Simulation Result 1: C~Exp(0.2)

Convergence rate, removed non-converged results

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Table 1: Summary of the estimated SAUC for Biomarker1 when the true censoring is distributed as $Exp(0.2)$.

			$p = 0.7$		$p = 0.5$		$p = 0.3$	
Patients	N	Method	Median (Q1, Q3)	CR	Median (Q1, Q3)	CR	Median (Q1, Q3)	CR
50-150	20	HZ_P	0.00 (73.45, 76.48)	100.00	0.00 (73.43, 75.97)	100.00	0.00 (73.69, 75.66)	100.00
		HZ_O	1.33 (74.32, 78.03)	99.90	1.73 (74.57, 78.51)	100.00	2.35 (75.15, 79.14)	99.90
		$Prop_n$	0.64 (73.01, 77.96)	64.19	0.16 (72.29, 77.54)	60.48	-0.52 (71.10, 77.02)	56.21
		$Prop_o$	0.71 (73.23, 78.00)	58.85	0.29 (72.62, 77.69)	56.05	-0.28 (71.80, 77.10)	57.94
		$Prop_p$	0.57 (73.14, 77.99)	62.58	0.23 (72.48, 77.63)	60.28	-0.23 (71.73, 77.07)	60.18
	30	HZ_P	0.00 (73.58, 75.95)	100.00	0.00 (73.54, 75.58)	100.00	0.00 (73.76, 75.32)	100.00
		HZ_O	1.10 (74.27, 77.41)	100.00	1.62 (74.54, 77.85)	100.00	2.48 (75.42, 78.57)	100.00
		$Prop_n$	0.38 (73.51, 77.07)	73.32	0.05 (72.59, 76.81)	69.48	-0.21 (72.02, 76.51)	65.89
		$Prop_o$	0.52 (73.64, 77.35)	68.41	0.05 (72.68, 76.79)	67.07	-0.07 (72.27, 76.47)	65.99
		$Prop_p$	0.40 (73.57, 77.11)	70.41	0.02 (72.62, 76.69)	70.58	-0.18 (72.26, 76.35)	70.74
	50	HZ_P	0.00 (73.78, 75.58)	100.00	0.00 (73.73, 75.38)	100.00	0.00 (73.85, 75.12)	100.00
		HZ_O	1.08 (74.67, 76.93)	100.00	1.67 (75.06, 77.32)	100.00	2.28 (75.60, 78.07)	100.00
		$Prop_n$	0.41 (73.56, 76.57)	81.30	0.04 (73.06, 76.21)	77.10	-0.42 (72.27, 76.01)	72.77
		$Prop_o$	0.49 (73.56, 76.62)	70.70	-0.01 (73.07, 76.07)	70.90	-0.33 (72.43, 75.98)	73.87
		$Prop_p$	0.44 (73.56, 76.56)	79.40	0.10 (73.19, 76.28)	78.00	-0.36 (72.37, 76.04)	79.88
	100	HZ_P	0.00 (73.87, 75.17)	100.00	0.00 (73.96, 75.05)	100.00	0.00 (73.93, 74.82)	100.00
		HZ_O	0.99 (74.75, 76.31)	100.00	1.59 (75.32, 76.94)	100.00	2.38 (75.93, 77.54)	100.00
		$Prop_n$	0.30 (73.79, 76.08)	90.50	0.11 (73.50, 76.19)	85.70	-0.25 (72.88, 75.45)	83.60
		$Prop_o$	0.34 (73.84, 76.15)	72.20	0.11 (73.51, 76.09)	73.70	-0.19 (72.93, 75.55)	74.70
		$Prop_p$	0.36 (73.80, 76.04)	86.30	0.11 (73.55, 76.21)	86.10	-0.19 (72.94, 75.49)	85.90
50-300	20	HZ_P	0.00 (74.66, 77.07)	100.00	0.00 (74.79, 76.82)	100.00	0.00 (74.99, 76.53)	100.00
		HZ_O	0.86 (75.22, 78.36)	100.00	1.56 (75.65, 78.87)	100.00	2.18 (76.18, 79.45)	100.00
		$Prop_n$	-0.42 (72.75, 77.47)	59.05	-0.50 (72.37, 77.46)	57.93	-1.82 (35.05, 76.41)	55.61
		$Prop_o$	0.53 (74.45, 77.89)	51.81	0.22 (74.28, 77.63)	54.32	-0.06 (73.94, 77.40)	57.23
		$Prop_p$	0.35 (74.44, 77.87)	53.12	0.39 (74.40, 77.75)	59.34	-0.03 (73.97, 77.40)	60.06
	30	HZ_P	0.00 (74.85, 76.88)	100.00	0.00 (74.84, 76.53)	100.00	0.00 (75.03, 76.33)	100.00
		HZ_O	0.93 (75.43, 77.98)	100.00	1.34 (75.77, 78.34)	100.00	2.10 (76.19, 79.14)	100.00
		$Prop_n$	0.04 (74.14, 77.43)	71.80	-0.10 (73.74, 77.40)	65.06	-1.01 (71.10, 76.78)	61.18
		$Prop_o$	0.48 (74.88, 77.68)	66.40	0.24 (74.47, 77.47)	63.65	-0.08 (74.12, 77.37)	66.40
		$Prop_p$	0.42 (74.90, 77.65)	71.40	0.31 (74.44, 77.58)	71.29	-0.06 (74.08, 77.28)	73.72
	50	HZ_P	0.00 (74.96, 76.51)	100.00	0.00 (75.04, 76.22)	100.00	0.00 (75.08, 76.07)	100.00
		HZ_O	0.75 (75.48, 77.45)	100.00	1.13 (75.81, 77.69)	100.00	1.81 (76.36, 78.48)	100.00
		$Prop_n$	0.06 (74.65, 77.09)	77.10	0.01 (74.47, 76.90)	70.10	-0.40 (73.71, 76.45)	64.00
		$Prop_o$	0.24 (75.05, 77.27)	72.00	0.08 (74.69, 76.86)	70.60	-0.08 (74.39, 76.76)	72.60
		$Prop_p$	0.27 (75.03, 77.31)	78.80	0.15 (74.77, 76.96)	82.30	-0.04 (74.43, 76.79)	82.80
	100	HZ_P	0.00 (75.04, 76.11)	100.00	0.00 (75.10, 75.98)	100.00	0.00 (75.15, 75.81)	100.00
		HZ_O	0.72 (75.58, 76.95)	100.00	1.03 (75.92, 77.29)	100.00	1.61 (76.37, 77.76)	100.00
		$Prop_n$	0.32 (75.10, 76.68)	84.00	0.18 (74.86, 76.59)	74.10	-0.28 (74.29, 76.22)	63.40
		$Prop_o$	0.31 (75.11, 76.70)	76.40	0.23 (74.95, 76.59)	75.20	-0.17 (74.52, 76.16)	71.80
		$Prop_p$	0.31 (75.13, 76.72)	85.20	0.23 (74.97, 76.60)	86.20	-0.13 (74.60, 76.26)	84.50

Median with 25th and 75th empirical quartiles (Q1, Q3) of the SAUC at $t = 2$ are reported. N denotes the number of the published studies. Prop denotes the proposed sensitivity analysis method; HZ_P denotes the HZ model using the population (published and unpublished) studies; HZ_O denotes the HZ model using only the observed (published) studies. CR denotes the proportion of successfully convergenced estimates among 1000 repetition. All the entries are multiplied by 100.

Table 2: Summary of the estimated SAUC for Biomarker2 when the true censoring is distributed as $Exp(0.2)$.

			$p = 0.7$		$p = 0.5$		$p = 0.3$	
Patients	N	Method	Median (Q1, Q3)	CR	Median (Q1, Q3)	CR	Median (Q1, Q3)	CR
50-150	20	HZ_P	0.00 (56.66, 58.69)	99.49	0.00 (56.92, 58.65)	98.99	0.00 (57.09, 58.42)	99.90
		HZ_O	1.79 (58.40, 60.64)	98.89	2.95 (59.44, 61.90)	98.99	4.27 (60.72, 63.21)	99.18
		$Prop_n$	1.40 (57.81, 60.32)	85.31	2.05 (58.00, 61.35)	85.34	3.11 (57.71, 62.38)	84.46
		$Prop_o$	1.44 (57.73, 60.40)	85.41	2.56 (58.55, 61.69)	87.06	3.84 (59.57, 63.02)	87.01
		$Prop_p$	1.29 (57.64, 59.99)	81.86	1.73 (57.87, 60.89)	82.51	2.65 (57.62, 62.01)	84.97
	30	HZ_P	0.00 (56.95, 58.56)	99.70	0.00 (57.03, 58.42)	100.00	0.00 (57.24, 58.27)	99.90
		HZ_O	1.84 (58.67, 60.63)	99.50	2.87 (59.74, 61.60)	99.50	4.12 (60.92, 62.90)	99.18
		$Prop_n$	1.41 (57.99, 60.25)	90.46	2.12 (58.13, 61.22)	87.86	2.99 (57.48, 62.24)	88.93
		$Prop_o$	1.49 (58.05, 60.41)	88.05	2.54 (58.84, 61.45)	90.77	3.91 (60.28, 62.76)	92.52
		$Prop_p$	1.05 (57.74, 59.85)	87.05	1.83 (58.02, 60.83)	87.26	2.86 (57.74, 61.95)	89.55
	50	HZ_P	0.00 (57.09, 58.33)	100.00	0.00 (57.17, 58.24)	99.90	0.00 (57.32, 58.15)	100.00
		HZ_O	1.85 (58.88, 60.38)	99.80	2.94 (59.98, 61.41)	99.70	4.27 (61.22, 62.73)	99.90
		$Prop_n$	1.46 (58.26, 60.06)	95.20	2.14 (57.76, 61.02)	93.98	3.36 (57.42, 62.21)	92.17
		$Prop_o$	1.58 (58.33, 60.18)	91.39	2.78 (59.56, 61.26)	95.78	4.15 (60.79, 62.66)	94.89
		$Prop_p$	1.10 (57.86, 59.70)	91.19	1.99 (57.78, 60.77)	92.37	3.09 (57.54, 62.05)	90.81
	100	HZ_P	0.00 (57.31, 58.19)	100.00	0.00 (57.36, 58.10)	100.00	0.00 (57.44, 58.02)	100.00
		HZ_O	1.92 (59.13, 60.14)	100.00	2.96 (60.14, 61.21)	100.00	4.26 (61.44, 62.53)	100.00
		$Prop_n$	1.76 (58.77, 60.04)	97.70	2.05 (57.40, 60.80)	92.57	3.58 (57.36, 62.15)	94.68
		$Prop_o$	1.78 (58.70, 60.08)	94.30	2.86 (59.89, 61.15)	97.09	4.23 (61.34, 62.51)	97.71
		$Prop_p$	1.38 (58.15, 59.77)	93.20	2.17 (57.70, 60.76)	92.87	3.76 (58.08, 62.19)	94.89
50-300	20	HZ_P	0.00 (57.09, 58.64)	99.80	0.00 (57.31, 58.54)	100.00	0.00 (57.50, 58.38)	100.00
		HZ_O	1.36 (58.31, 60.07)	99.39	2.18 (59.24, 60.89)	99.59	3.12 (60.10, 61.97)	99.47
		$Prop_n$	0.63 (57.51, 59.59)	69.43	1.30 (57.65, 60.29)	76.38	2.18 (57.97, 61.51)	78.03
		$Prop_o$	0.94 (57.66, 59.84)	66.97	1.77 (57.92, 60.71)	75.15	2.98 (59.20, 61.98)	81.63
		$Prop_p$	0.55 (57.50, 59.30)	63.70	0.59 (57.26, 59.55)	66.87	0.18 (56.56, 59.56)	63.59
	30	HZ_P	0.00 (57.24, 58.59)	100.00	0.00 (57.37, 58.37)	100.00	0.00 (57.52, 58.33)	100.00
		HZ_O	1.39 (58.58, 60.05)	99.69	2.22 (59.44, 60.82)	100.00	3.15 (60.30, 61.81)	99.47
		$Prop_n$	0.52 (57.63, 59.30)	74.13	1.31 (57.69, 60.28)	77.44	2.49 (57.78, 61.47)	83.91
		$Prop_o$	0.85 (57.73, 59.91)	71.36	1.64 (57.65, 60.65)	77.44	3.02 (59.35, 61.82)	86.33
		$Prop_p$	0.40 (57.49, 59.13)	71.77	0.32 (57.18, 59.24)	71.38	-0.26 (56.59, 59.05)	68.77
	50	HZ_P	0.00 (57.47, 58.40)	100.00	0.00 (57.50, 58.35)	100.00	0.00 (57.60, 58.23)	100.00
		HZ_O	1.40 (58.82, 59.91)	100.00	2.16 (59.55, 60.68)	100.00	3.17 (60.50, 61.64)	100.00
		$Prop_n$	0.36 (57.62, 59.05)	77.27	0.82 (57.54, 59.99)	81.08	2.48 (57.75, 61.32)	88.59
		$Prop_o$	0.66 (57.69, 59.48)	72.32	1.44 (57.63, 60.42)	84.13	3.11 (60.15, 61.63)	87.96
		$Prop_p$	0.28 (57.62, 58.93)	76.46	0.03 (57.12, 58.85)	77.01	-0.56 (56.56, 58.34)	73.30
	100	HZ_P	0.00 (57.56, 58.21)	100.00	0.00 (57.61, 58.18)	100.00	0.00 (57.68, 58.15)	100.00
		HZ_O	1.38 (58.92, 59.64)	100.00	2.20 (59.71, 60.53)	100.00	3.11 (60.66, 61.49)	100.00
		$Prop_n$	0.12 (57.53, 58.50)	82.14	0.35 (57.38, 59.89)	80.72	2.74 (57.73, 61.23)	89.16
		$Prop_o$	0.24 (57.55, 58.95)	72.96	1.14 (57.48, 60.22)	78.71	3.08 (60.48, 61.48)	90.86
		$Prop_p$	0.10 (57.51, 58.46)	77.70	-0.16 (57.14, 58.32)	79.92	-0.64 (56.63, 57.93)	73.96

Median with 25th and 75th empirical quartiles (Q1, Q3) of the SAUC at $t = 2$ are reported. N denotes the number of the published studies. Prop denotes the proposed sensitivity analysis method; HZ_P denotes the HZ model using the population (published and unpublished) studies; HZ_O denotes the HZ model using only the observed (published) studies. CR denotes the proportion of successfully convergenced estimates among 1000 repetition. All the entries are multiplied by 100.

Table 3: Summary of the estimated SAUC for Biomarker1 when the true censoring is distributed as $U(1,4)$, but a misspecified exponential distribution is fitted.

			$p = 0.7$		$p = 0.5$		$p = 0.3$	
Patients	N	Method	Median (Q1, Q3)	CR	Median (Q1, Q3)	CR	Median (Q1, Q3)	CR
50-150	20	HZ_P	0.00 (73.54, 76.47)	100.00	0.00 (73.75, 76.05)	100.0	0.00 (74.04, 75.88)	100.00
		HZ_O	1.24 (74.15, 78.10)	99.90	1.86 (74.77, 78.67)	100.0	2.65 (75.62, 79.53)	100.00
		$Prop_n$	0.84 (73.29, 78.22)	44.34	-0.06 (72.17, 77.25)	37.7	-1.35 (71.08, 76.54)	35.30
		$Prop_o$	1.06 (73.58, 78.40)	43.34	0.32 (73.02, 77.72)	42.4	-0.89 (72.04, 76.81)	38.30
		$Prop_p$	0.80 (73.37, 78.15)	43.24	0.47 (73.05, 77.72)	42.5	-0.77 (72.07, 76.99)	41.20
	30	HZ_P	0.00 (73.89, 76.20)	100.00	0.00 (73.98, 75.91)	100.0	0.00 (74.06, 75.66)	100.00
		HZ_O	1.19 (74.85, 77.58)	100.00	1.85 (75.36, 78.17)	99.9	2.39 (75.81, 78.85)	99.90
		$Prop_n$	0.75 (74.04, 77.93)	50.60	0.37 (73.05, 77.68)	43.5	-0.90 (71.48, 76.50)	39.30
		$Prop_o$	0.73 (74.04, 77.87)	50.40	0.32 (73.35, 77.31)	50.3	-0.52 (72.16, 76.62)	46.20
		$Prop_p$	0.88 (74.21, 78.02)	52.40	0.37 (73.42, 77.36)	52.7	-0.61 (72.12, 76.63)	52.10
	50	HZ_P	0.00 (73.92, 75.78)	100.00	0.00 (74.04, 75.59)	100.0	0.00 (74.21, 75.36)	100.00
		HZ_O	1.01 (74.84, 77.03)	100.00	1.50 (75.05, 77.39)	100.0	2.18 (75.87, 78.08)	100.00
		$Prop_n$	0.70 (74.16, 77.11)	58.50	-0.20 (72.94, 76.29)	50.8	-0.98 (72.14, 75.81)	48.10
		$Prop_o$	0.76 (74.24, 77.25)	60.50	-0.08 (73.07, 76.22)	59.6	-0.71 (72.51, 75.90)	60.50
		$Prop_p$	0.71 (74.18, 77.13)	64.90	-0.10 (73.07, 76.21)	65.1	-0.77 (72.42, 75.84)	65.10
	100	HZ_P	0.00 (74.14, 75.41)	100.00	0.00 (74.27, 75.28)	100.0	0.00 (74.30, 75.19)	100.00
		HZ_O	1.00 (74.98, 76.59)	100.00	1.55 (75.54, 77.10)	100.0	2.27 (76.18, 77.76)	100.00
		$Prop_n$	0.57 (74.31, 76.49)	72.00	0.06 (73.67, 76.20)	61.4	-0.74 (72.73, 75.27)	58.10
		$Prop_o$	0.51 (74.23, 76.51)	74.10	0.07 (73.78, 76.08)	72.8	-0.46 (72.97, 75.46)	70.50
		$Prop_p$	0.56 (74.28, 76.54)	78.30	0.04 (73.68, 76.12)	77.8	-0.49 (72.92, 75.44)	76.20
50-300	20	HZ_P	0.00 (75.28, 77.32)	100.00	0.00 (75.17, 77.04)	100.0	0.00 (75.20, 76.64)	100.00
		HZ_O	0.91 (75.76, 78.71)	100.00	1.61 (76.27, 79.15)	100.0	2.27 (76.67, 79.81)	99.90
		$Prop_n$	-0.47 (73.75, 78.07)	29.73	-0.67 (71.23, 77.56)	28.7	-1.99 (36.01, 76.37)	32.33
		$Prop_o$	-0.11 (74.34, 78.37)	30.03	0.20 (74.21, 77.85)	30.5	-0.37 (73.82, 77.31)	32.13
		$Prop_p$	0.01 (74.73, 78.29)	32.13	0.07 (74.38, 77.86)	34.3	-0.36 (73.91, 77.31)	39.94
	30	HZ_P	0.00 (75.08, 76.99)	100.00	0.00 (75.14, 76.71)	100.0	0.00 (75.30, 76.36)	100.00
		HZ_O	0.91 (75.62, 78.19)	100.00	1.52 (76.27, 78.79)	100.0	2.34 (76.64, 79.48)	100.00
		$Prop_n$	-0.02 (74.47, 77.57)	33.60	-0.49 (73.63, 77.33)	31.3	-0.63 (73.03, 76.92)	31.70
		$Prop_o$	0.12 (74.73, 77.69)	38.00	0.05 (74.42, 77.47)	37.4	-0.30 (73.87, 77.00)	39.70
		$Prop_p$	0.12 (74.84, 77.81)	40.60	-0.05 (74.48, 77.47)	45.0	-0.40 (73.86, 76.85)	48.20
	50	HZ_P	0.00 (75.23, 76.61)	100.00	0.00 (75.36, 76.50)	99.9	0.00 (75.34, 76.26)	100.00
		HZ_O	0.75 (75.82, 77.63)	100.00	1.38 (76.24, 78.24)	100.0	1.98 (76.50, 79.06)	100.00
		$Prop_n$	0.19 (75.09, 77.16)	39.00	0.23 (74.56, 77.05)	36.3	-0.52 (73.69, 76.60)	37.80
		$Prop_o$	0.24 (75.09, 77.21)	51.20	0.15 (74.73, 77.05)	52.2	-0.51 (74.22, 76.44)	51.20
		$Prop_p$	0.35 (75.21, 77.33)	53.60	0.15 (74.69, 77.05)	55.4	-0.43 (74.28, 76.63)	61.90
	100	HZ_P	0.00 (75.31, 76.34)	100.00	0.00 (75.37, 76.19)	100.0	0.00 (75.40, 76.05)	100.00
		HZ_O	0.65 (75.79, 77.16)	100.00	1.04 (76.15, 77.60)	100.0	1.62 (76.62, 78.16)	100.00
		$Prop_n$	0.15 (75.35, 76.81)	52.00	0.02 (74.98, 76.62)	42.2	-0.65 (74.26, 75.83)	37.90
		$Prop_o$	0.32 (75.41, 76.88)	62.30	0.04 (75.06, 76.62)	66.7	-0.54 (74.37, 75.94)	65.50
		$Prop_p$	0.32 (75.40, 76.96)	65.00	0.12 (75.03, 76.64)	70.0	-0.55 (74.36, 75.96)	71.00

Median with 25th and 75th empirical quartiles (Q1, Q3) of the SAUC at $t = 2$ are reported. N denotes the number of the published studies. Prop denotes the proposed sensitivity analysis method; HZ_P denotes the HZ model using the population (published and unpublished) studies; HZ_O denotes the HZ model using only the observed (published) studies. CR denotes the proportion of successfully convergenced estimates among 1000 repetition. All the entries are multiplied by 100.

Table 4: Summary of the estimated SAUC for Biomarker2 when the true censoring is distributed as $U(1,4)$, but a misspecified exponential distribution is fitted.

			$p = 0.7$		$p = 0.5$		$p = 0.3$	
Patients	N	Method	Median (Q1, Q3)	CR	Median (Q1, Q3)	CR	Median (Q1, Q3)	CR
50-150	20	HZ_P	0.00 (56.84, 58.68)	99.30	0.00 (56.95, 58.64)	99.70	0.00 (57.16, 58.39)	99.80
		HZ_O	2.04 (58.64, 60.87)	98.99	3.29 (59.91, 62.16)	99.20	4.68 (61.29, 63.67)	99.19
		$Prop_n$	1.52 (57.75, 60.66)	67.17	2.62 (58.29, 61.82)	69.18	3.96 (58.35, 63.26)	72.58
		$Prop_o$	1.82 (58.06, 60.79)	66.06	3.03 (59.17, 62.09)	69.28	4.55 (60.70, 63.69)	74.09
		$Prop_p$	1.03 (57.66, 59.94)	60.62	1.58 (57.71, 60.87)	59.34	1.83 (56.78, 61.75)	56.96
	30	HZ_P	0.00 (56.99, 58.42)	99.50	0.00 (57.14, 58.40)	99.90	0.00 (57.29, 58.32)	100.00
		HZ_O	2.07 (58.98, 60.71)	99.30	3.29 (60.16, 61.92)	99.90	4.70 (61.65, 63.44)	99.29
		$Prop_n$	1.50 (57.82, 60.36)	70.90	2.59 (57.96, 61.62)	70.91	4.16 (57.94, 63.12)	79.68
		$Prop_o$	1.82 (58.35, 60.47)	71.90	3.00 (59.25, 61.73)	73.32	4.45 (60.60, 63.31)	77.86
		$Prop_p$	1.08 (57.75, 59.78)	61.63	1.38 (57.53, 60.62)	62.29	0.78 (56.41, 61.64)	62.29
	50	HZ_P	0.00 (57.27, 58.43)	99.80	0.00 (57.34, 58.29)	100.00	0.00 (57.37, 58.16)	100.00
		HZ_O	2.06 (59.30, 60.62)	100.00	3.26 (60.49, 61.76)	100.00	4.64 (61.72, 63.12)	99.90
		$Prop_n$	1.42 (58.01, 60.29)	75.78	2.49 (57.68, 61.41)	79.22	4.33 (59.19, 62.99)	82.72
		$Prop_o$	1.77 (58.49, 60.49)	78.28	2.96 (58.97, 61.62)	76.91	4.50 (61.13, 63.08)	76.52
		$Prop_p$	0.77 (57.78, 59.55)	67.27	0.71 (57.41, 60.22)	64.36	-0.08 (56.37, 61.26)	64.43
	100	HZ_P	0.00 (57.37, 58.21)	100.00	0.00 (57.47, 58.17)	100.00	0.00 (57.54, 58.08)	100.00
		HZ_O	2.04 (59.38, 60.32)	100.00	3.32 (60.64, 61.59)	99.80	4.64 (61.98, 62.94)	99.90
		$Prop_n$	1.43 (57.81, 60.11)	75.85	2.72 (57.56, 61.35)	80.62	4.50 (60.99, 62.88)	91.06
		$Prop_o$	1.82 (58.86, 60.18)	80.36	3.03 (59.02, 61.42)	76.00	4.39 (61.18, 62.84)	74.30
		$Prop_p$	0.67 (57.73, 59.22)	67.74	0.15 (57.14, 60.00)	65.06	-0.56 (56.34, 61.01)	61.14
50-300	20	HZ_P	0.00 (57.28, 58.74)	99.59	0.00 (57.33, 58.50)	99.80	0.00 (57.50, 58.45)	99.90
		HZ_O	1.51 (58.69, 60.39)	99.69	2.43 (59.50, 61.11)	99.69	3.39 (60.52, 62.25)	99.59
		$Prop_n$	0.93 (57.62, 60.18)	49.54	1.54 (57.87, 60.72)	51.78	3.07 (58.97, 62.20)	60.81
		$Prop_o$	1.33 (58.03, 60.49)	48.93	2.27 (58.79, 61.20)	61.26	3.43 (60.38, 62.39)	73.53
		$Prop_p$	0.39 (57.27, 59.55)	37.51	0.10 (56.95, 59.24)	37.00	-0.66 (56.26, 58.63)	32.68
	30	HZ_P	0.00 (57.37, 58.56)	99.80	0.00 (57.43, 58.41)	100.00	0.00 (57.58, 58.30)	100.00
		HZ_O	1.53 (58.84, 60.14)	100.00	2.46 (59.67, 61.00)	99.69	3.42 (60.65, 61.98)	99.70
		$Prop_n$	0.66 (57.57, 59.72)	51.22	1.17 (57.54, 60.63)	55.91	3.10 (58.15, 61.82)	72.50
		$Prop_o$	1.11 (57.92, 59.99)	52.55	2.34 (58.60, 61.04)	64.44	3.44 (60.53, 62.01)	78.16
		$Prop_p$	0.15 (57.37, 58.97)	42.36	-0.01 (56.97, 58.83)	40.49	-0.81 (56.18, 57.95)	42.77
	50	HZ_P	0.00 (57.50, 58.43)	100.00	0.00 (57.51, 58.30)	100.00	0.00 (57.66, 58.22)	100.00
		HZ_O	1.53 (58.97, 59.99)	100.00	2.42 (59.83, 60.86)	100.00	3.42 (60.79, 61.83)	100.00
		$Prop_n$	0.37 (57.55, 59.30)	49.03	0.54 (57.37, 60.18)	55.02	2.93 (57.34, 61.72)	74.42
		$Prop_o$	1.01 (57.84, 59.82)	55.66	2.18 (58.09, 60.84)	68.29	3.37 (60.50, 61.85)	82.58
		$Prop_p$	0.19 (57.46, 58.78)	48.52	-0.35 (56.96, 58.39)	47.92	-0.90 (56.32, 57.76)	49.75
	100	HZ_P	0.00 (57.63, 58.24)	100.00	0.00 (57.68, 58.18)	100.00	0.00 (57.73, 58.13)	100.00
		HZ_O	1.54 (59.11, 59.83)	100.00	2.41 (59.99, 60.72)	100.00	3.47 (61.02, 61.75)	100.00
		$Prop_n$	0.12 (57.61, 58.57)	47.39	0.10 (57.36, 59.58)	53.71	3.30 (57.98, 61.70)	77.08
		$Prop_o$	0.43 (57.79, 59.51)	58.03	2.23 (58.12, 60.67)	74.30	3.40 (60.83, 61.73)	83.98
		$Prop_p$	0.05 (57.52, 58.38)	51.91	-0.29 (57.10, 58.16)	54.72	-0.77 (56.52, 57.69)	52.45

Median with 25th and 75th empirical quartiles (Q1, Q3) of the SAUC at $t = 2$ are reported. N denotes the number of the published studies. Prop denotes the proposed sensitivity analysis method; HZ_P denotes the HZ model using the population (published and unpublished) studies; HZ_O denotes the HZ model using only the observed (published) studies. CR denotes the proportion of successfully convergenced estimates among 1000 repetition. All the entries are multiplied by 100.