

Supplementary File 4. Univariate binary logistic regression analysis

Variant	OR	95%CI	p*
Age	0.995	0.979-1.001	0.540
Female	2.051	1.439-2.923	<0.001*
BMI \geq 30 kg/m ²	4.167	2.575-6.742	<0.001*
Surgical position			
	Supine	Ref.	
	Neutral-prone	1.481	0.997-2.200
	Cervical-flexion	2.222	1.220-4.047
Cervicooccipital angle			
	Neutral ^a	Ref.	
	Hyper-extension ^b	1.942	1.329-2.838
	Over-flexion ^c	3.045	1.686-5.497
Thyromental distance <6.5 cm	1.987	1.385-2.850	<0.001*
Mandibular angle <6 cm	0.775	0.516-1.164	0.219
Mallampati grade \geqIII	0.774	0.536-1.119	0.173
OSAHS	11.571	4.780-28.013	<0.001*
High risk surgical position ^d			
	Low risk	Ref.	
	Prone-flexion	3.045	1.686-5.497
	Prone-extension	1.942	1.329-2.838
“Fat chin, snore throat” ^e	2.168	1.507-3.121	<0.001*

* $p < 0.05$

^a Neutral was defined as $10^\circ \leq$ cervicooccipital angle $\leq 18^\circ$.

^b Hyper-extension was defined as cervicooccipital angle $> 18^\circ$ as the surgical position.

^c Over-flexion was defined as cervicooccipital angle $< 10^\circ$ as the surgical position.

^d High risk surgical position included (a) prone-flexion position: cervicooccipital angle $< 10^\circ$ in prone position and (b) prone-extension position: cervicooccipital angle $> 18^\circ$ in prone position.

^e “Fat chin, snore throat” was defined as any one of the signs of BMI ≥ 30 kg/m² (“fat”), short thyromental distance (“chin”), symptoms of OSAHS (“snore”), or Mallampati grade \geq III (“throat”).

BMI, body mass index; CI, confidence interval; OR, Odds ratio; OSAHS, obstructive sleep apnea/hypopnea syndrome