## VOLATILE ANESTHETICS VERSUS PROPOFOL FOR CARDIAC SURGERY WITH CARDIOPULMONARY BYPASS: META-ANALYSIS OF RANDOMIZED TRIALS.

Alice Bonanni MD, Alessio Signori MD, PhD, Cristiano Alicino MD, PhD, Irene Mannucci MD, Maria Antonietta Grasso MD, Luigi Martinelli MD and Giacomo Deferrari MD, PhD.

## **SUPPLEMENTAL DIGITAL CONTENT FILE 8**

Figure 8: Forest plot for the effects of volatile anesthetics (A) as a class and (B) as subgroups versus propofol on the extubation time (hours) in adults undergoing cardiac surgery with cardiopulmonary bypass. Subgroup analysis: in (A) isolated coronary artery bypass graft versus isolated valve/concomitant surgery, and in (B) isoflurane versus desflurane or sevoflurane. Std. Mean difference: standardized mean difference. IV: inverse variance

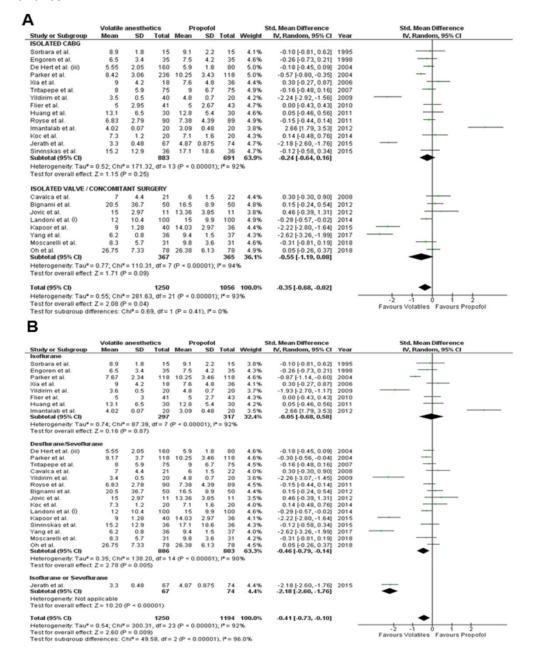
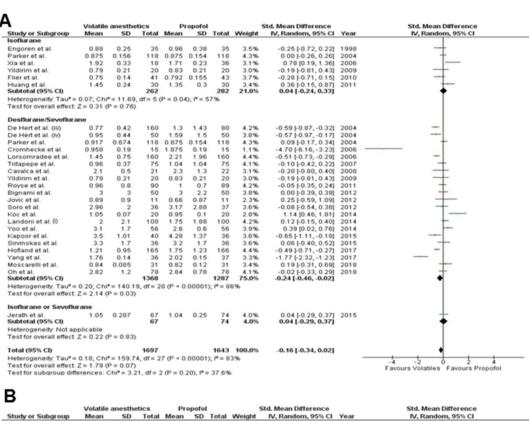


Figura 9: Forest plot for the effects of volatile anesthetics subgroups versus propofol on (A) Intensive Care Unit (days) and (B) Hospital Stay (days) in adults undergoing cardiac surgery with cardiopulmonary bypass. Subgroup analysis: isoflurane versus desflurane or sevoflurane. M-H: Mantel-Haenszel



Study or Subgroup	Volatile anesthetics			Propofol			Std. Mean Difference			Std. Mean Difference
	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year	IV, Random, 95% CI
1.28.1 Isoflurane										
Engoren et al.	5.1	1.8	35	6	3	35	4.2%	-0.36 [-0.83, 0.11]	1998	
Flier et al.	8	1.1	41	8	2.2	43	4.3%	0.00 [-0.43, 0.43]	2010	
Huang et al.	18.5	7.5	30	17.6	9.2	30	4.1%	0.11 [-0.40, 0.61]	2011	
Subtotal (95% CI)			106			108	12.7%	-0.09 [-0.36, 0.18]		•
Heterogeneity: Tau* =	0.00; Chi*	= 2.00, 6	if = 2 (F	= 0.37	$     ^{2} = 0$	%				
Test for overall effect	Z = 0.63 (F	= 0.53)								
1.28.2 Desflurane/Se	voflurane									
De Hert et al. (iii)	8.26	1.85	160	9.44	3.88	80	4.7%	-0.44 [-0.71, -0.16]	2004	
De Hert et al. (iv)	8.13	2.73	50	11.08	6.28	50	4.4%	-0.60 [-1.01, -0.20]	2004	
Cromhecke et al.	7	0.8	15	9.7	4.6	15	3.5%	-0.80 (-1.54, -0.05)	2006	
Lorsomradee et al.	9	4	160	13	7	160	4.8%	-0.70 [-0.93, -0.47]		
Tritapepe et al.	6	2.96	75	8	3.7	75	4.6%	-0.59 [-0.92, -0.27]		
De Hert et al. (v)	9	16.3	269	12	59.3	145	4.8%	-0.08 [-0.28, 0.12]		+
Royse et al.	6	1.48	90	7	2.2	89	4.6%	-0.53 [-0.83, -0.23]		
Bignami et al.	8	6.67	50	7	3.7	50	4.4%	0.18 [-0.21, 0.58]		
Jovic et al.	13.55	8	11	11.27	6.75	11	3.2%	0.30 [-0.54, 1.14]		
Soro et al.	9.2	4.2	36	9.6	5.6	37	4.3%	-0.08 [-0.54, 0.38]		
Koc et al.	5.8	0.4	20	5.4	0.5	20	3.8%	0.87 [0.21, 1.52]		
Landoni et al. (i)	10	5.19	100	10	4.44	100	4.7%	0.00 [-0.28, 0.28]		_
Yoo et al.	15.6	7.5	56	12.3	3.9	56	4.5%	0.55 [0.17, 0.93]		
Kapoor et al.	7.02	1.18	40	7.92	1.42	36	4.3%	-0.69 [-1.15, -0.22]		
Likhvantzev et al.	10	0.74	437	14	4.44	431	4.9%	-1.26 [-1.41, -1.11]		-
Hofland et al.	9	2.2	165	9	2.2	166	4.8%	0.00 [-0.22, 0.22]		+
Yang et al.	12	1.5	36	16	1.5	37	3.8%	-2.64 [-3.27, -2.00]		
Moscarelli et al.	8	1.5	31	8	2.2	31	4.2%	0.00 [-0.50, 0.50]	2018	
Oh et al.	20	3.7	78	19	4.4	78	4.6%	0.24 [-0.07, 0.56]		-
Subtotal (95% CI)	20	0.1	1879			1667	82.7%	-0.33[-0.62, -0.04]	20.0	•
Heterogeneity: Tau* =	0.38: Chi	= 291.8	3. df = 1	8 (P < 0	.0000	1): [* = 1	94%			
Test for overall effect						,,,				
1.28.3 Isoflurane or										
Jerath et al. Subtotal (95% CI)	6	0.5	67 67	6	0.75	74	4.6%	0.00 [-0.33, 0.33]	2015	<b>*</b>
Heterogeneity: Not as	oplicable									
Test for overall effect		= 1.00)								
Total (95% CI)			2052				100.0%	-0.28 [-0.54, -0.03]		•
Heterogeneity: Tau* =	0.35; Chi*	= 307.4	3, df = 2	2 (P < 0	.0000	1); 12 = 1	93%			
Test for overall effect	Z = 2.16 (F	= 0.03)								Favours Volatiles Favours Propofol
Test for subgroup diff	ferences: C	$hi^2 = 2.4$	4. df = 3	2 (P = 0.	30), [*	= 18.04	X6			ravours voiames ravours Propoior

Figure 10: Funnel plots for extubation time (Egger's test P=0.89), hospital stay (Egger's test P=0.094), and Intensive Care Unit stay(Egger's test P=0.65), in adults undergoing cardiac surgery with cardiopulmonary bypass

