting

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(NI) NOT: Sequence Generation

(N) RCT: Other sources of bias

 $(\mathbf{0})$  RCT: Blinding of outcome assessors

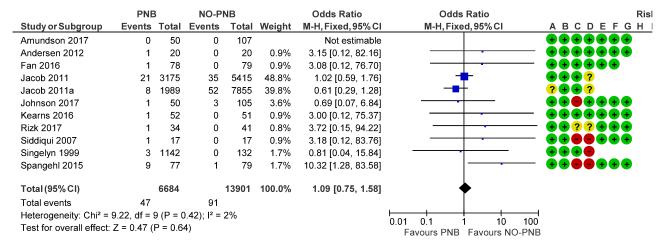
(P) RCT: Blinding of participants and personnel

(Q) RCT: Allocation concealment

(R) RCT: Incomplete outcome data

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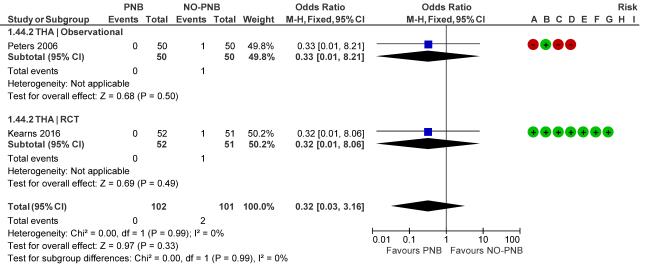
#### 1.43 Perioperative Nerve Injury | Total



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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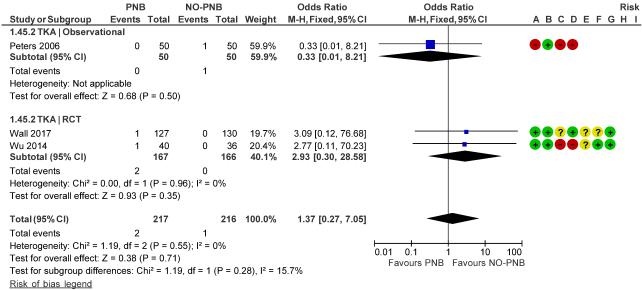
#### 1.44 Sepsis | THA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mbox{\bf K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- $(\mbox{\bf O})$  RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- $(\mathbf{Q})$  RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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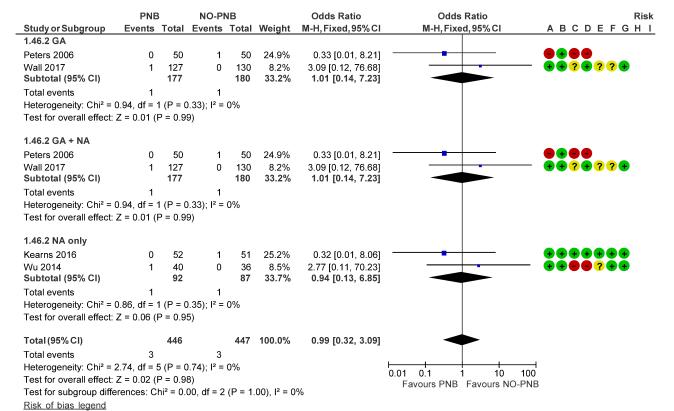
#### 1.45 Sepsis | TKA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mbox{\bf K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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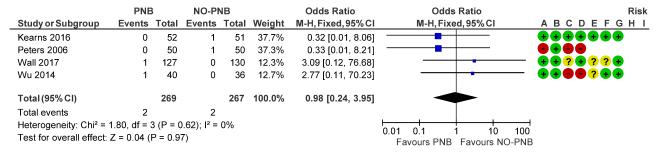
### 1.46 Sepsis | GA/NA (THA/TKA)



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- $(\mbox{\bf N})$  RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- $(\mbox{\bf P})$  RCT: Blinding of participants and personnel
- $({\bf Q})$  RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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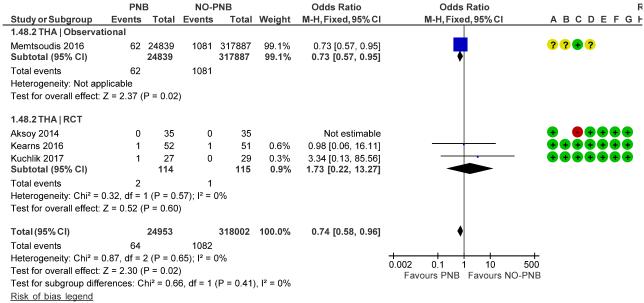
#### 1.47 Sepsis | Total



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mbox{\bf K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- $(\mbox{\bf M})$  RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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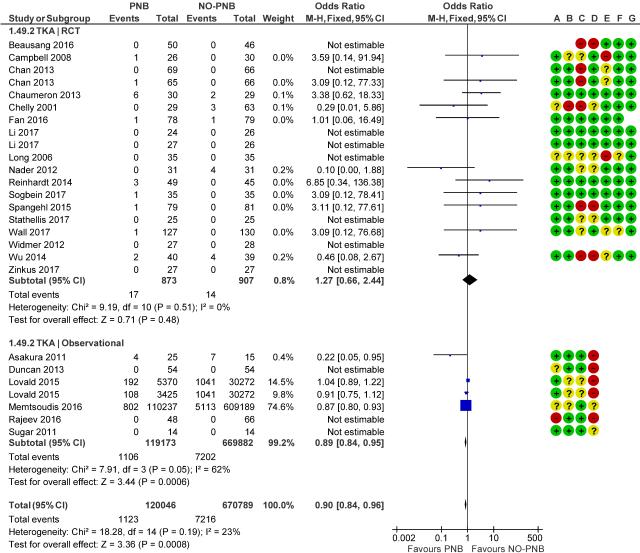
### 1.48 Thromboembolism (composite) | THA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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### 1.49 Thromboembolism (composite) | TKA



Test for subgroup differences:  $Chi^2 = 1.09$ , df = 1 (P = 0.30),  $I^2 = 7.9\%$ 

#### Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel

(A) DCT: Allocation concollection Review Manager 5.4.1

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(**u**) RCT: Allocation concealment (**R**) RCT: Incomplete outcome data

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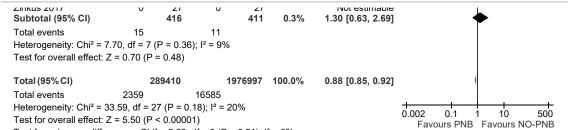
1.50 Thromboembolism (composite) | GA/NA (THA/TKA)

	PN	В	NO-I	PNB		Odds Ratio	Odds Ratio	
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Fixed, 95% CI	M-H, Fixed, 95% CI	ABCDEFG
1.50.2 GA								
Asakura 2011	4	25	7	15	0.2%	0.22 [0.05, 0.95]		$\bullet \bullet \bullet \bullet$
Chan 2013	0	69	0	66		Not estimable		$\bullet \bullet \bullet \bullet ? \bullet \bullet$
Chan 2013	1	65	0	66	0.0%	3.09 [0.12, 77.33]	<del></del>	++++++
Chelly 2001	0	29	3	63	0.0%	0.29 [0.01, 5.86]	-	? ? + + +
Duncan 2013	0	54	0	54	0.00/	Not estimable		? + + -
Fan 2016	1	78 5070	1	79	0.0%	1.01 [0.06, 16.49]		+ + + + + + + + + + + + + + + + + + +
Lovald 2015	192	5370	1041	30272	6.8%	1.04 [0.89, 1.22] 0.91 [0.75, 1.12]	Ţ	<b>+</b> ??
Lovald 2015 Memtsoudis 2016	108 62	3425 24839	1041 1081	30272 317887	4.6% 3.5%	0.91 [0.75, 1.12]	_]	??+?
Memtsoudis 2016	802	110237	5113	609189	34.8%	0.73 [0.87, 0.93]		??+?
Rajeev 2016	0	48	0	66	34.070	Not estimable	T	
Spangehl 2015	1	79	0	81	0.0%	3.11 [0.12, 77.61]	<del></del>	+++++
Stathellis 2017	0	25	0	25	0.070	Not estimable		++??+++
Wall 2017	1	127	0	130	0.0%	3.09 [0.12, 76.68]	<del></del>	++?+?+
Widmer 2012	0	27	0	28		Not estimable		
Subtotal (95% CI)		144497		988293	49.9%	0.88 [0.83, 0.94]	•	
Total events	1172		8287					
Heterogeneity: Chi <sup>2</sup> =	12.40, df =	9 (P = 0.	19); $I^2 = 2$	27%				
Test for overall effect:	Z = 3.92 (	P < 0.000	1)					
1.50.2 GA + NA								
Chan 2013	0	69	0	66		Not estimable		+++++++
Chan 2013	1	65	0	66	0.0%	3.09 [0.12, 77.33]	<del></del>	+
Chelly 2001	0	29	3	63	0.0%	0.29 [0.01, 5.86]		? • • ? • • •
Duncan 2013	0	54	0	54	0.070	Not estimable		? • • •
Lovald 2015	192	5370	1041	30272	6.8%	1.04 [0.89, 1.22]	<b>,</b>	<b>+</b> ? ? <b>-</b>
Lovald 2015	108	3425	1041	30272	4.6%	0.91 [0.75, 1.12]	+	<b>+</b> ? ? <b>=</b>
Memtsoudis 2016	62	24839	1081	317887	3.5%	0.73 [0.57, 0.95]	-	??+?
Memtsoudis 2016	802	110237	5113	609189	34.8%	0.87 [0.80, 0.93]	•	?? ? • ?
Rajeev 2016	0	48	0	66		Not estimable		
Wall 2017	1	127	0	130	0.0%	3.09 [0.12, 76.68]	<del></del>	++?+?+
Subtotal (95% CI)		144263		988065	49.7%	0.89 [0.83, 0.94]	•	
Total events	1166		8279					
Heterogeneity: Chi <sup>2</sup> = 1		•		3%				
Test for overall effect:	Z = 3.86 (	P = 0.000	1)					
1.50.2 GA only								
Asakura 2011	4	25	7	15	0.2%	0.22 [0.05, 0.95]	<del></del>	$\bullet \bullet \bullet \bullet$
Fan 2016	1	78	1	79	0.0%	1.01 [0.06, 16.49]		$\bullet \bullet \bullet \bullet \bullet \bullet$
Spangehl 2015	1	79	0	81	0.0%	3.11 [0.12, 77.61]	-	$\bullet \bullet \bullet \bullet \bullet \bullet \bullet$
Stathellis 2017	0	25	0	25		Not estimable		++??++
Widmer 2012	0	27	0	28		Not estimable		
Subtotal (95% CI)		234		228	0.2%	0.47 [0.15, 1.43]		
Total events	6		8	•••				
Heterogeneity: Chi <sup>2</sup> = 2		•	$(6); I^2 = 25$	5%				
Test for overall effect:	Z = 1.34 (I	P = 0.18)						
1.50.2 NA only								
Beausang 2016	0	50	0	46		Not estimable		
Campbell 2008	1	26	0	30	0.0%	3.59 [0.14, 91.94]	<del>-   ·</del>	+??+++
Chaumeron 2013	6	30	2	29	0.0%	3.38 [0.62, 18.33]	+-	+++++
Kearns 2016	1	52	1	51	0.0%	0.98 [0.06, 16.11]		++++++
Kuchlik 2017	1	27	0	29	0.0%	3.34 [0.13, 85.56]	<del></del>	
Long 2006	0	35	0	35		Not estimable		????=?+
Nader 2012	0	31	4	31	0.1%	0.10 [0.00, 1.88]		++??+++
Reinhardt 2014	3	49	0	45	0.0%	6.85 [0.34, 136.38]		++++++
Sogbein 2017	1	35	0	35	0.0%	3.09 [0.12, 78.41]	-	
Sugar 2011	0	14	0	14	0.40/	Not estimable		+++?
Wu 2014 Zinkus 2017	2 n	40 27	4	39 27	0.1%	0.46 [0.08, 2.67]	-	<b>++?+</b>
			- 11	-77		mot perimania		

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Risk of bias legend

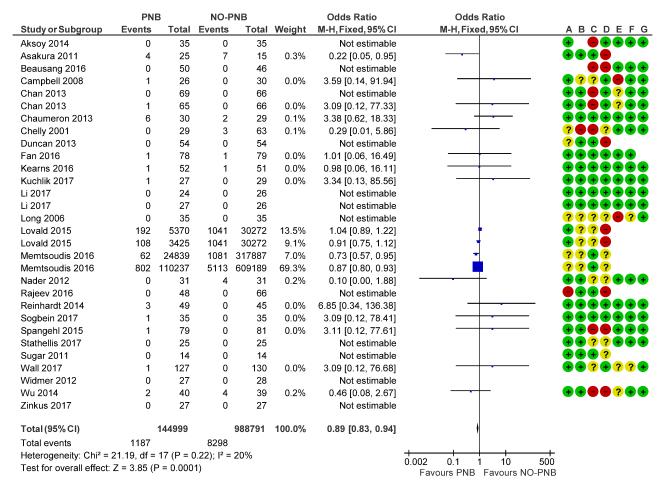
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)

Test for subgroup differences:  $Chi^2 = 2.33$ , df = 3 (P = 0.51),  $I^2 = 0\%$ 

- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- $(\mbox{I})$  Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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1.51 Thromboembolism (composite) | Total



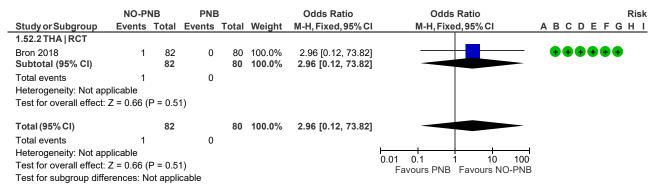
#### Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- $\textbf{(I)} \ \ \textbf{Observational Study: Flawed measurement of exposure or outcome}$
- $(\boldsymbol{J})$  Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- $(\mbox{\bf M})$  RCT: Sequence Generation
- $(\ensuremath{\text{N}})$  RCT: Other sources of bias
- $(\mathbf{O})$  RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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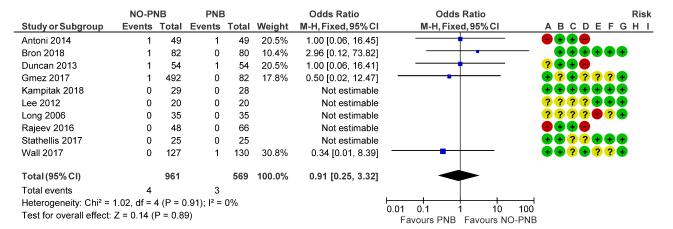
### 1.52 Hematoma | THA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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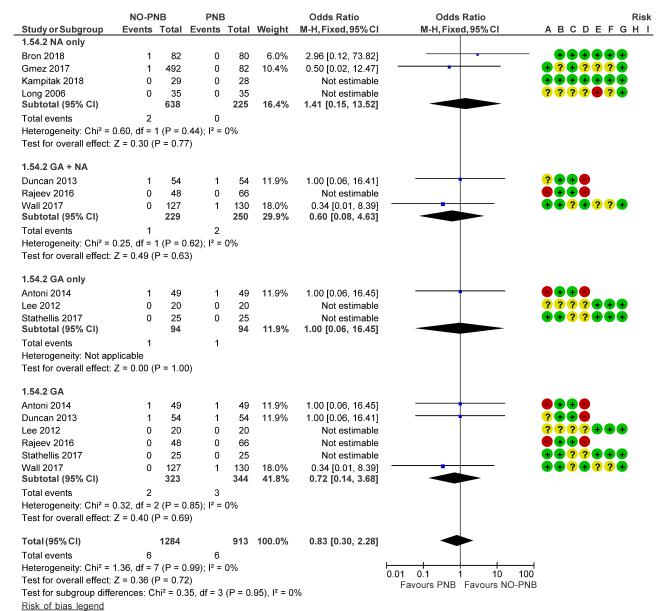
### 1.53 Hematoma | Total



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment (R) RCT: Incomplete outcome data

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### 1.54 Hematoma | GA/NA (THA/TKA)



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- $(\mbox{\bf C})$  Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (**G**) Other bias
- $\textbf{(H)} \ \textbf{Observational Study: Failure to develop and apply appropriate eligibility criteria} \\$
- $\textbf{(I)} \ \ \textbf{Observational Study: Flawed measurement of exposure or outcome}$
- $(\boldsymbol{J})$  Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- $(\mbox{\bf M})$  RCT: Sequence Generation
- $(\mbox{\bf N})$  RCT: Other sources of bias
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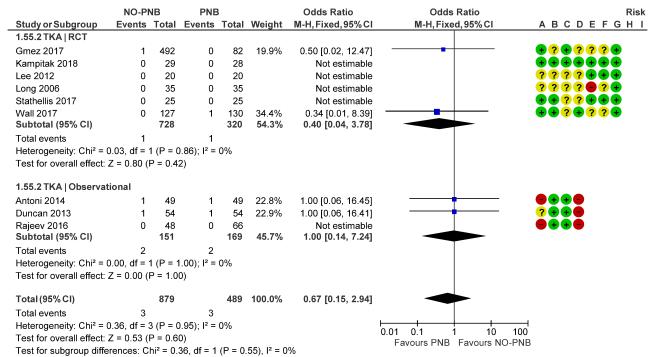
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(V) RCT: Difficing of outcome assessors (P) RCT: Blinding of participants and personnel

(Q) RCT: Allocation concealment (R) RCT: Incomplete outcome data

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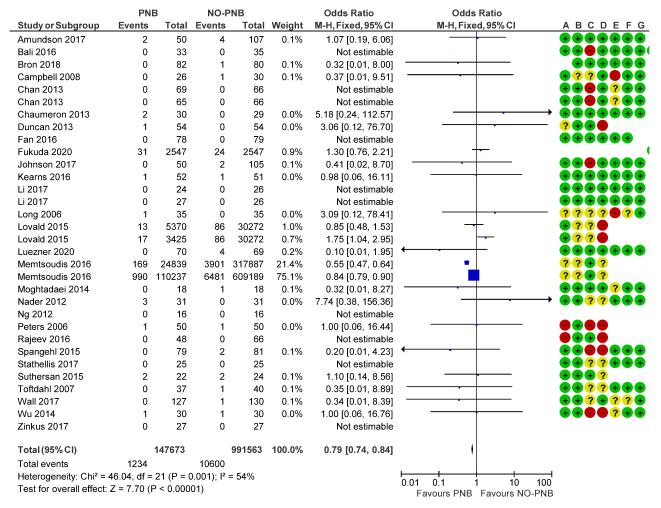
### 1.55 Hematoma | TKA



- Risk of bias legend
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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#### 1.56 Surgical site infection | Total



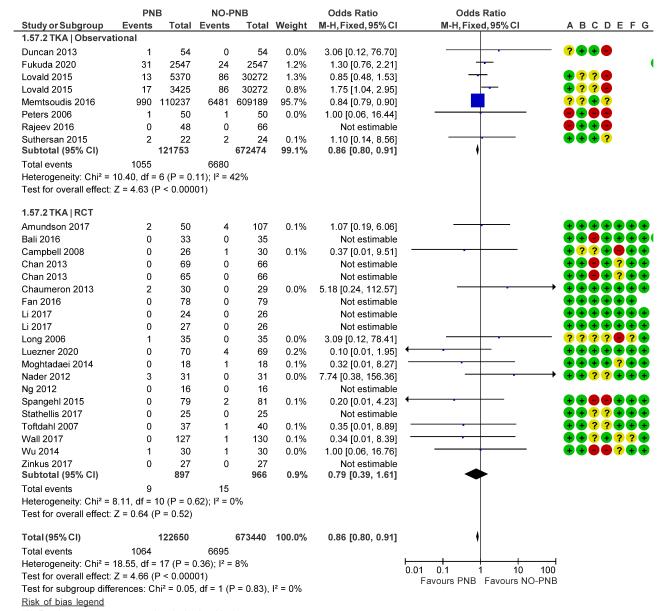
#### Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (**G**) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- $(\mbox{\bf N})$  RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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#### 1.57 Surgical site infection | TKA



- $\textbf{(A)} \ \ \text{Random sequence generation (selection bias)}$
- (B) Allocation concealment (selection bias)
- $(\mbox{\bf C})$  Blinding of participants and personnel (performance bias)
- $(\mbox{\bf D})$  Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- $\textbf{(F)} \ \ \text{Selective reporting (reporting bias)}$
- (**G**) Other bias
- $\textbf{(H)} \ \textbf{Observational Study: Failure to develop and apply appropriate eligibility criteria} \\$
- $\textbf{(I)} \ \textbf{Observational Study: Flawed measurement of exposure or outcome}$
- $(\boldsymbol{J})$  Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
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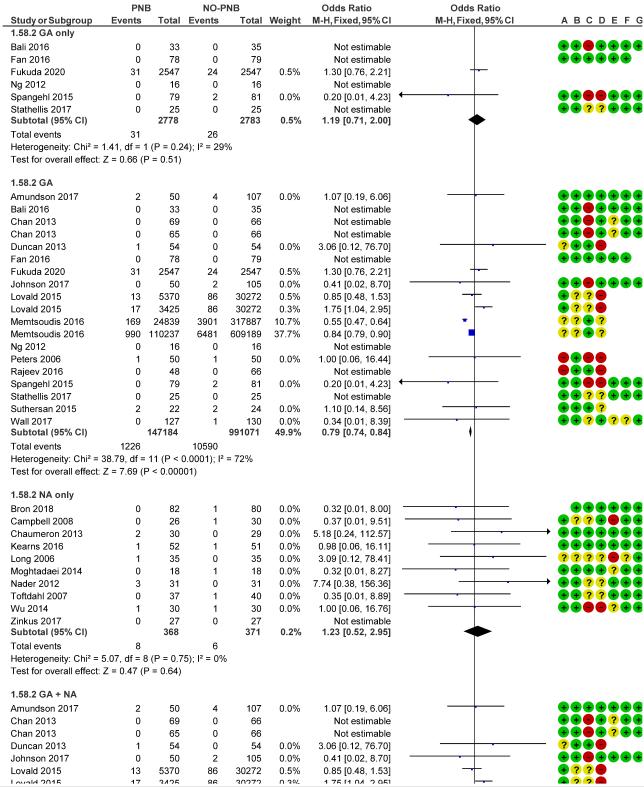
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(**O**) RCT. Diffiding of outcome assessors (**P**) RCT: Blinding of participants and personnel

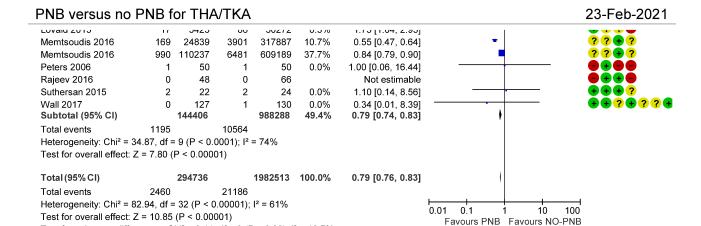
(Q) RCT: Allocation concealment (R) RCT: Incomplete outcome data

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1.58 Surgical site infection | GA/NA (THA/TKA)



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Risk of bias legend
(A) Random sequence generation (selection bias)

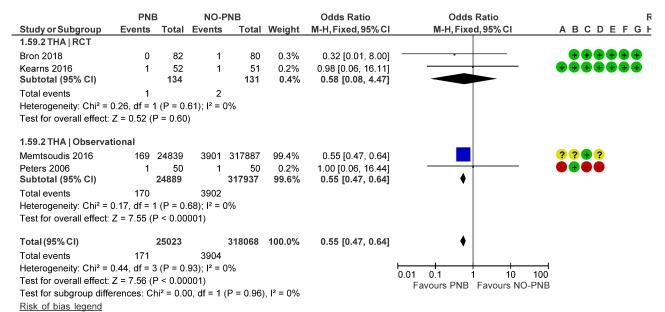
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (**G**) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome

Test for subgroup differences: Chi<sup>2</sup> = 3.44, df = 3 (P = 0.33),  $I^2$  = 12.7%

- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- $(\boldsymbol{M})$  RCT: Sequence Generation
- (N) RCT: Other sources of bias
- $(\mathbf{O})$  RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- $(\mbox{\bf R})$  RCT: Incomplete outcome data

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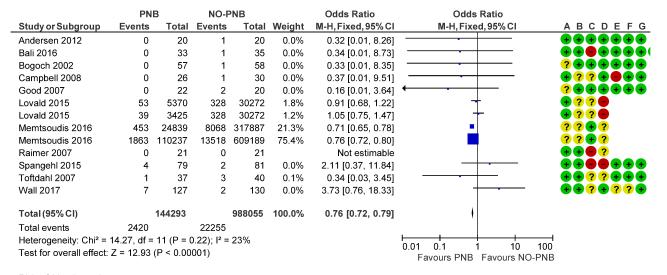
### 1.59 Surgical site infection | THA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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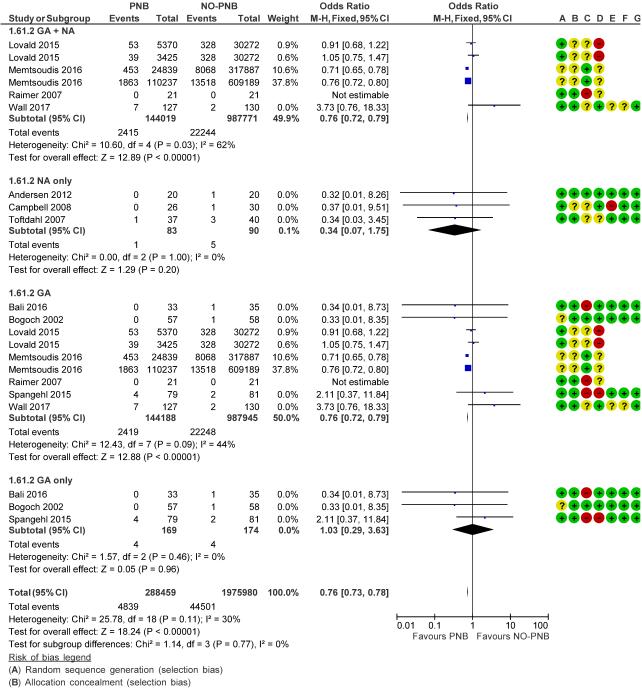
1.60 Infection (composite) | Total



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- $(\mathbf{Q})$  RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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### 1.61 Infection (composite) | GA/NA (THA/TKA)



- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (I) Observational Study Incomplete following

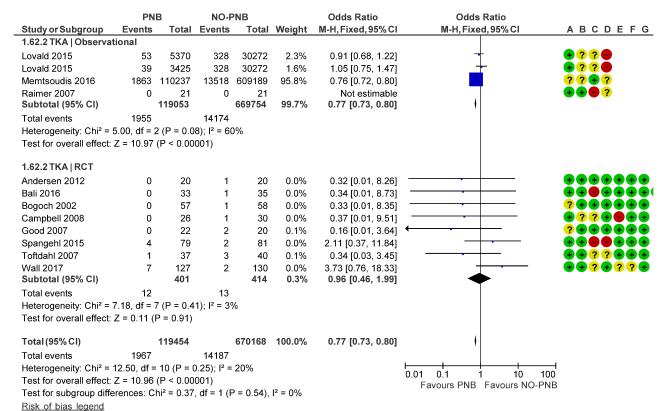
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- (J) Observational Study: Incomplete ioliow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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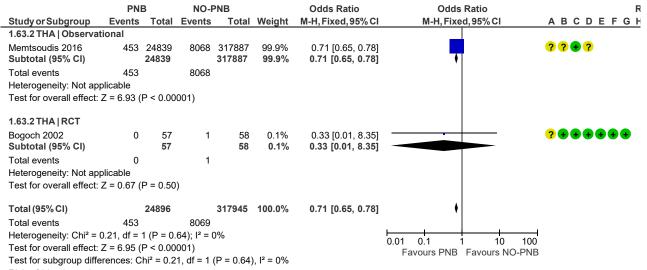
### 1.62 Infection (composite) | TKA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- $(\mbox{\bf P})$  RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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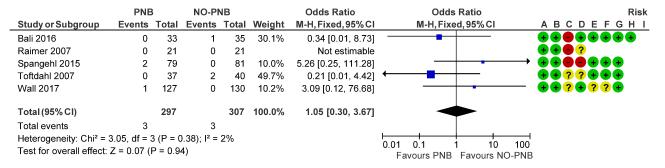
#### 1.63 Infection (composite) | THA



- Risk of bias legend
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- $\textbf{(H)} \ \textbf{Observational Study: Failure to develop and apply appropriate eligibility criteria} \\$
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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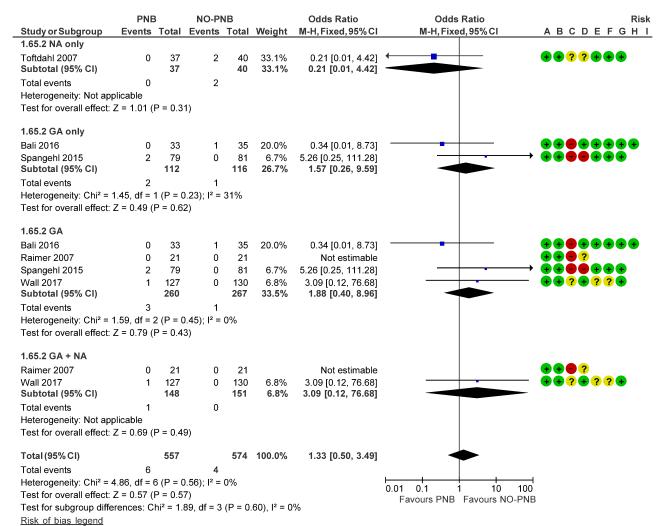
### 1.64 Urinary tract infection | Total



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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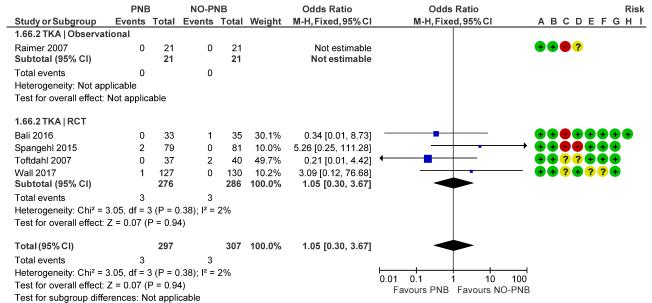
### 1.65 Urinary tract infection | GA/NA (THA/TKA)



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- $(\mbox{\bf R})$  RCT: Incomplete outcome data

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### 1.66 Urinary tract infection | TKA

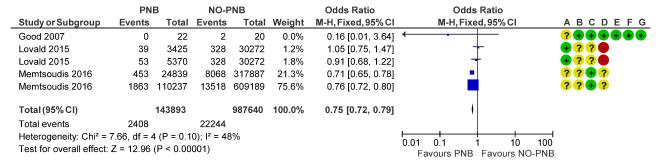


Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- $(\boldsymbol{C})$  Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- $(\mathbf{P})$  RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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#### 1.67 Infection | Total



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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### 1.68 Infection | GA/NA (THA/TKA)

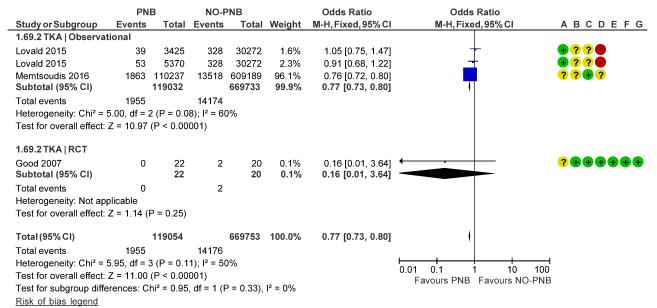
	PN	В	NO-F	PNB		Odds Ratio	Odds Ratio	
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Fixed, 95% CI	M-H, Fixed, 95% CI	ABCDEFG
1.68.2 GA								
Lovald 2015	39	3425	328	30272	0.6%	1.05 [0.75, 1.47]	+	🛨 ʔ 💡 🖶
Lovald 2015	53	5370	328	30272	0.9%	0.91 [0.68, 1.22]	+	<ul><li>? ? •</li></ul>
Memtsoudis 2016	453	24839	8068	317887	10.7%	0.71 [0.65, 0.78]	•	?? ? • ?
Memtsoudis 2016	1863	110237	13518	609189	37.8%	0.76 [0.72, 0.80]		?? ? 🕩 ?
Subtotal (95% CI)		143871		987620	50.0%	0.75 [0.72, 0.79]	1	
Total events	2408		22242					
Heterogeneity: Chi <sup>2</sup> = 6	5.73, df =	3 (P = 0.0)	8); $I^2 = 55$	5%				
Test for overall effect:	Z = 12.94	(P < 0.00)	001)					
1.68.2 GA + NA								
Lovald 2015	39	3425	328	30272	0.6%	1.05 [0.75, 1.47]	<b>T</b>	+??
Lovald 2015	53	5370	328	30272	0.9%	0.91 [0.68, 1.22]		+??=
Memtsoudis 2016	1863	110237	13518	609189	37.8%	0.76 [0.72, 0.80]		??+?
Memtsoudis 2016	453		8068	317887	10.7%	0.71 [0.65, 0.78]		??+?
Subtotal (95% CI)		143871		987620	50.0%	0.75 [0.72, 0.79]	1	
Total events	2408		22242					
Heterogeneity: Chi <sup>2</sup> = 6		•	* *	5%				
Test for overall effect:	Z = 12.94	(P < 0.00)	001)					
Total (95% CI)		287742		1975240	100.0%	0.75 [0.73, 0.78]		
Total events	4816		44484					
Heterogeneity: Chi <sup>2</sup> = 1	13.47, df =	7 (P = 0	06); I <sup>2</sup> = 4	-8%			0.01 0.1 1	400
Test for overall effect:	Z = 18.31	(P < 0.00)	001)				0.01 0.1 1 10 Favours PNB Favours NO-F	100
Test for subgroup diffe	rences: C	$hi^2 = 0.00$	. df = 1 (F	) = 1.00), I	<sup>2</sup> = 0%		TAVOUIS FIND FAVOUIS INO-F	IND

Test for subgroup differences:  $Chi^2 = 0.00$ , df = 1 (P = 1.00),  $I^2 = 0\%$ 

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- $(\mbox{\bf M})$  RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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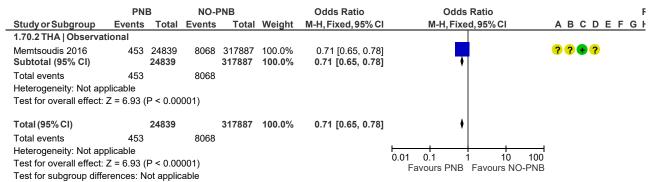
#### 1.69 Infection | TKA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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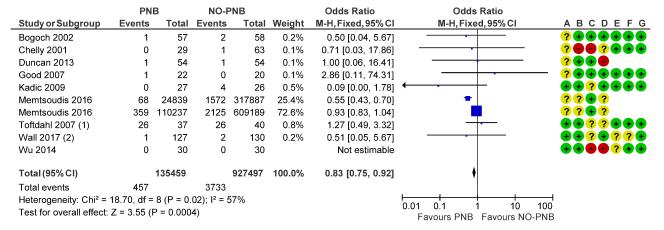
#### 1.70 Infection | THA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- $(\boldsymbol{\mathsf{C}})$  Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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### 1.71 Gastrointestinal complications (composite) | Total



#### **Footnotes**

- (1) Constipation + Ulcer
- (2) Ileus

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bia
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appro
- (I) Observational Study: Flawed measurement of exposure  $\varepsilon$
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for co
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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## 1.72 Gastrointestinal complications (composite) | GA/NA (THA/TKA)

	PN	В	NO-F	PNB		Odds Ratio	Odds Ratio	
Study or Subgroup	Events		Events		Weight			ABCDEFG
1.72.2 GA								
Bogoch 2002	1	57	2	58	0.1%	0.50 [0.04, 5.67]	<del></del>	$? \bullet \bullet \bullet \bullet \bullet$
Chelly 2001	0	29	1	63	0.1%	0.71 [0.03, 17.86]	-	? - ? + + +
Duncan 2013	1	54	1	54	0.1%	1.00 [0.06, 16.41]	• • • • • • • • • • • • • • • • • • •	? + + =
Memtsoudis 2016	68	24839	1572	317887	12.8%	0.55 [0.43, 0.70]	*	??+?
Memtsoudis 2016	359	110237	2125	609189	36.5%	0.93 [0.83, 1.04]		??+?
Wall 2017 (1)	1	127	2	130	0.1%	0.51 [0.05, 5.67]		++?+?+
Subtotal (95% CI)		135343		927381	49.7%	0.83 [0.75, 0.92]	•	
Total events  Heterogeneity: Chi <sup>2</sup> = 1  Test for overall effect: 2		•		67%				
1.72.2 NA only								
Kadic 2009	0	27	4	26	0.3%	0.09 [0.00, 1.78]	<b>—</b>	++?+++
Toftdahl 2007 (2)	26	37	26	40	0.4%	1.27 [0.49, 3.32]		++??+++
Wu 2014	0	30	0	30	0.470	Not estimable		<b>+++</b> 2++
Subtotal (95% CI)	Ü	94	Ü	96	0.7%	0.83 [0.36, 1.92]		
Total events	26		30				٦	
Heterogeneity: Chi <sup>2</sup> = 2		1 (P = 0.0		5%				
Test for overall effect: 2		,	-,,	.,•				
1.72.2 GA + NA								
Chelly 2001	0	29	1	63	0.1%	0.71 [0.03, 17.86]		? • • ? • • •
Duncan 2013	1	54	1	54	0.1%	1.00 [0.06, 16.41]		? • • •
Memtsoudis 2016	68	24839	1572	317887	12.8%	0.55 [0.43, 0.70]		??+?
Memtsoudis 2016	359	110237	2125	609189	36.5%	0.93 [0.83, 1.04]		??+?
Wall 2017 (3)	1	127	2	130	0.1%	0.51 [0.05, 5.67]		++?+?+
Subtotal (95% CI)		135286		927323	49.6%	0.83 [0.75, 0.92]	<b>•</b>	
Total events	429		3701					
Heterogeneity: Chi <sup>2</sup> = 1 Test for overall effect: 2		•		74%				
1.72.2 GA only								
Bogoch 2002	1	57	2	58	0.1%	0.50 [0.04, 5.67]		$? \bullet \bullet \bullet \bullet \bullet \bullet$
Subtotal (95% CI)		57		58	0.1%	0.50 [0.04, 5.67]		
Total events	1		2					
Heterogeneity: Not app Test for overall effect: 2		P = 0.58)						
		,		4054050	400.00/	0.02 (0.70, 0.00)	4	
Total (95% CI)	000	270780		1854858	100.0%	0.83 [0.78, 0.89]	<b>"</b>	
Total events	886	40 (D. (	7436	040/				
Heterogeneity: Chi <sup>2</sup> = 3				= 61%			0.01 0.1 1 10	100
Test for overall effect: Z				. – 0.00) 1	2 – 00/		Favours PNB Favours NO-	PNB
Test for subgroup differ	rences: Ci	ni= = 0.17	, at = 3 (F	' = 0.98), I	- = 0%		Disk of his leased	
Footnotes (1) House							Risk of bias legend	on (coloction bics)
(1) Ileus	or						(A) Random sequence generati	
(2) Constipation + Ulce (3) Ileus	<b>5</b> 1						<ul><li>(B) Allocation concealment (sele</li><li>(C) Blinding of participants and</li></ul>	,
(3) lieus							(D) Blinding of outcome assess	•
							(E) Incomplete outcome data (at	
							(F) Selective reporting (reporting	
							(G) Other bias	2.00)
							(H) Observational Study: Failure	to develop and apply appr
							(I) Observational Study: Flawed	
							(J) Observational Study: Incomp	· ·
							(K) Observational Study: Failure	·
							(L) RCT: Selective outcome repo	
								J
							(M) RCT: Sequence Generation	
							(M) RCT: Sequence Generation (N) RCT: Other sources of bias	
							• •	ssessors

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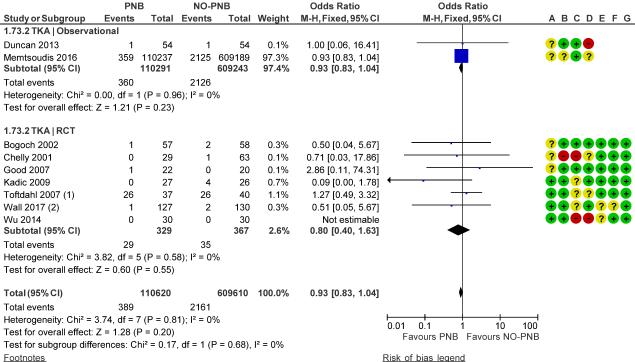
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(P) NOT: Difficing of participants and personner

(Q) RCT: Allocation concealment (R) RCT: Incomplete outcome data

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## 1.73 Gastrointestinal complications (composite) | TKA

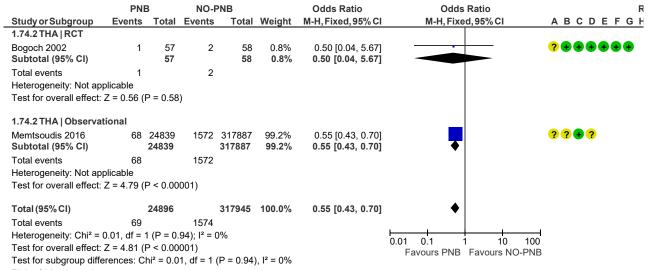


- (1) Constipation + Ulcer
- (2) Ileus

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bia
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appro
- (I) Observational Study: Flawed measurement of exposure c
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for co
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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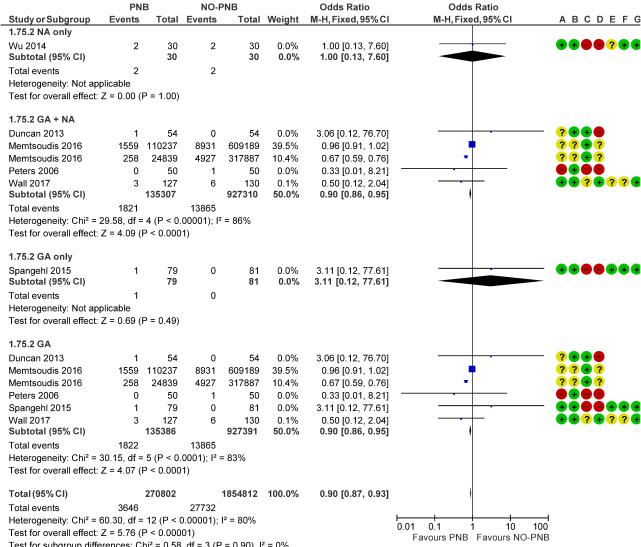
#### 1.74 Gastrointestinal complications (composite) | THA



- Risk of bias legend
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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### 1.75 Renal complications (composite) | GA/NA (THA/TKA)



Test for subgroup differences:  $Chi^2 = 0.58$ , df = 3 (P = 0.90),  $I^2 = 0\%$ 

Risk of bias legend

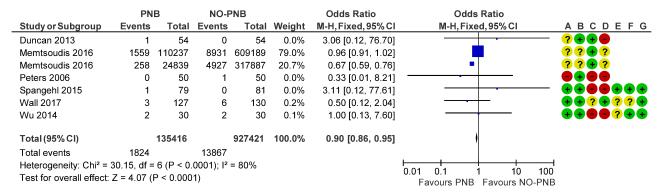
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (D) DCT- Incomplete cuiteeme det

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(K) NOT. Incomplete outcome data

#### 1.76 Renal complications (composite) | Total

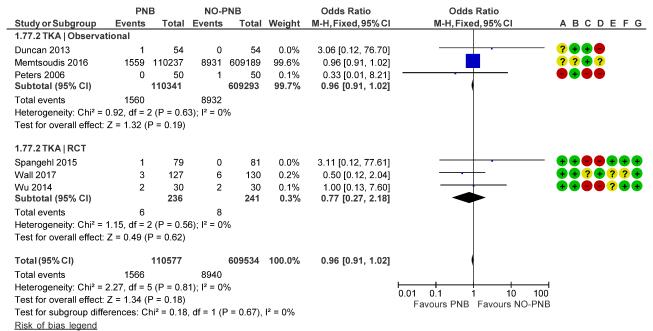


#### Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mbox{\bf K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- $(\mbox{\it M})$  RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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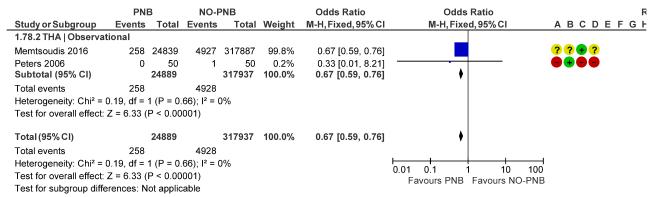
### 1.77 Renal complications (composite) | TKA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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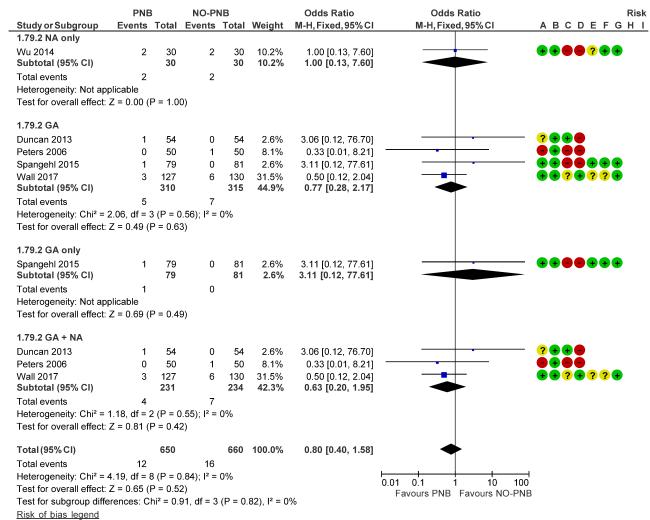
#### 1.78 Renal complications (composite) | THA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- $(\mbox{\bf N})$  RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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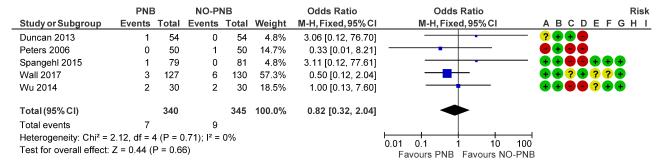
### 1.79 Renal failure (composite) | GA/NA (THA/TKA)



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- $(\mbox{\bf N})$  RCT: Other sources of bias
- $(\mbox{\bf O})$  RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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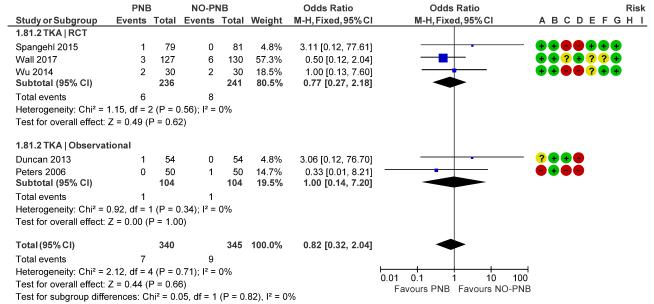
### 1.80 Renal failure (composite) | Total



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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### 1.81 Renal failure (composite) | TKA

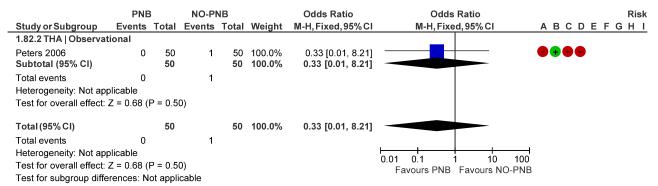


Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- $(\boldsymbol{C})$  Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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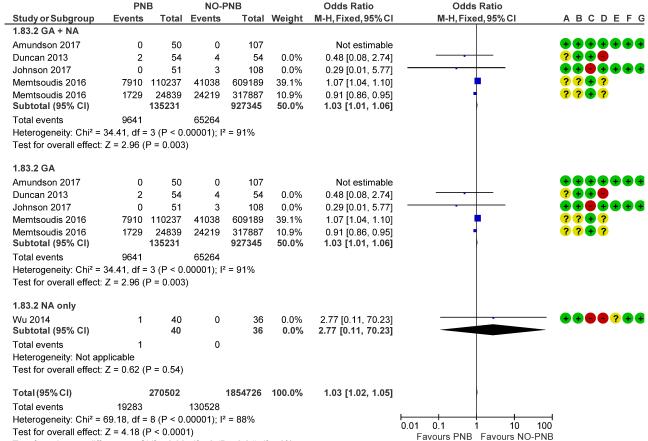
#### 1.82 Renal failure (composite) | THA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- $(\mathbf{G})$  Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mbox{\bf K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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### 1.83 Critical care admission | GA/NA (THA/TKA)



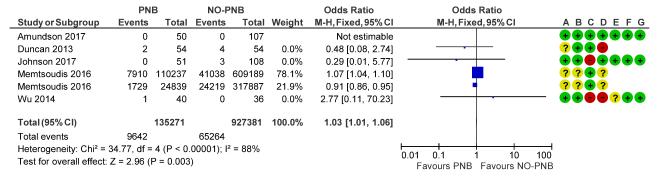
Test for subgroup differences: Chi<sup>2</sup> = 0.36, df = 2 (P = 0.84),  $I^2$  = 0%

#### Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mbox{\bf K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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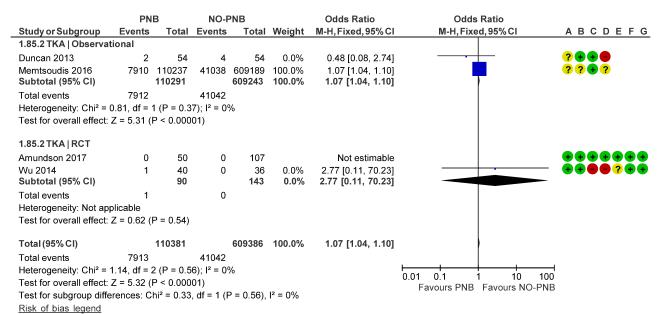
#### 1.84 Critical care admission | Total



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mbox{\bf K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- $(\mbox{\bf N})$  RCT: Other sources of bias
- $\textbf{(O)} \ \, \mathsf{RCT:} \ \, \mathsf{Blinding} \ \, \mathsf{of} \ \, \mathsf{outcome} \ \, \mathsf{assessors}$
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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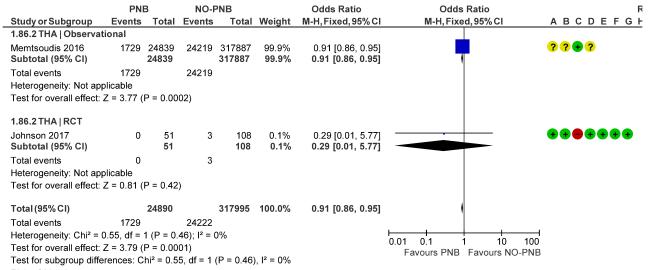
#### 1.85 Critical care admission | TKA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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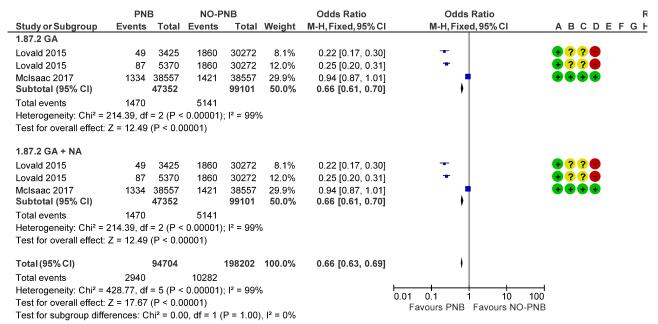
#### 1.86 Critical care admission | THA



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mbox{\bf K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- $(\mathbf{Q})$  RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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#### 1.87 Readmission | GA/NA (THA/TKA)



Risk of bias legend

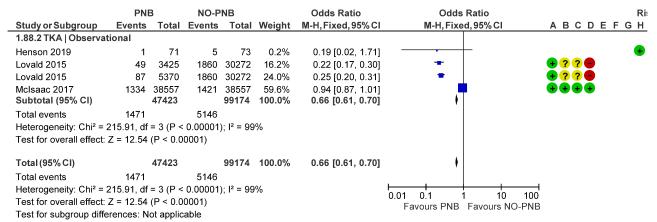
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- $(\mbox{\bf N})$  RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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#### 1.88 Readmission | TKA

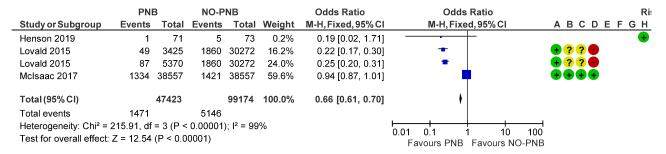


Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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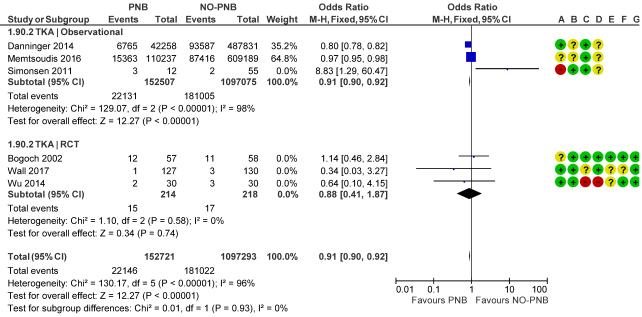
#### 1.89 Readmission | Total



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- $(\mbox{\bf M})$  RCT: Sequence Generation
- (N) RCT: Other sources of bias
- $(\mbox{\bf O})$  RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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#### 1.90 Blood transfusion | TKA

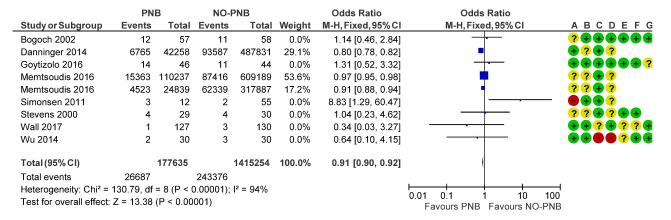


Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- $(\mbox{\bf N})$  RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- $(\mbox{\bf P})$  RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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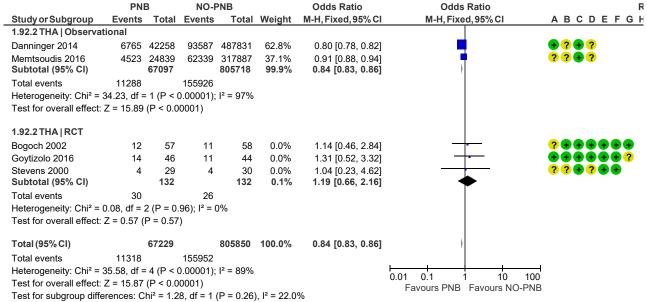
#### 1.91 Blood transfusion | Total



- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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#### 1.92 Blood transfusion | THA



Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- $(\boldsymbol{\mathsf{C}})$  Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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### 1.93 Blood transfusion | GA/NA (THA/TKA)

	PN	В	NO-	PNB		Odds Ratio	Odds	Ratio	
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Fixed, 95% CI	M-H, Fixe	i, 95% CI	ABCDEF
1.93.2 GA									
Bogoch 2002	12	57	11	58	0.0%	1.14 [0.46, 2.84]	<del></del>		?+++++
Danninger 2014	6765	42258	93587	487831	14.6%	0.80 [0.78, 0.82]	•		+?+?
Memtsoudis 2016	4523	24839	62339	317887	8.6%	0.91 [0.88, 0.94]	•		??+?
Memtsoudis 2016	15363	110237	87416	609189	26.8%	0.97 [0.95, 0.98]	•		??+?
Stevens 2000	4	29	4	30	0.0%	1.04 [0.23, 4.62]	<del>-  </del>		??+?++
Wall 2017	1	127	3	130	0.0%	0.34 [0.03, 3.27]			++?+?
Subtotal (95% CI)		177547		1415125	50.0%	0.91 [0.90, 0.92]			
Total events	26668		243360						
Heterogeneity: Chi <sup>2</sup> =	124.71, df	= 5 (P < 0	0.00001);	$I^2 = 96\%$					
Test for overall effect:	Z = 13.40	(P < 0.00	001)						
1.93.2 NA only									
Goytizolo 2016	14	46	11	44	0.0%	1.31 [0.52, 3.32]	+	<del></del>	+++++
Simonsen 2011	3	12	2	55	0.0%	8.83 [1.29, 60.47]		<del></del>	<b>++</b> ?
Wu 2014	2	30	3	30	0.0%	0.64 [0.10, 4.15]			++?+4
Subtotal (95% CI)		88		129	0.0%	1.51 [0.71, 3.18]	◀	<b>&gt;</b>	
Total events	19		16						
Heterogeneity: Chi <sup>2</sup> = 4	4.13, df = :	2 (P = 0.1	3); $I^2 = 52$	2%					
Test for overall effect:	Z = 1.08 (	P = 0.28)							
1.93.2 GA only									
Bogoch 2002	12	57	11	58	0.0%	1.14 [0.46, 2.84]	<del>-  </del>		?++++
Stevens 2000	4	29	4	30	0.0%	1.04 [0.23, 4.62]	-		??+?++
Subtotal (95% CI)		86		88	0.0%	1.11 [0.51, 2.42]	◀	<b>&gt;</b>	
Total events	16		15						
Heterogeneity: Chi <sup>2</sup> = 0	0.01, df =	1 (P = 0.9	$(2); I^2 = 0$	%					
Test for overall effect:	Z = 0.27 (	P = 0.79)							
1.93.2 GA + NA									
Danninger 2014	6765	42258	93587	487831	14.6%	0.80 [0.78, 0.82]	•		+?+?
Memtsoudis 2016	15363	110237	87416	609189	26.8%	0.97 [0.95, 0.98]	•		??+?
Memtsoudis 2016	4523	24839	62339	317887	8.6%	0.91 [0.88, 0.94]	+		??+?
Wall 2017	1	127	3	130	0.0%	0.34 [0.03, 3.27]	-		++?+??
Subtotal (95% CI)		177461		1415037	50.0%	0.91 [0.90, 0.92]	(		
Total events	26652		243345						
Heterogeneity: Chi <sup>2</sup> =	124.45, df	= 3 (P < 0	0.00001);	$I^2 = 98\%$					
Test for overall effect:	Z = 13.41	(P < 0.00	001)						
Total (95% CI)		355182		2830379	100.0%	0.91 [0.90, 0.92]			
Total events	53355		486736			_			
Heterogeneity: Chi <sup>2</sup> = 2		= 14 (P <	0.00001	); I <sup>2</sup> = 95%				<del></del>	
Test for overall effect:		,					0.01 0.1 1	10 100	
		•	,	P = 0.57), I	2 - 00/		ravours PNB	Favours NO-PNB	

Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- $(\mbox{\bf C})$  Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- $(\boldsymbol{G}\!)$  Other bias
- $\textbf{(H)}\ \textbf{Observational Study:}\ \textbf{Failure to develop and apply appropriate eligibility criteria}$
- $\textbf{(I)} \ \ \textbf{Observational Study: Flawed measurement of exposure or outcome}$
- $(\boldsymbol{J})$  Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- $(\mbox{\bf M})$  RCT: Sequence Generation
- $(\mbox{\bf N})$  RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors

(B) DCT: Dlinding of participants and paragnal

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(F) NOT: billing of participants and personner

(Q) RCT: Allocation concealment (R) RCT: Incomplete outcome data

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### 1.94 Blood loss (total / intraop / postop) | TKA

		PNB		N	O-PNB			Mean Difference	Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Fixed, 95% CI	IV, Fixed, 95% CI
1.94.2 TKA   Observa	tional								
Alsheik 2020	268	201.9	40	476.5	292.9	40	0.8%	-208.50 [-318.74, -98.26]	<del></del>
Simonsen 2011 Subtotal (95% CI)	252.5	70.014879	12 <b>52</b>	327.5	77.5	55 <b>95</b>	4.6% <b>5.3%</b>	-75.00 [-119.60, -30.40] -93.77 [-135.11, -52.43]	<b>→</b>
Heterogeneity: Chi <sup>2</sup> =	4.84, df =	1 (P = 0.03)	; I <sup>2</sup> = 79	9%					
Test for overall effect:	Z = 4.45	(P < 0.00001	)						
1.94.2 TKA   RCT									
Barrington 2005	821	469	53	676	472	55	0.3%	145.00 [-32.49, 322.49]	<del> </del>
Kadic 2009	156	128	27	243	227	26	0.9%	-87.00 [-186.72, 12.72]	<del> </del>
Kovalak 2015	225.63	31.72	32	223.93	28.46	28	39.3%	1.70 [-13.53, 16.93]	•
Li 2017	276.4	103.2	27	288.5	97.6	26	3.1%	-12.10 [-66.16, 41.96]	+
Li 2017	273.6	101.5	24	288.5	97.6	26	3.0%	-14.90 [-70.18, 40.38]	+
Ivarez 2017	180.5	19.7	19	334.7	39.6	20	24.0%	-154.20 [-173.69, -134.71]	•
Peng 2014	89.72	93.49	140	88.89	86.27	140	20.5%	0.83 [-20.24, 21.90]	•
Sites 2004	250	86	20	260	90	20	3.1%	-10.00 [-64.56, 44.56]	+
Wu 2014 Subtotal (95% CI)	434	309	30 <b>372</b>	394	267	30 <b>371</b>	0.4% <b>94.7%</b>	40.00 [-106.13, 186.13] -39.64 [-49.46, -29.83]	1
Heterogeneity: Chi <sup>2</sup> =	184.33, d	f = 8 (P < 0.0)	0001);	$I^2 = 96\%$					
Test for overall effect:	Z = 7.92	(P < 0.00001	)						
Total (95% CI)			424			466	100.0%	-42.53 [-52.08, -32.98]	•
Heterogeneity: Chi <sup>2</sup> =	195.41, d	f = 10 (P < 0	.00001	); I <sup>2</sup> = 95 <sup>9</sup>	%				-1000 -500 0 500 10
Test for overall effect:	Z = 8.73	(P < 0.00001	)						-1000 -500 0 500 10

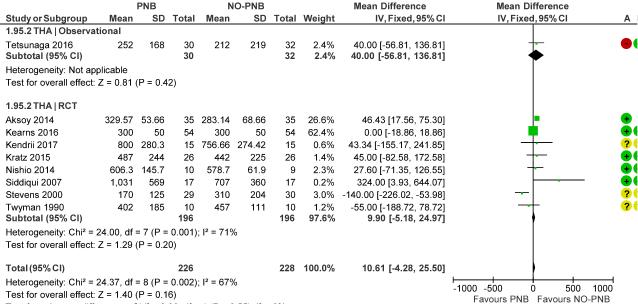
Test for subgroup differences:  $Chi^2 = 6.23$ , df = 1 (P = 0.01),  $I^2 = 84.0\%$ 

Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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### 1.95 Blood loss (total / intraop / postop) | THA



Test for subgroup differences:  $Chi^2 = 0.36$ , df = 1 (P = 0.55),  $I^2 = 0\%$ 

### Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
- (J) Observational Study: Incomplete follow-up
- (K) Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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## 1.96 Blood loss (total / intraop / postop) | GA/NA (THA/TKA)

		PNB		N	O-PNB			Mean Difference	Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Fixed, 95% CI	IV, Fixed, 95% CI
1.96.2 GA									
Alsheik 2020	268	201.9	40	476.5	292.9	40	0.5%	-208.50 [-318.74, -98.26]	<del></del>
Kendrii 2017	800	280.3	15	756.66	274.42	15	0.2%	43.34 [-155.17, 241.85]	<del></del> -
Kratz 2015	487	244	26	442	225	26	0.4%	45.00 [-82.58, 172.58]	<del></del>
Nishio 2014	606.3	145.7	10	578.7	61.9	9	0.6%	27.60 [-71.35, 126.55]	<del> -</del>
Peng 2014	89.72	93.49	140	88.89	86.27	140	13.6%	0.83 [-20.24, 21.90]	<b>.</b>
Siddiqui 2007	1,031	569	17	707	360	17	0.1%	324.00 [3.93, 644.07]	
Stevens 2000	170	125	29	310	204	30	0.8%	-140.00 [-226.02, -53.98]	<del></del>
Tetsunaga 2016	252	168	30	212	219	32	0.6%	40.00 [-56.81, 136.81]	<del> </del>
Twyman 1990	402	185	10	457	111	10	0.3%	-55.00 [-188.72, 78.72]	<del></del>
Subtotal (95% CI)	402	100	317	457		319	17.1%	-8.18 [-26.98, 10.61]	•
Heterogeneity: Chi <sup>2</sup> =	20 40 df :	= 8 (P = 0 00		= 73%		0.0	111170	0.10 [ 20.00, 10.01]	ì
Test for overall effect:	,	`	00), 1	- 1070					
1.96.2 GA only									
Kratz 2015	487	244	26	442	225	26	0.4%	45.00 [-82.58, 172.58]	+-
Peng 2014	89.72	93.49	140	88.89	86.27	140	13.6%	0.83 [-20.24, 21.90]	<b>+</b>
Siddiqui 2007	1,031	569	17	707	360	17	0.1%	324.00 [3.93, 644.07]	<del></del>
Stevens 2000	170	125	29	310	204	30	0.8%	-140.00 [-226.02, -53.98]	<del></del>
Γetsunaga 2016	252	168	30	212	219	32	0.6%	40.00 [-56.81, 136.81]	<del> </del>
Twyman 1990	402	185	10	457	111	10	0.3%	-55.00 [-188.72, 78.72]	<del></del>
Subtotal (95% CI)			252			255	15.9%	-3.79 [-23.32, 15.74]	•
Heterogeneity: Chi <sup>2</sup> = Fest for overall effect: I.96.2 GA + NA		•	- /,						
	000	004.0	40	470.5	000.0	40	0.50/	000 50 5040 74 00 001	
Alsheik 2020	268	201.9	40	476.5	292.9	40	0.5%	-208.50 [-318.74, -98.26]	<u> </u>
Kendrii 2017	800	280.3		756.66		15	0.2%	43.34 [-155.17, 241.85]	<u></u>
Nishio 2014	606.3	145.7	10 <b>65</b>	578.7	61.9	9 <b>64</b>	0.6% <b>1.3%</b>	27.60 [-71.35, 126.55]	
Subtotal (95% CI)	11 01 45.	- 2 (D - 0 00		0.20/		04	1.5/0	-63.09 [-132.13, 5.95]	<b>V</b>
Heterogeneity: Chi² = Test for overall effect:		•	14); 1	02%					
1.96.2 NA only									
Alsheik 2020	268	201.9	40	476.5	292.9	40	0.5%	-208.50 [-318.74, -98.26]	
Barrington 2005	821	469	53	676	472	55	0.2%	145.00 [-32.49, 322.49]	+
Kadic 2009	156	128	27	243	227	26	0.6%	-87.00 [-186.72, 12.72]	<del> </del>
Kearns 2016	300	50	54	300	50	54	17.0%	0.00 [-18.86, 18.86]	<b>+</b>
Kovalak 2015	225.63	31.72		223.93	28.46	28	26.1%	1.70 [-13.53, 16.93]	<b>.</b>
varez 2017	180.5	19.7	19	334.7	39.6	20	15.9%	-	•
Simonsen 2011		70.014879	12	327.5	77.5	55	3.0%	-75.00 [-119.60, -30.40]	<b>-</b>
Sites 2004	250	86	20	260	90	20	2.0%	-10.00 [-64.56, 44.56]	+
Nu 2014	434	309	30	394	267	30	0.3%	40.00 [-106.13, 186.13]	<del></del> _
Subtotal (95% CI)	434	309	287	394	207	328	65.7%	-42.30 [-51.90, -32.71]	•
Heterogeneity: Chi² = Fest for overall effect:		•	0001);	I <sup>2</sup> = 96%		020	00.70	-2.00 [-01.00, -02.71]	
	<u> </u>	(i ~ 0.00001	•						
Total (95% CI)			921			966	100.0%	-30.61 [-38.39, -22.83]	. 4
Heterogeneity: Chi <sup>2</sup> =	271.93, df	f = 26 (P < 0.	.00001)	$I^2 = 90^\circ$	6				-1000 -500 0 500
Test for overall effect: Test for subgroup diffe		•	,	D - 0 00	02) 12 - 1	Q1 10/ <sub>2</sub>			Favours PNB Favours NO-

Test for subgroup differences:  $Chi^2 = 19.26$ , df = 3 (P = 0.0002),  $I^2 = 84.4\%$ 

Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria

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- (I) Observational Study. Flawed measurement of exposure of outcome
- (J) Observational Study: Incomplete follow-up
- $(\mbox{\bf K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- $(\mbox{\bf M})$  RCT: Sequence Generation
- (N) RCT: Other sources of bias
- $({\bf O})$  RCT: Blinding of outcome assessors  $({\bf P})$  RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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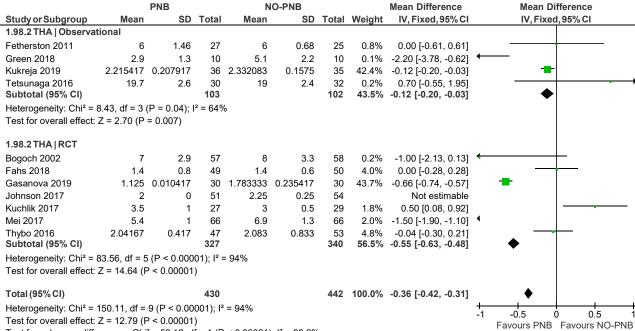
## 1.97 Blood loss (total / intraop / postop) | Total

		PNB		N	O-PNB			Mean Difference	Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Fixed, 95% CI	IV, Fixed, 95% CI
Aksoy 2014	329.57	53.66	35	283.14	68.66	35	7.8%	46.43 [17.56, 75.30]	<del>-</del>
Alsheik 2020	268	201.9	40	476.5	292.9	40	0.5%	-208.50 [-318.74, -98.26]	<del></del>
Barrington 2005	821	469	53	676	472	55	0.2%	145.00 [-32.49, 322.49]	<del> </del>
Kadic 2009	156	128	27	243	227	26	0.6%	-87.00 [-186.72, 12.72]	<del> </del>
Kearns 2016	300	50	54	300	50	54	18.2%	0.00 [-18.86, 18.86]	•
Kendrii 2017	800	280.3	15	756.66	274.42	15	0.2%	43.34 [-155.17, 241.85]	<del>- </del>
Kovalak 2015	225.63	31.72	32	223.93	28.46	28	27.9%	1.70 [-13.53, 16.93]	•
Kratz 2015	487	244	26	442	225	26	0.4%	45.00 [-82.58, 172.58]	<del> -</del>
Li 2017	276.4	103.2	27	288.5	97.6	26	2.2%	-12.10 [-66.16, 41.96]	+
Li 2017	273.6	101.5	24	288.5	97.6	26	2.1%	-14.90 [-70.18, 40.38]	+
Ivarez 2017	180.5	19.7	19	334.7	39.6	20	17.0%	-154.20 [-173.69, -134.71]	•
Nishio 2014	606.3	145.7	10	578.7	61.9	9	0.7%	27.60 [-71.35, 126.55]	<del> -</del>
Peng 2014	89.72	93.49	140	88.89	86.27	140	14.6%	0.83 [-20.24, 21.90]	•
Siddiqui 2007	1,031	569	17	707	360	17	0.1%	324.00 [3.93, 644.07]	<del></del>
Simonsen 2011	252.5	70.014879	12	327.5	77.5	55	3.2%	-75.00 [-119.60, -30.40]	<del>-</del>
Sites 2004	250	86	20	260	90	20	2.2%	-10.00 [-64.56, 44.56]	+
Stevens 2000	170	125	29	310	204	30	0.9%	-140.00 [-226.02, -53.98]	<del></del>
Tetsunaga 2016	252	168	30	212	219	32	0.7%	40.00 [-56.81, 136.81]	<del> -</del>
Twyman 1990	402	185	10	457	111	10	0.4%	-55.00 [-188.72, 78.72]	<del></del>
Wu 2014	434	309	30	394	267	30	0.3%	40.00 [-106.13, 186.13]	<del> </del>
Total (95% CI)			650			694	100.0%	-27.05 [-35.09, -19.01]	•
Heterogeneity: Chi <sup>2</sup> =	254 43 di	f = 19 (P < 0	00001	· I² = 939	6			- <i>′</i> -	<del></del>
Test for overall effect:		•	,	,,	•				-1000 -500 0 500 1000
1 COL TOT OVER UIT CHECK.	_ 0.00	(1 - 0.00001	,						Favours PNB Favours NO-PNB

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
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- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
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- (G) Other bias
- (H) Observational Study: Failure to develop and apply appropriate eligibility criteria
- (I) Observational Study: Flawed measurement of exposure or outcome
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- $(\mathbf{K})$  Observational Study: Failure to adequately control for confounding
- (L) RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
- (N) RCT: Other sources of bias
- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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### 1.98 Length of hospital stay (LOS) | THA



Test for subgroup differences: Chi<sup>2</sup> = 58.12, df = 1 (P < 0.00001),  $I^2$  = 98.3%

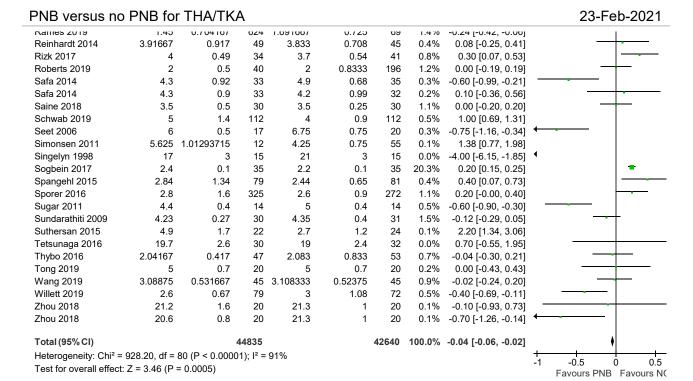
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
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- (L) RCT: Selective outcome reporting
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- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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1.99 Length of hospital stay (LOS) | Total

		PNB			NO-PNB			Mean Difference	Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Fixed, 95% CI	IV, Fixed, 95% CI
Amundson 2017	2	0.1666	50	2	0.1666	107	14.2%	0.00 [-0.06, 0.06]	+
Andersen 2012	3.4	0.65	20	3.3	0.85	20	0.2%	0.10 [-0.37, 0.57]	<del> </del>
Angers 2019	6.2	2.1	45	6.1	3	45	0.0%	0.10 [-0.97, 1.17]	- ·
Antoni 2014	8.8	3.5	49	6.1	3.4	49	0.0%	2.70 [1.33, 4.07]	
Ashraf 2013	5.7	1.3	21	5.4	1.2	19	0.1%	0.30 [-0.47, 1.07]	-
Barrington 2005	5.3	1.1	53	5.4	1.1	55	0.3%	-0.10 [-0.51, 0.31]	
Beaupre 2012	4.25	0.25	19	3.5	0.25	20	1.8%	0.75 [0.59, 0.91]	
Biswas 2018	3	0	68	3	0	62		Not estimable	
Bogoch 2002	7	2.9	57	8	3.3	58	0.0%	-1.00 [-2.13, 0.13]	<del>-</del>
Campbell 2008	9	4	26	8.75	3.75	30	0.0%	0.25 [-1.79, 2.29]	•
Chan 2013	5.5	1.6	65	5.4	1.4	66	0.2%	0.10 [-0.42, 0.62]	
Chan 2013	5.9	1.9	69	5.4	1.4	66	0.1%	0.50 [-0.06, 1.06]	<del>                                     </del>
Chan 2014	5.5	1.6	65	5.4	1.4	66	0.2%	0.10 [-0.42, 0.62]	-
Chan 2014	5.9	1.9	69	5.4	1.4	66	0.1%	0.50 [-0.06, 1.06]	1
Chaumeron 2013	6.8	2.6	30	6.6	2.1	29	0.0%	0.20 [-1.00, 1.40]	
Cien 2015	2	0.7	65	1.6	0.7	57	0.7%	0.40 [0.15, 0.65]	
DeRuyter 2006	3.6	0.6	24	4.2	1	26	0.2%	-0.60 [-1.05, -0.15]	<del></del>
Fahs 2018	1.4	0.8	49	1.4	0.6	50	0.6%	0.00 [-0.28, 0.28]	
Fan 2016	18.6	4.7	78	17.3	3.7	79	0.0%	1.30 [-0.02, 2.62]	<del></del>
Fenten 2018	3.2	1.1	40	3	0.9	40	0.2%	0.20 [-0.24, 0.64]	
Fetherston 2011	6	1.46	27	6	0.68	25	0.1%	0.00 [-0.61, 0.61]	
Gasanova 2019	1.125	0.010417	30	1.783333	0.235417	30	6.3%	-0.66 [-0.74, -0.57]	<del></del>
Goytizolo 2020	1.075	0.2177	55	1.1	0.2427	56	6.1%	-0.03 [-0.11, 0.06]	, <del>†</del>
Green 2018	2.9	1.3	10	5.1	2.2	10	0.0%	-2.20 [-3.78, -0.62]	_
Grosso 2018	2.5	2.1	51	2.5	1.2	51	0.1%	0.00 [-0.66, 0.66]	
Gwam 2018	1.98	0.16	65	2.44	0.25	45	6.5%	-0.46 [-0.54, -0.38]	<del>-</del>
Henson 2019	2.97	1.08	71	2.63	0.68	73	0.5%	0.34 [0.04, 0.64]	-
Horn 2015	1.9	0.6	16	1.5	0.6	16	0.3%	0.40 [-0.02, 0.82]	-
Johnson 2017	2	0	51	2.25	0.25	54		Not estimable	
Kampitak 2018	4	0	29	4.11	0.31	28	0.40/	Not estimable	
Kardash 2007		1.34164079	20		1.34164079	20	0.1%	0.60 [-0.23, 1.43]	
Kardash 2007		1.30766968	19	6.1	1.34164079	20	0.1%	0.10 [-0.73, 0.93]	
Kayupov 2018	2.21	1.58	47	2.46	0.98	44	0.2%	-0.25 [-0.79, 0.29]	
Kayupov 2018	2.14	0.68	41	2.46	0.98	44	0.4%	-0.32 [-0.68, 0.04]	
Kinjo 2012	5.7	6.4	29	5	1.9	52	0.0%	0.70 [-1.69, 3.09]	`   <u> </u>
Kirkness 2017	3.6	1.6	134	3.1	1.7	134	0.3%	0.50 [0.10, 0.90]	
Kovalak 2015	4.81	0.69	32	4.61	0.74	28	0.3%	0.20 [-0.16, 0.56]	<u> </u>
Kuchlik 2017	3.5		27	3 2.332083	0.5	29	0.3%	0.50 [0.08, 0.92]	
Kukreja 2019	2.215417	0.207917	36		0.1575	35	6.1%	-0.12 [-0.20, -0.03]	
Kulkarni 2019	4.8	1.43	50 20	5.1	1.24	50	0.2%	-0.30 [-0.82, 0.22]	
Lee 2012	17.3 2.67	1.1	38	17.7 2.42	5.1 0.68	20 32	0.0% 0.3%	-0.40 [-3.24, 2.44]	` <u> </u>
Leung 2018 Li 2017	5.2	1.1	27	3.6	0.08	26	0.3%	0.25 [-0.17, 0.67] 1.60 [1.11, 2.09]	
Li 2017	4.9	0.8	24	3.6	0.8	26	0.2%	1.30 [0.86, 1.74]	
Liu 2015		1.02298463	1329		1.01554645	439		-0.15 [-0.26, -0.04]	
Lu 2017	4.5	1.02230403	28	5.76	2.2	29	0.1%	-0.50 [-1.40, 0.40]	<del></del>
McIsaac 2017	4.7	3.9	38557	4.8	4.1	38557		-0.10 [-0.16, -0.04]	
Mei 2017	5.4	1	66	6.9	1.3	66	0.3%	-1.50 [-1.90, -1.10]	<b>→</b>
Ng 2001	8.8	3.4	12	8.8	2.9	12	0.0%	0.00 [-2.53, 2.53]	<b>←</b>
Ng 2001	9.5	3.4	12	8.8	2.9	12	0.0%	0.70 [-1.83, 3.23]	<b>←</b>
Ng 2001	9.3	3	12	8.8	2.9	12	0.0%	0.50 [-1.86, 2.86]	<b>+</b>
Pope 2015	2.8	1	267	2.9	1.1	27	0.2%	-0.10 [-0.53, 0.33]	
Pope 2015	2.8	0.9	77	2.9	1.1	27	0.2%	-0.10 [-0.56, 0.36]	
Pope 2015	3.1	1.2	37	2.8	0.8	17	0.2%	0.30 [-0.24, 0.84]	<del>-   -</del>
Pope 2015	2.8	1	267	3.3	1	18	0.2%	-0.50 [-0.98, -0.02]	<u> </u>
Pope 2015	3.1	1.2	37	2.9	1.1	27	0.1%	0.20 [-0.37, 0.77]	<del>-   -</del>
Pope 2015	2.8	1	267	2.8	0.8	17	0.3%	0.00 [-0.40, 0.40]	
Pope 2015	3.1	1.2	37	3.3	1	18	0.1%	-0.20 [-0.80, 0.40]	-
Pope 2015	2.8	0.9	77	2.8	0.8	17	0.2%	0.00 [-0.43, 0.43]	
Pope 2015	2.8	0.9	77	3.3	1	18	0.2%	-0.50 [-1.00, 0.00]	-
Pames 2010	1 //5	N 7N/167	624	1 601667	N 725	60	1 10%	_U 3V I_U V3 _U Uej	<del></del>

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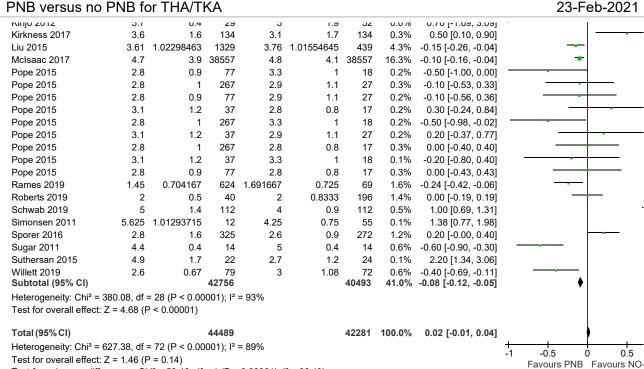
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- $\textbf{(F)} \ \mathsf{Selective} \ \mathsf{reporting} \ \mathsf{(reporting bias)}$
- $(\mathbf{G})$  Other bias
- $\textbf{(H)} \ \textbf{Observational Study: Failure to develop and apply appropriate eligibility criteria} \\$
- $\textbf{(I)} \ \textbf{Observational Study: Flawed measurement of exposure or outcome}$
- $(\boldsymbol{J})$  Observational Study: Incomplete follow-up
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- $(\mbox{\bf L})$  RCT: Selective outcome reporting
- (M) RCT: Sequence Generation
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- (O) RCT: Blinding of outcome assessors
- (P) RCT: Blinding of participants and personnel
- (Q) RCT: Allocation concealment
- (R) RCT: Incomplete outcome data

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1.100 Length of hospital stay (LOS) | TKA

		PNB			NO-PNB			Mean Difference	Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Fixed, 95% CI	IV, Fixed, 95% CI
1.100.2 TKA   RCT									
Amundson 2017	2	0.1666	50	2	0.1666	107	16.6%	0.00 [-0.06, 0.06]	+
Andersen 2012	3.4	0.65	20	3.3	0.85	20	0.2%	0.10 [-0.37, 0.57]	<del></del>
Angers 2019	6.2	2.1	45	6.1	3	45	0.0%	0.10 [-0.97, 1.17]	
Ashraf 2013	5.7	1.3	21	5.4	1.2	19	0.1%	0.30 [-0.47, 1.07]	-
Barrington 2005	5.3	1.1	53	5.4	1.1	55	0.3%	-0.10 [-0.51, 0.31]	<del></del>
Biswas 2018	3	0	68	3	0	62		Not estimable	
Bogoch 2002	7	2.9	57	8	3.3	58	0.0%	-1.00 [-2.13, 0.13]	<del></del>
Campbell 2008	9	4	26	8.75	3.75	30	0.0%	0.25 [-1.79, 2.29]	+ -
Chan 2013	5.5	1.6	65	5.4	1.4	66	0.2%	0.10 [-0.42, 0.62]	-
Chan 2013	5.9	1.9	69	5.4	1.4	66	0.2%	0.50 [-0.06, 1.06]	+
Chan 2014	5.5	1.6	65	5.4	1.4	66	0.2%	0.10 [-0.42, 0.62]	<del></del>
Chan 2014	5.9	1.9	69	5.4	1.4	66	0.2%	0.50 [-0.06, 1.06]	+
Chaumeron 2013	6.8	2.6	30	6.6	2.1	29	0.0%	0.20 [-1.00, 1.40]	-
Fan 2016	18.6	4.7	78	17.3	3.7	79	0.0%	1.30 [-0.02, 2.62]	
Fenten 2018	3.2	1.1	40	3	0.9	40	0.3%	0.20 [-0.24, 0.64]	<del>-  </del> -
Goytizolo 2020	1.075	0.2177	55	1.1	0.2427	56	7.1%	-0.03 [-0.11, 0.06]	+
Grosso 2018	2.5	2.1	51	2.5	1.2	51	0.1%	0.00 [-0.66, 0.66]	
Kampitak 2018	4	0	29	4.11	0.31	28		Not estimable	
Kardash 2007	6.7	1.34164079	20	6.1	1.34164079	20	0.1%	0.60 [-0.23, 1.43]	<del>-  </del>
Kardash 2007	6.2	1.30766968	19	6.1	1.34164079	20	0.1%	0.10 [-0.73, 0.93]	
Kayupov 2018	2.21	1.58	47	2.46	0.98	44	0.2%	-0.25 [-0.79, 0.29]	<del></del>
Kayupov 2018	2.14	0.68	41	2.46	0.98	44	0.4%	-0.32 [-0.68, 0.04]	<del></del>
Kovalak 2015	4.81	0.69	32	4.61	0.74	28	0.4%	0.20 [-0.16, 0.56]	<del></del>
Kulkarni 2019	4.8	1.43	50	5.1	1.24	50	0.2%	-0.30 [-0.82, 0.22]	<del></del>
Lee 2012	17.3	4	20	17.7	5.1	20	0.0%	-0.40 [-3.24, 2.44]	<del>-</del>
Leung 2018	2.67	1.1	38	2.42	0.68	32	0.3%	0.25 [-0.17, 0.67]	<del>-   •</del>
Li 2017	5.2	1	27	3.6	0.8	26	0.2%	1.60 [1.11, 2.09]	
Li 2017	4.9	0.8	24	3.6	0.8	26	0.3%	1.30 [0.86, 1.74]	
Lu 2017	4.5	1.1	28	5	2.2	29	0.1%	-0.50 [-1.40, 0.40]	<del>-</del>
Ng 2001	8.8	3.4	12	8.8	2.9	12	0.0%	0.00 [-2.53, 2.53]	+
Ng 2001	9.5	3.4	12	8.8	2.9	12	0.0%	0.70 [-1.83, 3.23]	<b>←</b>
Ng 2001	9.3	3	12	8.8	2.9	12	0.0%	0.50 [-1.86, 2.86]	<del>-</del>
Reinhardt 2014	3.91667	0.917	49	3.833	0.708	45	0.5%	0.08 [-0.25, 0.41]	<del>-   -</del>
Rizk 2017	4	0.49	34	3.7	0.54	41	1.0%	0.30 [0.07, 0.53]	<del></del>
Safa 2014	4.3	0.92	33	4.9	0.68	35	0.3%	-0.60 [-0.99, -0.21]	<del></del>
Safa 2014	4.3	0.9	33	4.2	0.99	32	0.2%	0.10 [-0.36, 0.56]	
Saine 2018	3.5	0.5	30	3.5	0.25	30	1.3%	0.00 [-0.20, 0.20]	
Seet 2006	6	0.5	17	6.75	0.75	20	0.3%	-0.75 [-1.16, -0.34]	<del></del>
Singelyn 1998	17	3	15	21	3	15	0.0%	-4.00 [-6.15, -1.85]	◀
Sogbein 2017	2.4	0.1	35	2.2	0.1	35	23.7%	0.20 [0.15, 0.25]	-
Spangehl 2015	2.84	1.34	79	2.44	0.65	81	0.5%	0.40 [0.07, 0.73]	
Sundarathiti 2009	4.23	0.27	30	4.35	0.4	31	1.8%	-0.12 [-0.29, 0.05]	<del>+</del>
Tong 2019	5	0.7	20	5	0.7	20	0.3%	0.00 [-0.43, 0.43]	<del></del>
Wang 2019	3.08875	0.531667	45	3.108333	0.52375	45	1.1%	-0.02 [-0.24, 0.20]	<del></del>
Zhou 2018	21.2	1.6	20	21.3	1	20	0.1%	-0.10 [-0.93, 0.73]	<del></del>
Zhou 2018	20.6	0.8	20	21.3	1	20	0.2%	-0.70 [-1.26, -0.14]	
Subtotal (95% CI)			1733			1788	59.0%	0.09 [0.06, 0.12]	♦
Heterogeneity: Chi <sup>2</sup> =	193.82, df =	= 43 (P < 0.00	001); I²	= 78%					
Test for overall effect:	Z = 5.80 (F	P < 0.00001)							
1.100.2 TKA   Observ								0.70.74.55	
Antoni 2014	8.8	3.5	49	6.1	3.4	49	0.0%	2.70 [1.33, 4.07]	
Beaupre 2012	4.25	0.25	19	3.5	0.25	20	2.1%	0.75 [0.59, 0.91]	
Cien 2015	2	0.7	65	1.6	0.7	57	0.8%	0.40 [0.15, 0.65]	
DeRuyter 2006	3.6	0.6	24	4.2	1	26	0.3%	-0.60 [-1.05, -0.15]	-
Fetherston 2011	6	1.46	27	6	0.68	25	0.1%	0.00 [-0.61, 0.61]	İ
Gwam 2018	1.98	0.16	65	2.44	0.25	45	7.6%	-0.46 [-0.54, -0.38]	<del></del>
Henson 2019	2.97	1.08	71	2.63	0.68	73	0.6%	0.34 [0.04, 0.64]	-
Horn 2015	1.9	0.6	16	1.5	0.6	16	0.3%	0.40 [-0.02, 0.82]	,
Kinin 2012	5.7	6.4	20	5	1 0	50	n n%	0 70 [_1 60 3 00]	+

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Test for subgroup differences:  $Chi^2 = 53.48$ , df = 1 (P < 0.00001),  $I^2 = 98.1\%$ 

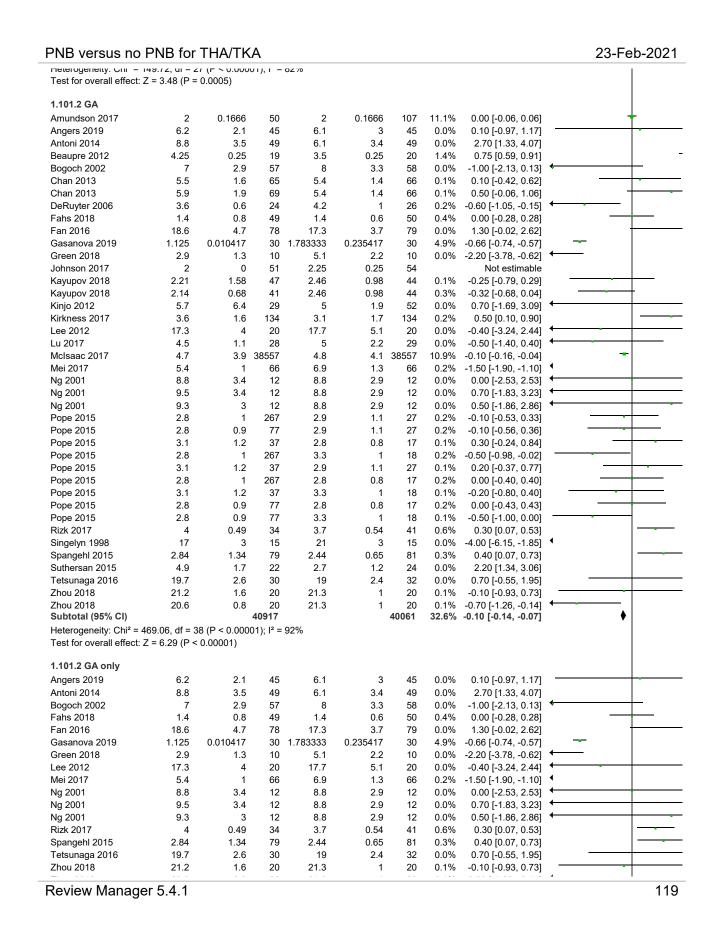
- (A) Random sequence generation (selection bias)
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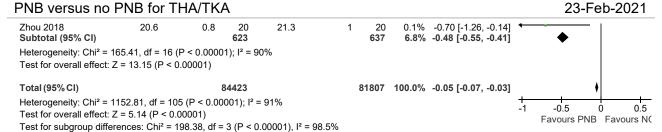
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## 1.101 Length of hospital stay (LOS) | GA/NA (THA/TKA)

		PNB			NO-PNB			Mean Difference	Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Fixed, 95% CI	IV, Fixed, 95% CI
1.101.2 GA + NA									
Amundson 2017	2	0.1666	50	2	0.1666	107	11.1%	0.00 [-0.06, 0.06]	+
Beaupre 2012	4.25	0.25	19	3.5	0.25	20	1.4%	0.75 [0.59, 0.91]	-
Chan 2013	5.5	1.6	65	5.4	1.4	66	0.1%	0.10 [-0.42, 0.62]	<del></del>
Chan 2013	5.9	1.9	69	5.4	1.4	66	0.1%	0.50 [-0.06, 1.06]	+
DeRuyter 2006	3.6	0.6	24	4.2	1	26	0.2%	-0.60 [-1.05, -0.15]	<del></del>
Johnson 2017	2	0	51	2.25	0.25	54		Not estimable	
Kayupov 2018	2.21	1.58	47	2.46	0.98	44	0.1%	-0.25 [-0.79, 0.29]	*
Kayupov 2018	2.14	0.68	41	2.46	0.98	44	0.3%	-0.32 [-0.68, 0.04]	<del></del>
Kinjo 2012	5.7	6.4	29	5	1.9	52	0.0%	0.70 [-1.69, 3.09]	+
Kirkness 2017	3.6	1.6	134	3.1	1.7	134	0.2%	0.50 [0.10, 0.90]	
Lu 2017	4.5	1.1	28	5	2.2	29	0.0%	-0.50 [-1.40, 0.40]	•
McIsaac 2017	4.7	3.9	38557	4.8	4.1	38557	10.9%	-0.10 [-0.16, -0.04]	-
Pope 2015	2.8	1	267	2.8	8.0	17	0.2%	0.00 [-0.40, 0.40]	
Pope 2015	3.1	1.2	37	3.3	1	18	0.1%	-0.20 [-0.80, 0.40]	-
Pope 2015	2.8	0.9	77	2.8	8.0	17	0.2%	0.00 [-0.43, 0.43]	
Pope 2015	2.8	0.9	77	3.3	1	18	0.1%	-0.50 [-1.00, 0.00]	-
Pope 2015	2.8	1	267	2.9	1.1	27	0.2%	-0.10 [-0.53, 0.33]	
Pope 2015	2.8	0.9	77	2.9	1.1	27	0.2%	-0.10 [-0.56, 0.36]	
Pope 2015	3.1	1.2	37	2.8	8.0	17	0.1%	0.30 [-0.24, 0.84]	<del></del>
Pope 2015	2.8	1	267	3.3	1	18	0.2%	-0.50 [-0.98, -0.02]	-
Pope 2015	3.1	1.2	37	2.9	1.1	27	0.1%	0.20 [-0.37, 0.77]	
Singelyn 1998	17	3	15	21	3	15	0.0%	-4.00 [-6.15, -1.85]	1
Suthersan 2015	4.9	1.7	22	2.7	1.2	24	0.0%	2.20 [1.34, 3.06]	
Subtotal (95% CI)			40294			39424	25.8%	-0.01 [-0.04, 0.03]	<b>†</b>
Heterogeneity: Chi <sup>2</sup> =	,	,	01); I <sup>2</sup> =	88%					
Test for overall effect:	Z = 0.32 (P)	= 0.75)							
1.101.2 NA only									
•	2.4	0.05	00	0.0	0.05	00	0.00/	0.40 [ 0.07 0.57]	
Andersen 2012 Ashraf 2013	3.4 5.7	0.65 1.3	20 21	3.3 5.4	0.85 1.2	20 19	0.2% 0.1%	0.10 [-0.37, 0.57]	
Barrington 2005	5.7	1.3	53	5.4	1.1	55	0.1%	0.30 [-0.47, 1.07] -0.10 [-0.51, 0.31]	
Biswas 2018	3.3	0	68	3.4	0	62	0.2 /0	Not estimable	
Campbell 2008	9	4	26	8.75	3.75	30	0.0%	0.25 [-1.79, 2.29]	<del>-</del>
Chaumeron 2013	6.8	2.6	30	6.6	2.1	29	0.0%	0.20 [-1.00, 1.40]	
Fenten 2018	3.2	1.1	40	3	0.9	40	0.0%	0.20 [-0.24, 0.64]	
Goytizolo 2020	1.075	0.2177	55	1.1	0.2427	56	4.7%	-0.03 [-0.11, 0.06]	<del>_</del>
Grosso 2018	2.5	2.1	51	2.5	1.2	51	0.1%	0.00 [-0.66, 0.66]	
Kampitak 2018	4	0	29	4.11	0.31	28	0.170	Not estimable	
Kardash 2007		1.34164079	20	6.1	1.34164079	20	0.1%	0.60 [-0.23, 1.43]	
Kardash 2007		1.30766968	19	6.1	1.34164079	20	0.1%	0.10 [-0.73, 0.93]	
Kovalak 2015	4.81	0.69	32	4.61	0.74	28	0.3%	0.20 [-0.16, 0.56]	
Kuchlik 2017	3.5	1	27	3	0.5	29	0.2%	0.50 [0.08, 0.92]	<del></del>
Kukreja 2019	2.215417	0.207917	36	2.332083	0.1575	35	4.7%	-0.12 [-0.20, -0.03]	<del></del>
Kulkarni 2019	4.8	1.43	50	5.1	1.24	50	0.1%	-0.30 [-0.82, 0.22]	<del></del>
Leung 2018	2.67	1.1	38	2.42	0.68	32	0.2%	0.25 [-0.17, 0.67]	<del></del>
Liu 2015		1.02298463	1329		1.01554645	439		-0.15 [-0.26, -0.04]	<del></del>
Reinhardt 2014	3.91667	0.917	49	3.833	0.708	45	0.3%	0.08 [-0.25, 0.41]	<del>-  </del>
Safa 2014	4.3	0.92	33	4.9	0.68	35	0.2%	-0.60 [-0.99, -0.21]	<del></del>
Safa 2014	4.3	0.9	33	4.2	0.99	32	0.2%	0.10 [-0.36, 0.56]	<del></del>
Saine 2018	3.5	0.5	30	3.5	0.25	30	0.9%	0.00 [-0.20, 0.20]	<del></del>
Seet 2006	6	0.5	17	6.75	0.75	20	0.2%	-0.75 [-1.16, -0.34]	<del></del>
Simonsen 2011		1.01293715	12	4.25	0.75	55	0.1%	1.38 [0.77, 1.98]	
Sogbein 2017	2.4	0.1	35	2.2	0.1	35	15.8%	0.20 [0.15, 0.25]	-
Sporer 2016	2.8	1.6	325	2.6	0.9	272	0.8%	0.20 [-0.00, 0.40]	<del> </del>
Sugar 2011	4.4	0.4	14	5	0.4	14	0.4%	-0.60 [-0.90, -0.30]	<del></del>
Sundarathiti 2009	4.23	0.27	30	4.35	0.4	31	1.2%	-0.12 [-0.29, 0.05]	<del>+</del>
Thybo 2016	2.04167	0.417	47	2.083	0.833	53	0.5%	-0.04 [-0.30, 0.21]	<del> </del>
Tong 2019	5	0.7	20	5	0.7	20	0.2%	0.00 [-0.43, 0.43]	-
Subtotal (95% CI)			2589			1685	34.7%	0.06 [0.02, 0.09]	♦
Hataroganaity: Chi2 =	1/10 77 df =	27 /D < N NNN	∩1\· I² =	<b>Ջ</b> ን%					<u> </u>

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- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
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