

Table a1: Area under the curve (AUC) of the receiver operating characteristics (ROC) curves for the detection of noxious events

		AUC (95% CI), p-value				
		Propofol only	Remi 0.05	Remi 0.1	Remi 0.15	Remi 0.2
Tetanic	ANI	0.967 (0.929,1.000) p<0.001	0.951 (0.908,0.994) p<0.001	0.892 (0.822,0.962) p<0.001	0.801 (0.703,0.898) p<0.001	0.824 (0.727,0.922) p<0.001
	SPI	0.855 (0.771,0.939) p<0.001	0.924 (0.860,0.989) p<0.001	0.802 (0.705,0.900) p<0.001	0.748 (0.636,0.859) p<0.001	0.727 (0.612,0.842) p=0.001
	PD	0.997 (0.990,1.000) p<0.001	0.874 (0.789,0.959) p<0.001	0.729 (0.610,0.848) p=0.001	0.677 (0.554,0.801) p=0.009	0.632 (0.504,0.760) p=0.050
	HR	0.750 (0.634,0.866) p<0.001	0.608 (0.478,0.738) P=0.110	0.536 (0.404,0.668) p=0.596	0.532 (0.400,0.665) p=0.634	0.515 (0.382,0.648) p=0.825
	MAP	0.744 (0.630,0.858) p<0.001	0.470 (0.337,0.603) P=0.658	0.431 (0.299,0.563) p=0.307	0.467 (0.335,0.600) p=0.630	0.480 (0.347,0.613) p=0.766
	BIS	0.527 (0.394,0.660) p= 0.685	0.581 (0.450,0.711) P=0.232	0.473 (0.341,0.606) p=0.693	0.492 (0.358,0.626) p=0.905	0.522 (0.388,0.655) p=0.746
Intra-cutaneous	ANI	0.994 (0.982,1.000) p<0.001	0.992 (0.978,1.000) p<0.001	0.922 (0.855,0.988) p<0.001	0.859 (0.761,0.956) p<0.001	0.801 (0.688,0.915) p<0.001
	SPI	0.898 (0.812,0.983) p<0.001	0.954 (0.906,1.000) p<0.001	0.864 (0.774,0.955) p<0.001	0.822 (0.715,0.928) p<0.001	0.841 (0.742,0.941) p<0.001
	PD	0.961 (0.898,1.000) p<0.001	0.843 (0.736,0.950) p<0.001	0.736 (0.606,0.866) p=0.002	0.670 (0.531,0.809) p=0.026	0.675 (0.535,0.816) p=0.022
	HR	0.737 (0.607,0.868) p=0.002	0.633 (0.487,0.779) p=0.083	0.551 (0.401,0.700) p=0.509	0.524 (0.374,0.674) p=0.750	0.510 (0.359,0.660) p=0.901
	MAP	0.756 (0.629,0.883) P=0.001	0.481 (0.331,0.631) p=0.803	0.411 (0.263,0.559) p=0.243	0.476 (0.324,0.627) p=0.750	0.483 (0.332,0.633) p=0.822
	BIS	0.581 (0.432,0.729) p=0.290	0.555 (0.405,0.705) p=0.470	0.532 (0.380,0.683) p=0.680	0.537 (0.386,0.689) p=0.624	0.603 (0.455,0.750) p=0.179

Area under the curve (AUC), asymptotic 95% confidence interval (95%CI) of AUC (in parentheses) and asymptotic P Value (H0: AUC = 0.5) of the receiver operating characteristics (ROC) curves for the detection of noxious events under propofol and increasing remifentanyl-infusion rates after tetanic or intracutaneous noxious stimulation. An AUC > 0.5 associated with p < 0.05 indicates that a given parameter, at a given remifentanyl dose, is better in correctly predicting noxious events than a random guess (significance measured by non-parametric Mann-Whitney-U-Test). Remifentanyl was increased step-wise from none ("Propofol") to 0.2 µg kg⁻¹ min⁻¹ by steps of 0.5 µg. Displayed are ANI = Analgesia Nociception Index, SPI = Surgical Pleth Index, PD = pupil diameter, HR = heart rate, MAP = mean arterial blood pressure and BIS = bispectral index; Remi = remifentanyl-infusion rates. Color-coded levels of effect size (green: AUC>0.80, yellow: AUC 0.65-0.80; red: AUC<0.65).