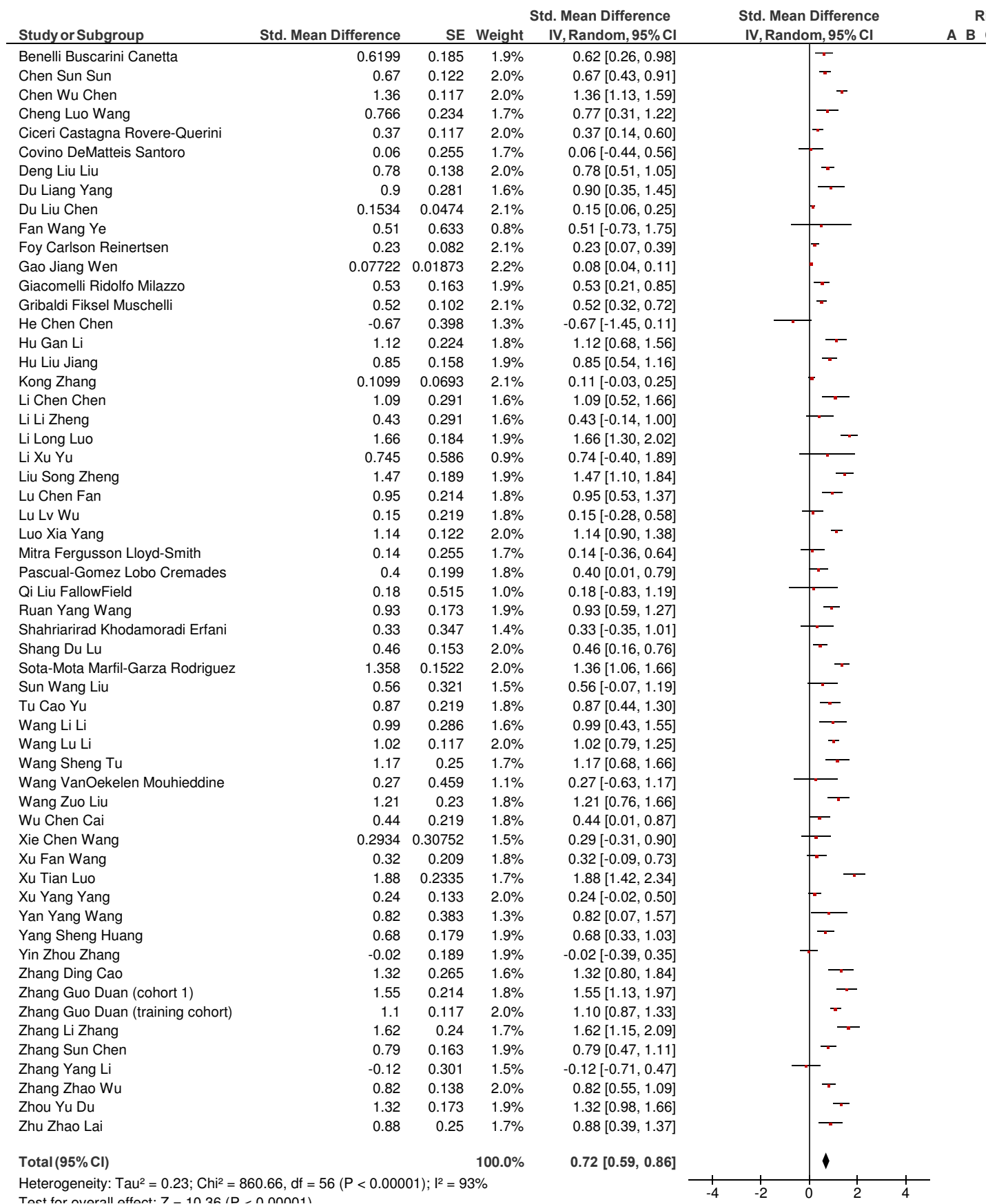


4 COVID-19 and Mortality SMD

4.1 White Blood Cell Count and Mortality SMD Combined



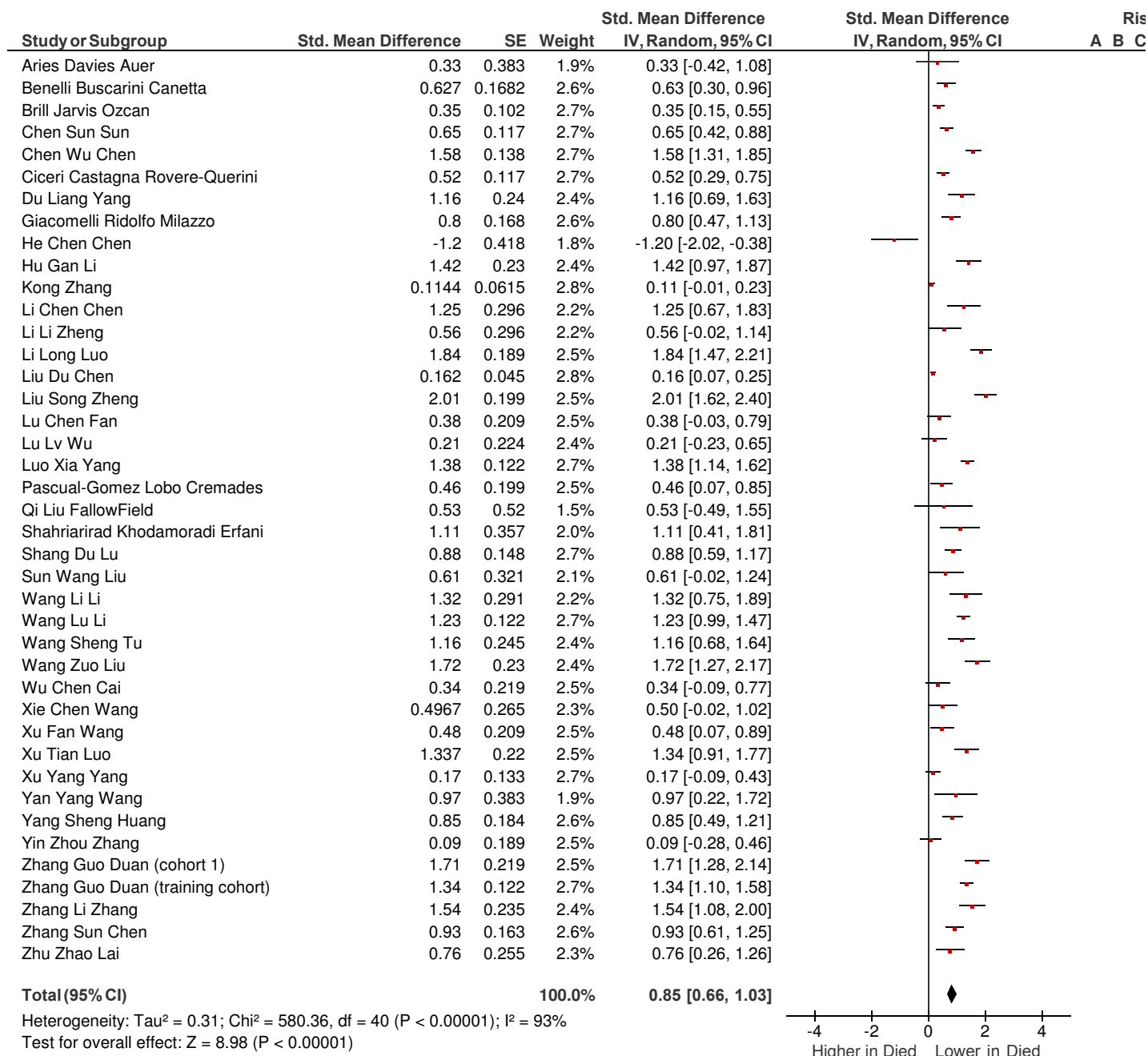
Test for overall effect: $Z = 10.50$ ($P < 0.00001$)

Higher in Died Lower in Died

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

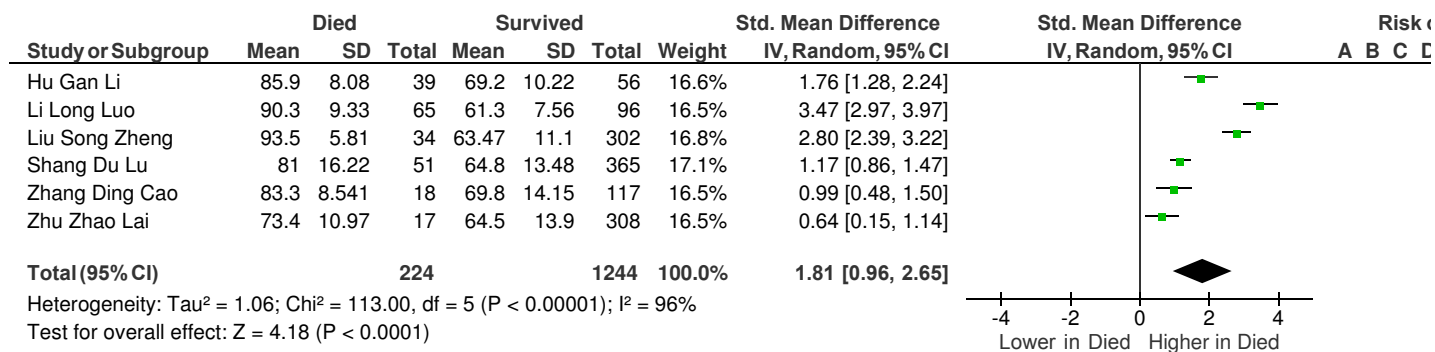
4.2 Absolute Neutrophil Count and Mortality SMD Combined



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

4.3 Percent Neutrophils and Mortality Means



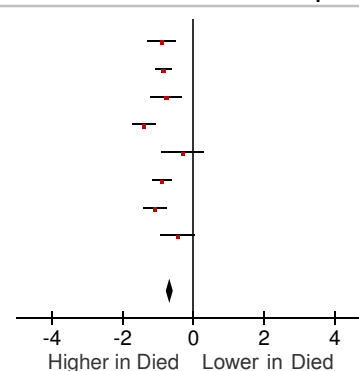
Risk of bias legend

- (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

4.4 Absolute Lymphocyte Count and Mortality SMD Combined

Study or Subgroup	Std. Mean Difference	SE	Weight	Std. Mean Difference		A
				IV, Random, 95% CI	IV, Random, 95% CI	
Aries Davies Auer	0	0.378	1.0%	0.00 [-0.74, 0.74]		
Benelli Buscarini Canetta	-0.4991	0.162	1.7%	-0.50 [-0.82, -0.18]		
Bolondi Russo Gamberini	-0.08	0.52	0.7%	-0.08 [-1.10, 0.94]		
Brill Jarvis Ozcan	-0.29	0.102	1.9%	-0.29 [-0.49, -0.09]		
Cao Tu Cheng	-0.32	0.27	1.4%	-0.32 [-0.85, 0.21]		
Caraballo McCullough Fuery	-0.6	0.189	1.6%	-0.60 [-0.97, -0.23]		
Chen Sun Sun	-0.79	0.117	1.9%	-0.79 [-1.02, -0.56]		
Chen Wu Chen	-0.94	0.128	1.9%	-0.94 [-1.19, -0.69]		
Cheng Luo Wang	-0.899	0.445	0.8%	-0.90 [-1.77, -0.03]		
Ciceri Castagna Rovere-Querini	-0.83	0.122	1.9%	-0.83 [-1.07, -0.59]		
De Smet Mellaerts Vandewinkele	-0.81	0.27	1.4%	-0.81 [-1.34, -0.28]		
Deng Liu Liu	-1.03	0.143	1.8%	-1.03 [-1.31, -0.75]		
Du Liang Yang	-0.28	0.235	1.5%	-0.28 [-0.74, 0.18]		
Du Liu Chen	-0.0481	0.21564	1.6%	-0.05 [-0.47, 0.37]		
Fan Wang Ye	-0.86	0.648	0.5%	-0.86 [-2.13, 0.41]		
Fei Fu Li	-1.13	0.2658	1.4%	-1.13 [-1.65, -0.61]		
Foy Carlson Reinertsen	-0.27	0.087	2.0%	-0.27 [-0.44, -0.10]		
Gao Jiang Wen	-1.51	0.3786	1.0%	-1.51 [-2.25, -0.77]		
Giacomelli Ridolfo Milazzo	-0.23	0.158	1.8%	-0.23 [-0.54, 0.08]		
Goicoechea Camara Macias	-0.32	0.362	1.1%	-0.32 [-1.03, 0.39]		
Gozalbo-Rivera Jiminez Latorre	-0.45	0.648	0.5%	-0.45 [-1.72, 0.82]		
Gribaldi Fiksel Muschelli	-0.41	0.102	1.9%	-0.41 [-0.61, -0.21]		
Grifoni Valoriani Cei	-0.05	0.423	0.9%	-0.05 [-0.88, 0.78]		
He Chen Chen	-1.48	0.434	0.9%	-1.48 [-2.33, -0.63]		
Hu Gan Li	-0.9	0.219	1.5%	-0.90 [-1.33, -0.47]		
Hu Liu Jiang	-1.33	0.168	1.7%	-1.33 [-1.66, -1.00]		
Kong Zhang	-1.048	0.598	0.6%	-1.05 [-2.22, 0.12]		
Li Chen Chen	-1.1	0.291	1.3%	-1.10 [-1.67, -0.53]		
Li Li Zheng	-0.6	0.296	1.3%	-0.60 [-1.18, -0.02]		
Liu Du Chen	-0.301	0.209	1.6%	-0.30 [-0.71, 0.11]		
Liu Fang Tokuno	-1.03	0.194	1.6%	-1.03 [-1.41, -0.65]		
Liu Song Zheng	-1.85	0.194	1.6%	-1.85 [-2.23, -1.47]		
Lu Chen Fan	-0.52	0.209	1.6%	-0.52 [-0.93, -0.11]		
Lu Hu Fan	-0.54876	0.20056	1.6%	-0.55 [-0.94, -0.16]		
Lu Lv Wu	-0.51	0.204	1.6%	-0.51 [-0.91, -0.11]		
Luo Xia Yang	-0.92	0.122	1.9%	-0.92 [-1.16, -0.68]		
Mitra Fergusson Lloyd-Smith	-0.13	0.255	1.4%	-0.13 [-0.63, 0.37]		
Pascual-Gomez Lobo Cremades	-0.13	0.194	1.6%	-0.13 [-0.51, 0.25]		
Price-Haywood Burton Fort Seoane	-0.1576	0.1156	1.9%	-0.16 [-0.38, 0.07]		
Qi Liu FallowField	-0.93	0.536	0.7%	-0.93 [-1.98, 0.12]		
Ruan Yang Wang	-0.51	0.168	1.7%	-0.51 [-0.84, -0.18]		
Shahriarirad Khodamoradi Erfani	-0.11	0.35	1.1%	-0.11 [-0.80, 0.58]		
Shang Du Lu	-0.75	0.148	1.8%	-0.75 [-1.04, -0.46]		
Sota-Mota Marfil-Garza Rodriguez	-0.95332	0.121245	1.9%	-0.95 [-1.19, -0.72]		
Sun Wang Liu	-0.42	0.321	1.2%	-0.42 [-1.05, 0.21]		
Tomlins Hamilton Gunning	-0.15	0.25	1.4%	-0.15 [-0.64, 0.34]		
Tu Cao Yu	-0.94	0.224	1.5%	-0.94 [-1.38, -0.50]		
Wang Li Li	-0.78	0.281	1.3%	-0.78 [-1.33, -0.23]		
Wang Lu Li	-1.61	0.122	1.9%	-1.61 [-1.85, -1.37]		
Wang Sheng Tu	-0.88	0.24	1.5%	-0.88 [-1.35, -0.41]		
Wang VanOekelen Mouhieddine	-0.44	0.459	0.8%	-0.44 [-1.34, 0.46]		
Wang Zuo Liu	-0.59	0.224	1.5%	-0.59 [-1.03, -0.15]		
Wu Chen Cai	-0.6	0.224	1.5%	-0.60 [-1.04, -0.16]		
Xie Chen Wang	-0.525	0.288	1.3%	-0.53 [-1.09, 0.04]		
Xu Fan Wang	-0.43	0.209	1.6%	-0.43 [-0.84, -0.02]		
Xu Tian Luo	-1.353	0.339	1.1%	-1.35 [-2.02, -0.69]		
Xu Yang Yang	-0.33	0.133	1.8%	-0.33 [-0.59, -0.07]		
Yan Yang Wang	-0.86	0.383	1.0%	-0.86 [-1.61, -0.11]		
Yang Sheng Huang	-0.77	0.184	1.7%	-0.77 [-1.13, -0.41]		
Yang Yu Xu	-0.31	0.286	1.3%	-0.31 [-0.87, 0.25]		
Yin Zhou Zhang	-0.03	0.189	1.6%	-0.03 [-0.40, 0.34]		

Study	Mean	SD	Total	Weight	Std. Mean Difference	95% CI
Zhang Guo Duan (cohort 1)	-0.89	0.204	1.6%		-0.89	[-1.29, -0.49]
Zhang Guo Duan (training cohort)	-0.86	0.117	1.9%		-0.86	[-1.09, -0.63]
Zhang Li Zhang	-0.77	0.224	1.5%		-0.77	[-1.21, -0.33]
Zhang Sun Chen	-1.39	0.168	1.7%		-1.39	[-1.72, -1.06]
Zhang Yang Li	-0.3	0.306	1.2%		-0.30	[-0.90, 0.30]
Zhang Zhao Wu	-0.9	0.138	1.8%		-0.90	[-1.17, -0.63]
Zhou Yu Du	-1.09	0.168	1.7%		-1.09	[-1.42, -0.76]
Zhu Zhao Lai	-0.45	0.25	1.4%		-0.45	[-0.94, 0.04]



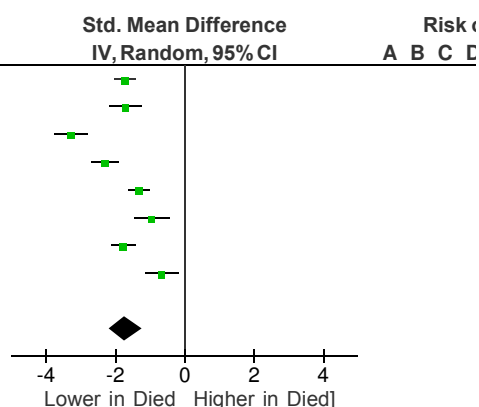
Total (95% CI) 100.0% **-0.67 [-0.78, -0.57]**
 Heterogeneity: Tau² = 0.14; Chi² = 332.76, df = 68 (P < 0.00001); I² = 80%
 Test for overall effect: Z = 12.68 (P < 0.00001)

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

4.5 Percent Lymphocyte and Mortality Means

Study or Subgroup	Died		Survived		Std. Mean Difference			Std. Mean Difference	Risk of Bias
	Mean	SD	Total	Mean	SD	Total	IV, Random, 95% CI		
Deng Liu Liu	7.1	6.13	109	23.5	11.84	116	13.1%	-1.72 [-2.02, -1.41]	
Hu Gan Li	7.9	3.96	39	20.5	8.96	56	12.2%	-1.70 [-2.18, -1.22]	
Li Long Luo	6.3	7.7	65	28.5	6.01	96	12.1%	-3.28 [-3.76, -2.80]	
Liu Song Zheng	4.2	3.44	34	24.2	9.1	302	12.6%	-2.29 [-2.69, -1.90]	
Shang Du Lu	11.2	8.52	51	25.4	10.89	365	13.1%	-1.33 [-1.64, -1.03]	
Zhang Ding Cao	7.7	6.425	18	18.83	12.2	117	12.0%	-0.95 [-1.46, -0.44]	
Zhou Yu Du	6.12	2.27	54	21.2	9.9	137	12.8%	-1.77 [-2.13, -1.41]	
Zhu Zhao Lai	18.6	8.54	17	26.6	12.3	308	12.1%	-0.66 [-1.15, -0.17]	



Total (95% CI) 387 1497 100.0% **-1.71 [-2.20, -1.23]**
 Heterogeneity: Tau² = 0.44; Chi² = 81.35, df = 7 (P < 0.00001); I² = 91%
 Test for overall effect: Z = 6.99 (P < 0.00001)

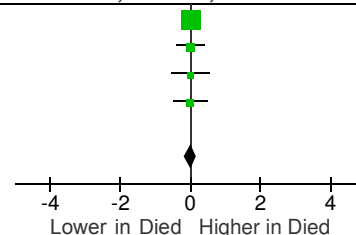
Risk of bias legend

- (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

4.6 Absolute Basophil Count and Mortality Means

Study or Subgroup	Died			Survived			Weight	Std. Mean Difference	Std. Mean Difference	R A B
	Mean	SD	Total	Mean	SD	Total		IV, Random, 95% CI	IV, Random, 95% CI	
Chen Sun Sun	0.01	0.0074	82	0.01	0.0074	578	57.9%	0.00 [-0.23, 0.23]		
Hu Gan Li	0	0.007	56	0	0.007	39	18.5%	0.00 [-0.41, 0.41]		
Wang Li Li	0	0.007	15	0	0.007	101	10.5%	0.00 [-0.54, 0.54]		
Zhu Zhao Lai	0.01	0.00756	17	0.01	0.0074	308	13.0%	0.00 [-0.49, 0.49]		
Total (95% CI)			170			1026	100.0%	0.00 [-0.18, 0.18]		

Heterogeneity: Tau² = 0.00; Chi² = 0.00, df = 3 (P = 1.00); I² = 0%
 Test for overall effect: Z = 0.00 (P = 1.00)



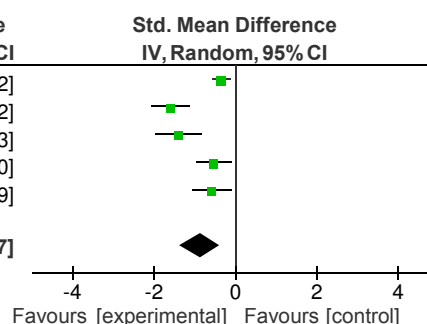
Risk of bias legend

- (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

4.7 Absolute Eosinophil count and Mortality Means

Study or Subgroup	Died			Survived			Weight	Std. Mean Difference	Std. Mean Difference	A
	Mean	SD	Total	Mean	SD	Total		IV, Random, 95% CI	IV, Random, 95% CI	
Chen Sun Sun	0	0.015	82	0.01	0.03	578	22.7%	-0.35 [-0.58, -0.12]		
Hu Gan Li	0	0.04	39	0.1	0.074	56	19.7%	-1.59 [-2.06, -1.12]		
Wang Li Li	0	0.04	15	0.1	0.074	101	18.1%	-1.40 [-1.98, -0.83]		
Zhang Li Zhang	0	0.0075	24	0.03	0.06	142	20.2%	-0.54 [-0.97, -0.10]		
Zhu Zhao Lai	0	0.04	17	0.01	0.015	308	19.4%	-0.58 [-1.07, -0.09]		
Total (95% CI)			177			1185	100.0%	-0.87 [-1.37, -0.37]		

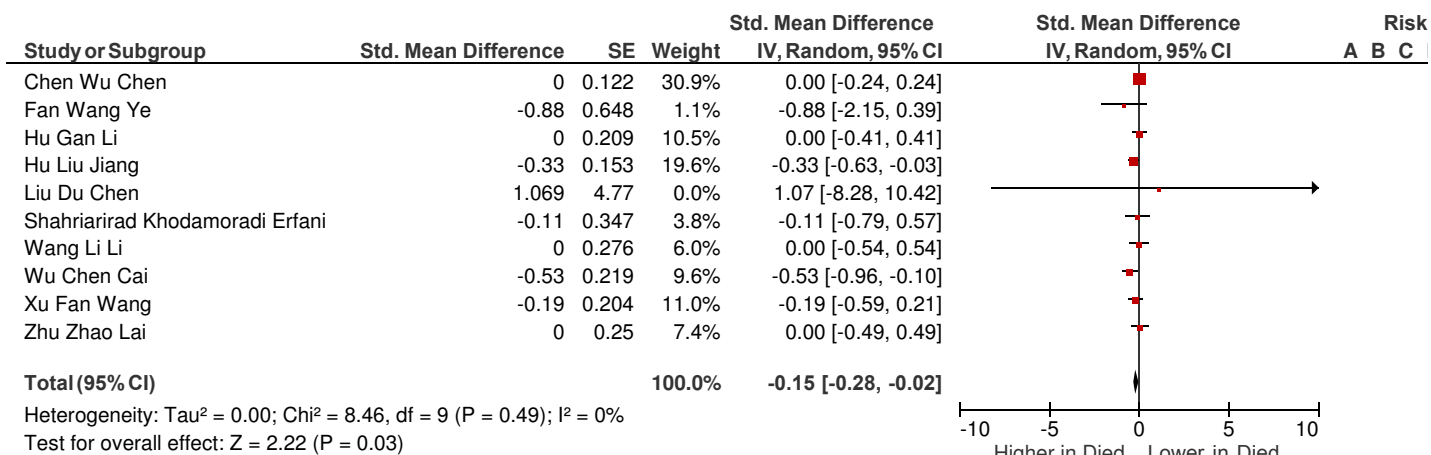
Heterogeneity: Tau² = 0.27; Chi² = 28.85, df = 4 (P < 0.00001); I² = 86%
 Test for overall effect: Z = 3.41 (P = 0.0007)



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

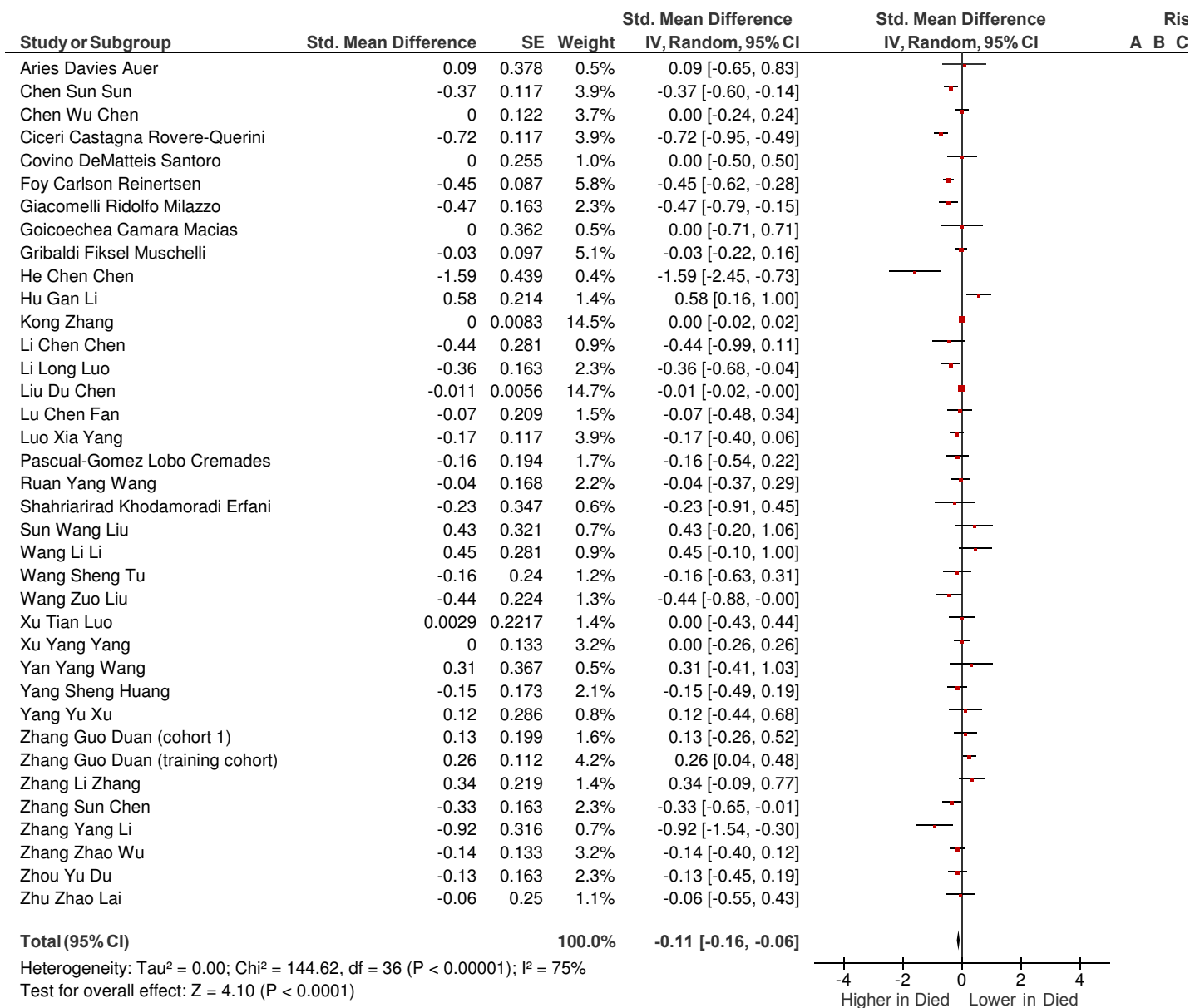
4.8 Absolute Monocyte Count and Mortality Means



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

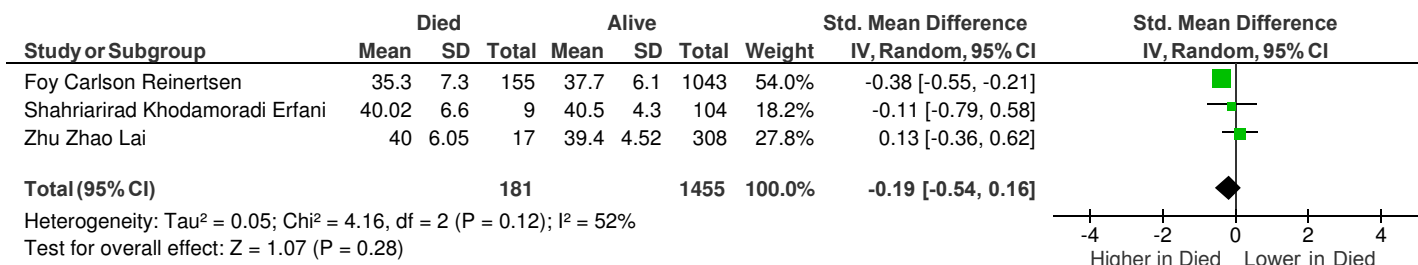
4.9 Hemoglobin and Mortality Means



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

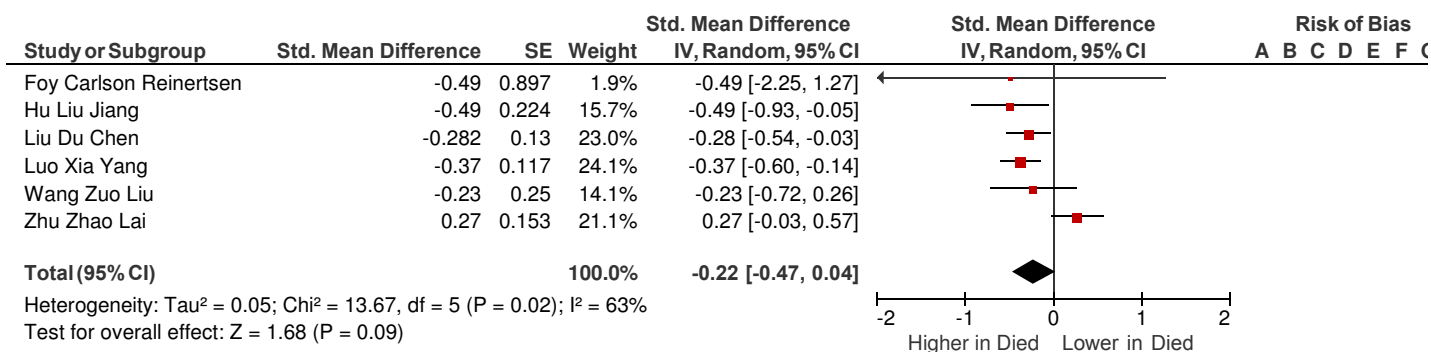
4.10 Hematocrit and Mortality Means



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

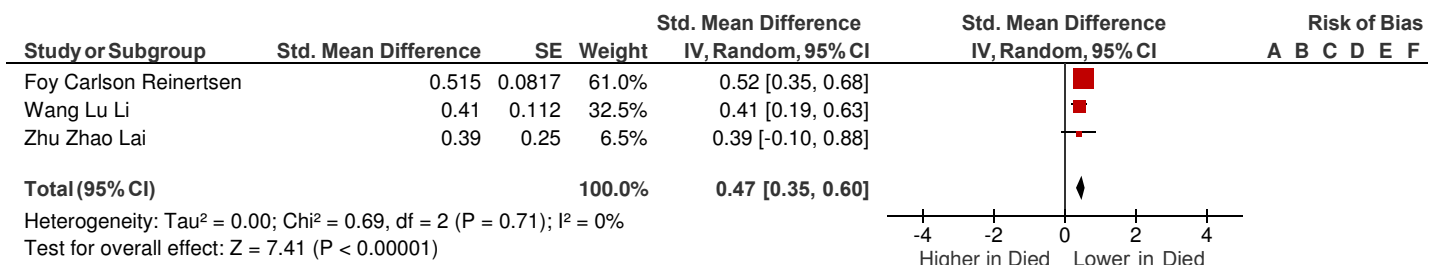
4.11 Red Blood Cell Count and Mortality Means



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

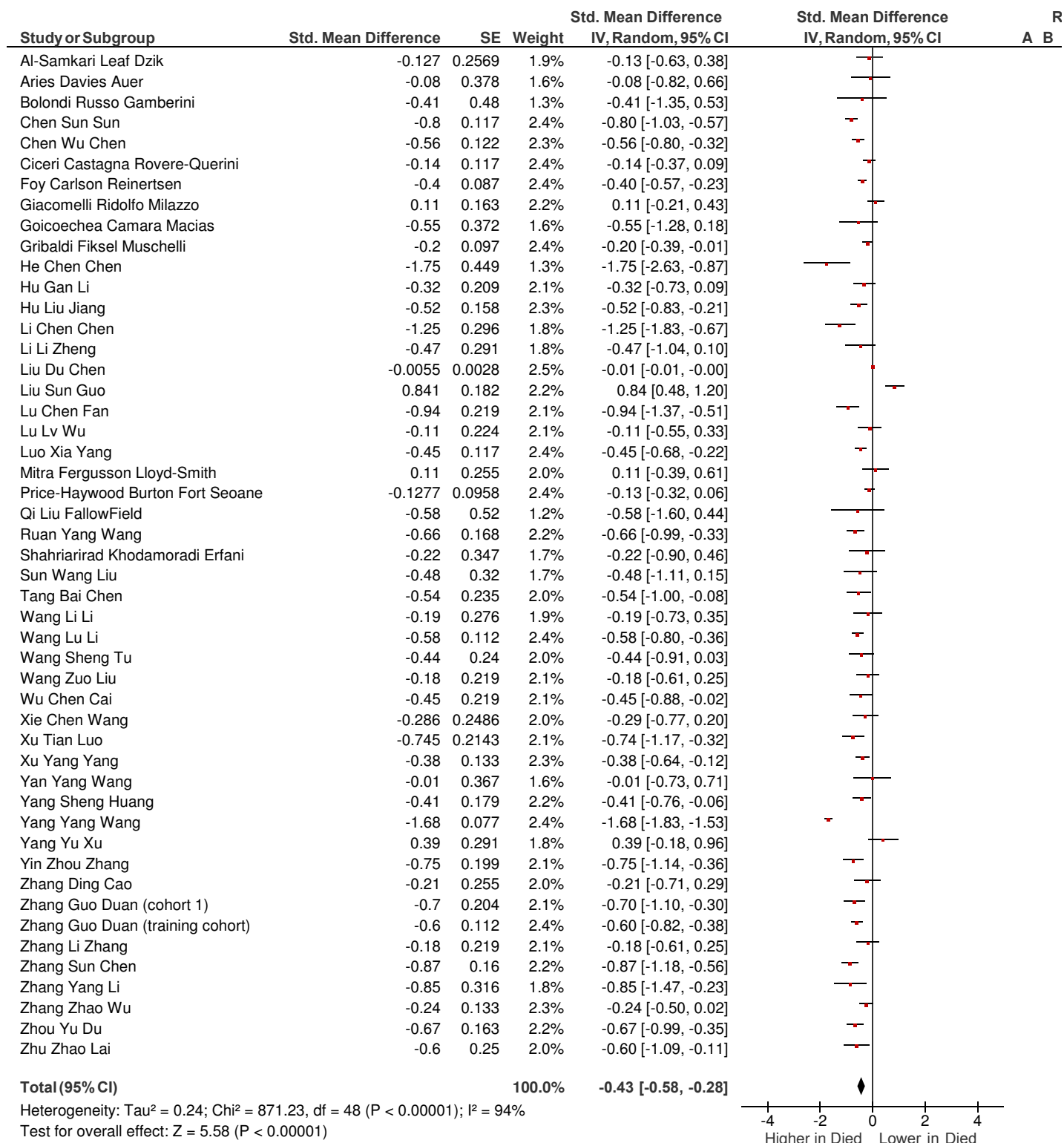
4.12 Red Cell Distribution Width and Mortality Means



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

4.13 Platelets and Mortality SMD Combined

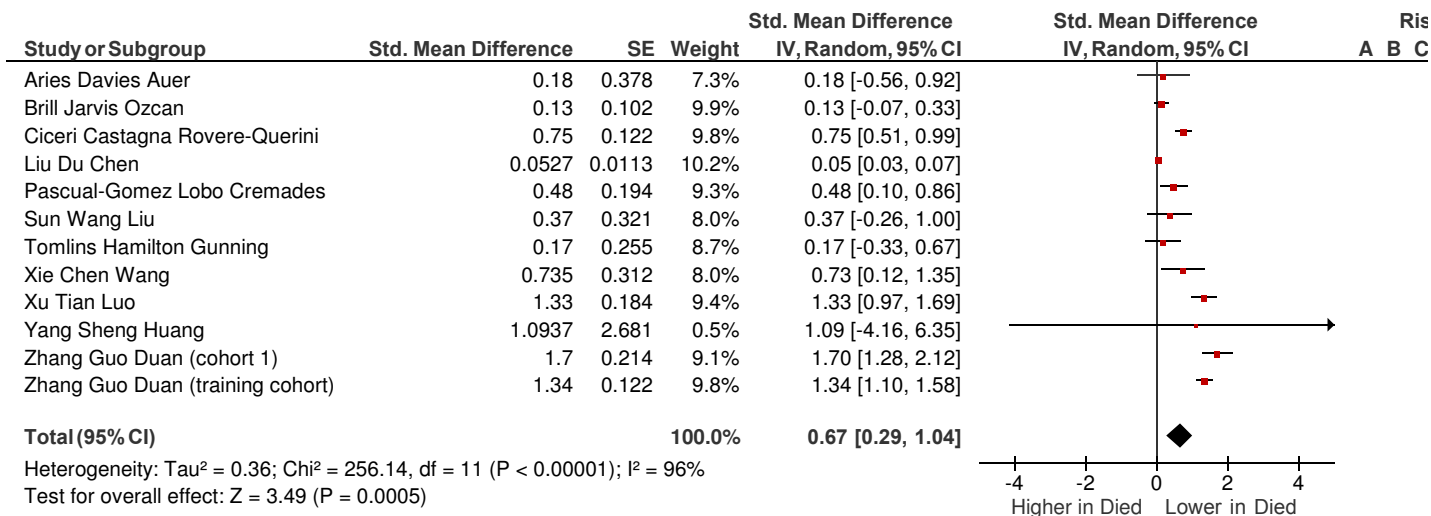


Risk of bias legend

- (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)

- (F) Selective reporting (reporting bias)
- (G) Other bias

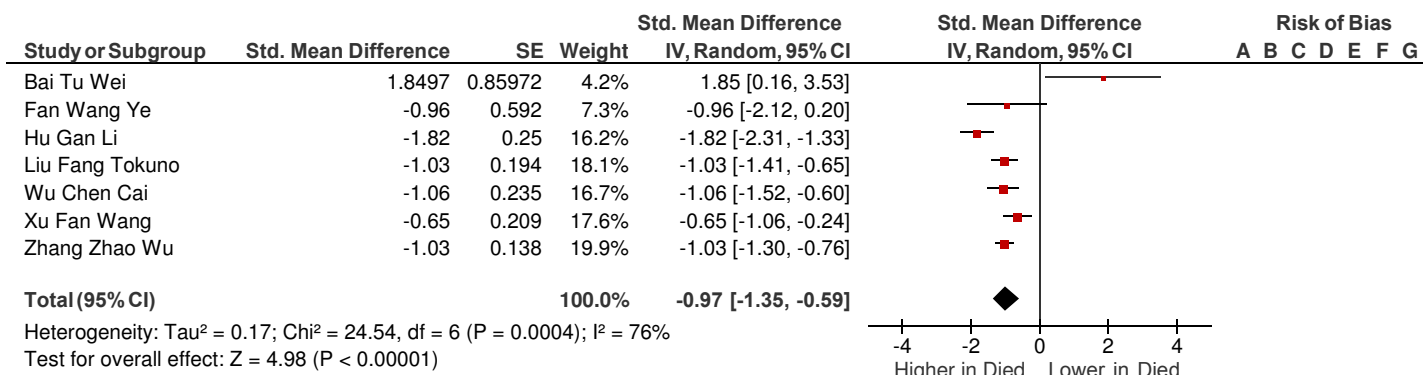
4.14 Neutrophil to Lymphocyte Ratio and Mortality Means



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

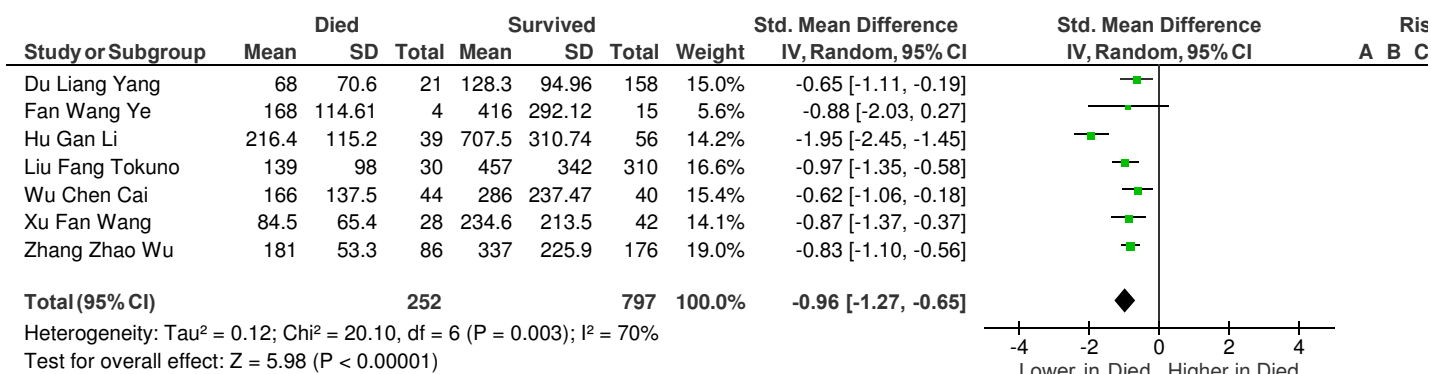
4.15 CD3+ Total T Cell Count and Mortality SMD Combined



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

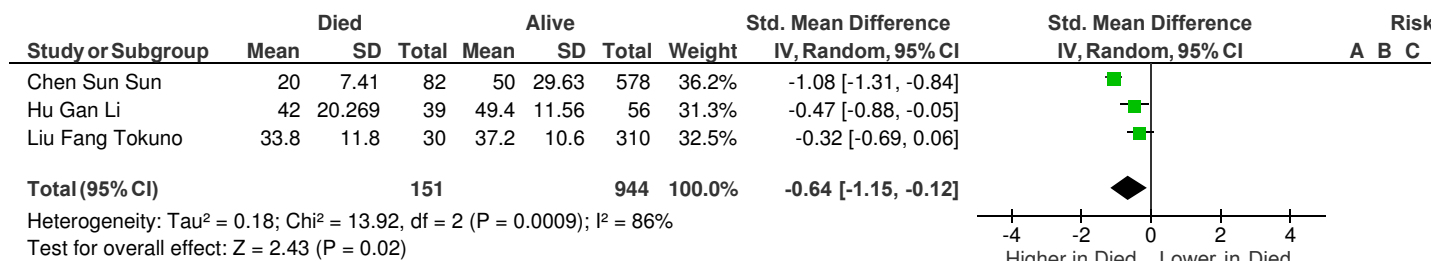
4.16 CD4+ T Helper Cells (Absolute) and Mortality Means



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

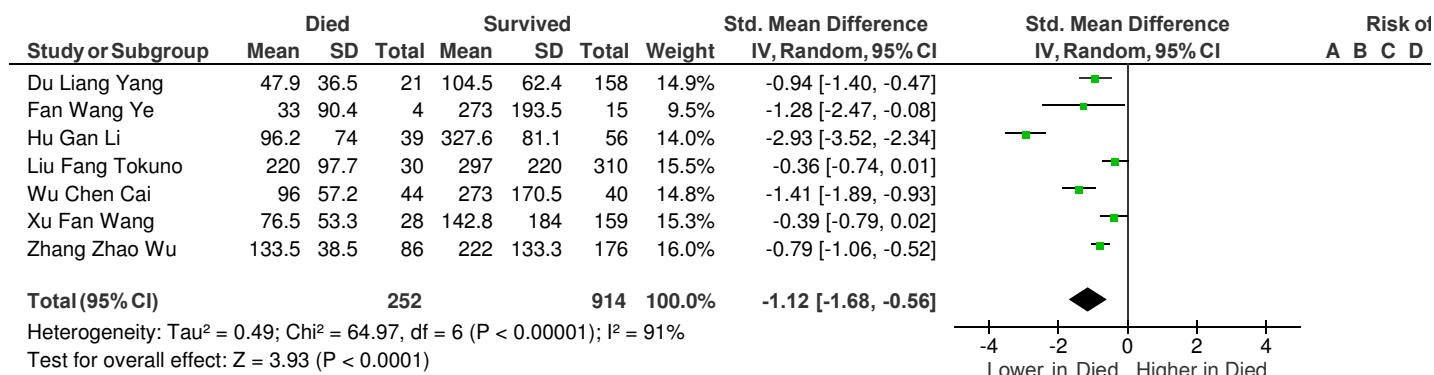
4.17 Percent CD4+ Cells (%) and Mortality Means



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

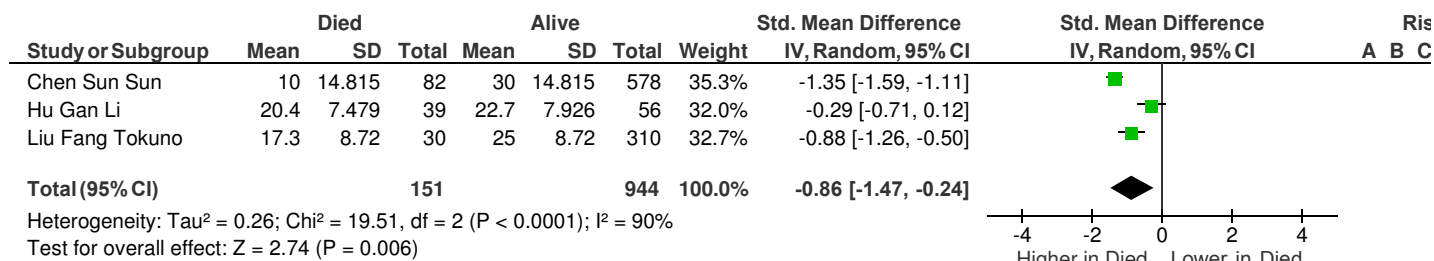
4.18 CD8+ Suppressor/Cytotoxic T Cells (absolute) and Mortality Means



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

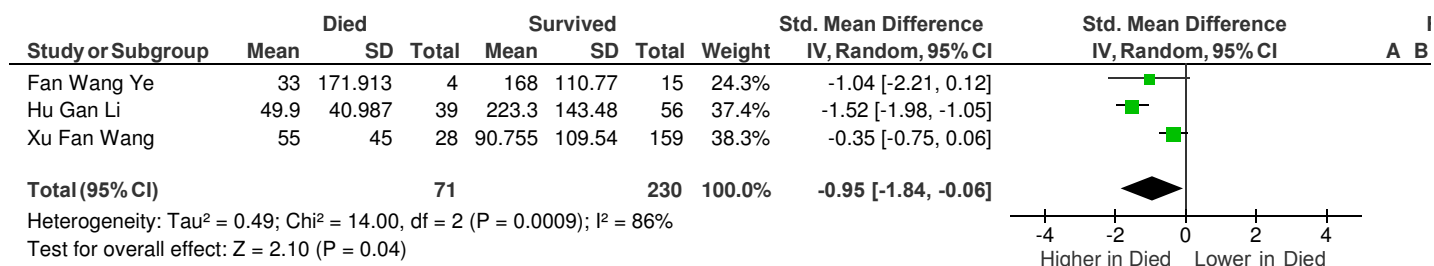
4.19 Percent CD8+ Cells (%) and Mortality Means



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

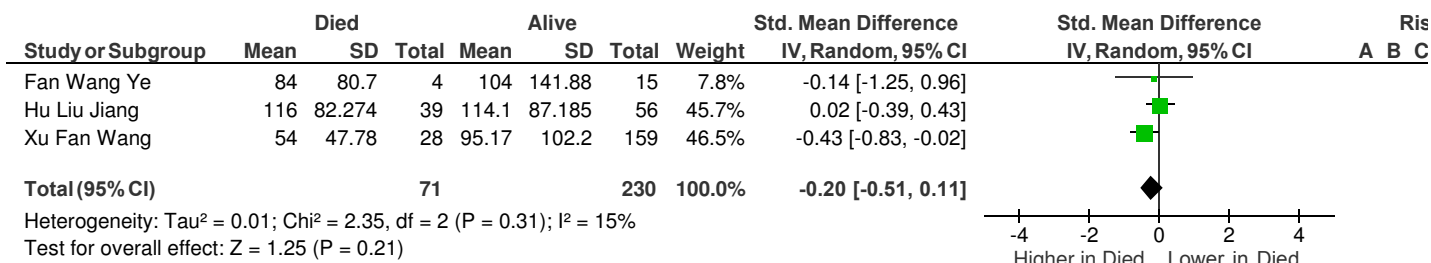
4.20 Natural Killer (NK) Cell (absolute) and Mortality Means



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

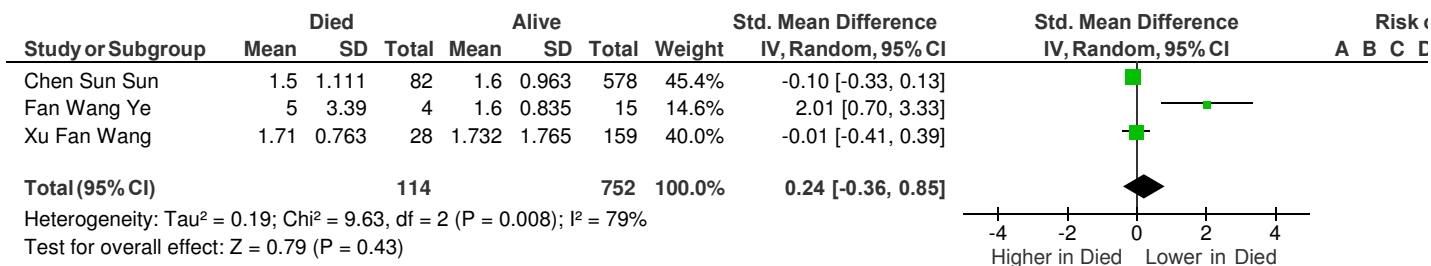
4.21 B Cells/CD19+ Cells and Mortality Mean



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

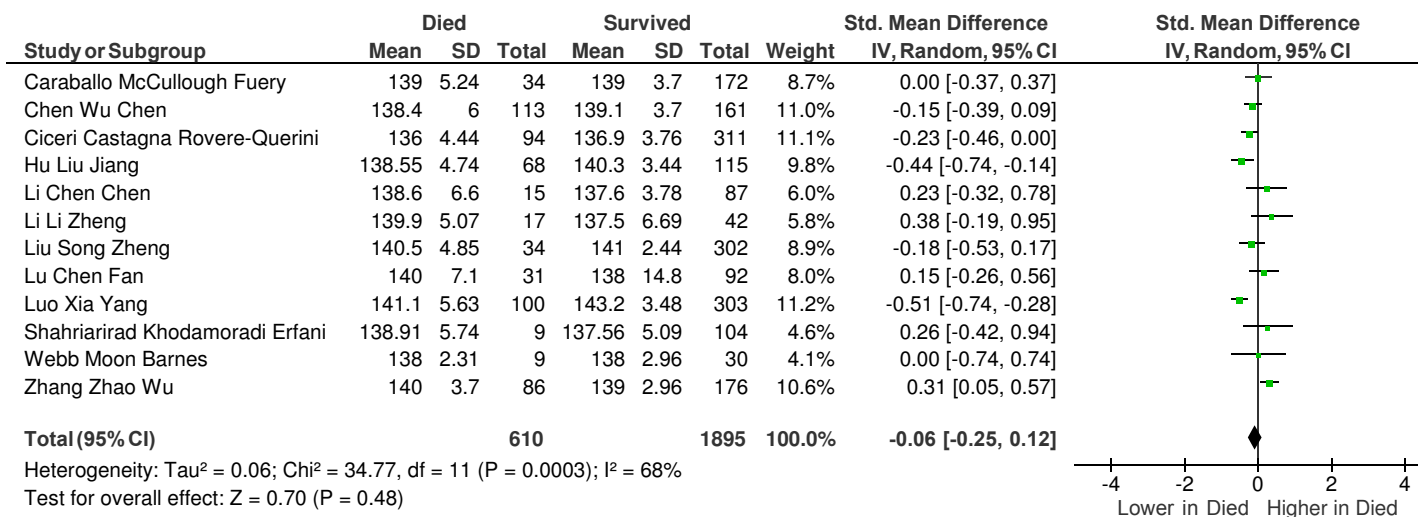
4.22 CD4+/CD8+ ratio



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

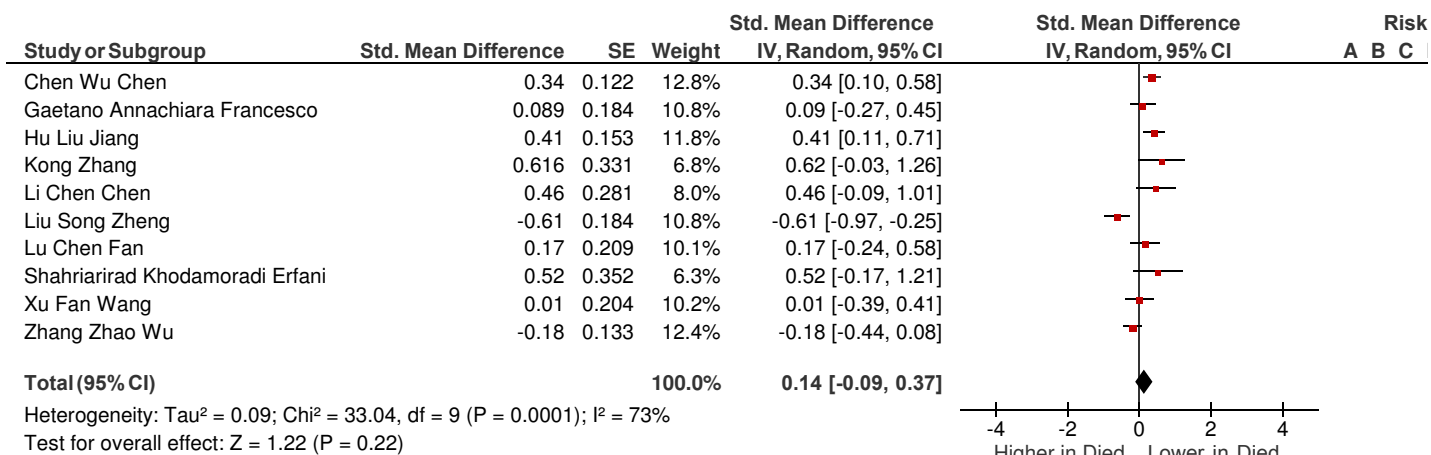
4.23 Sodium and Mortality Means



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

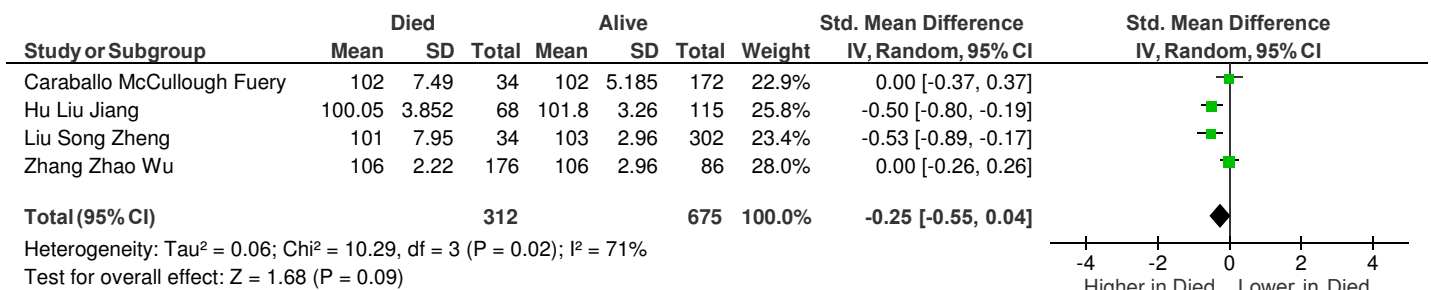
4.24 Potassium and Mortality Means



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

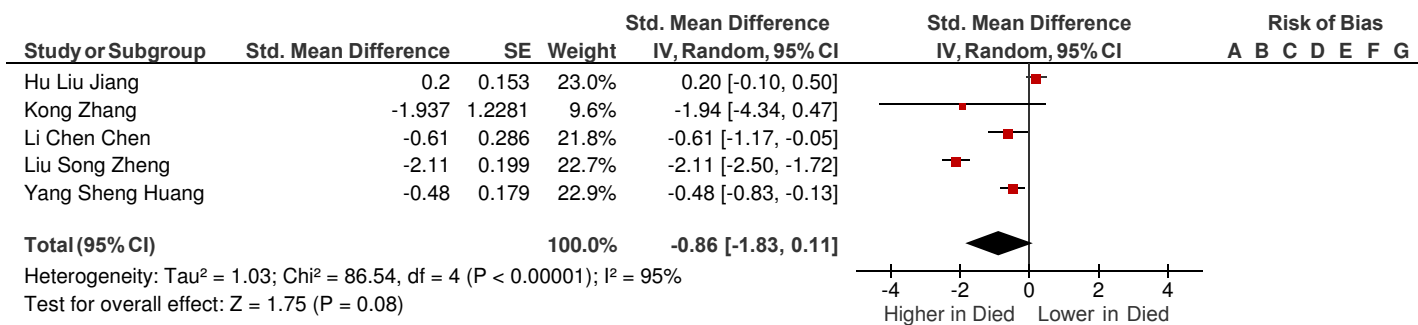
4.25 Chloride and Mortality Means



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

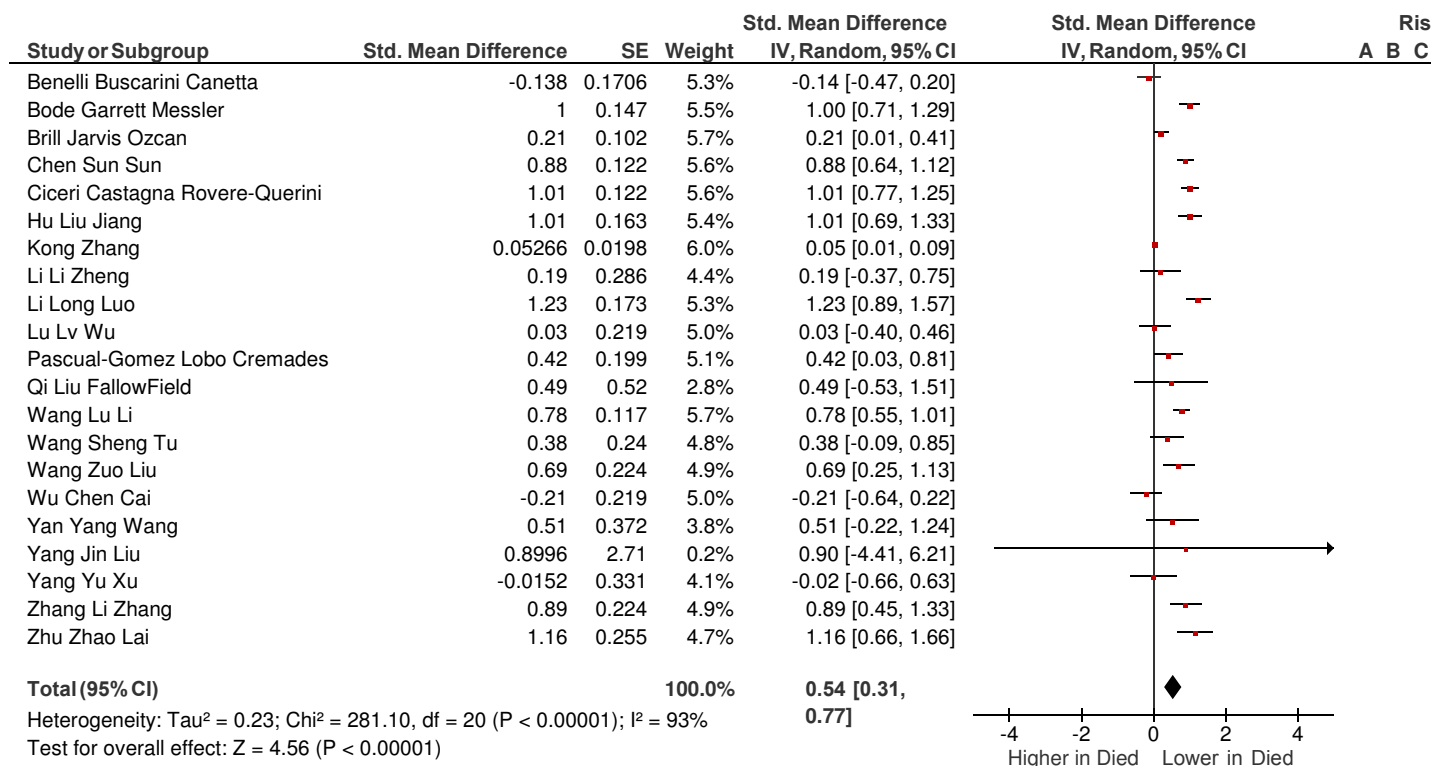
4.26 Calcium and Mortality Means



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

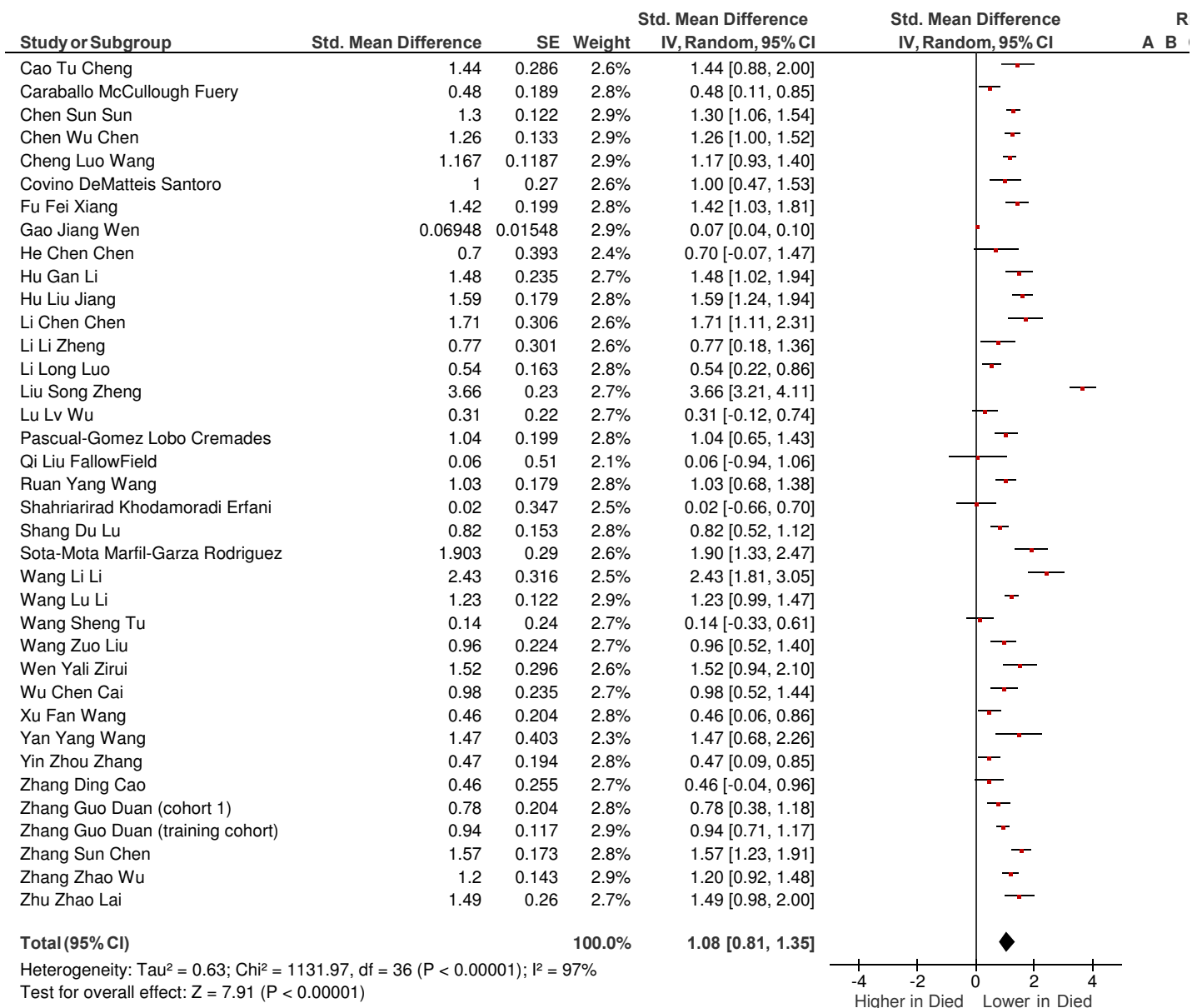
4.27 Glucose and Mortality SMD Combined



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

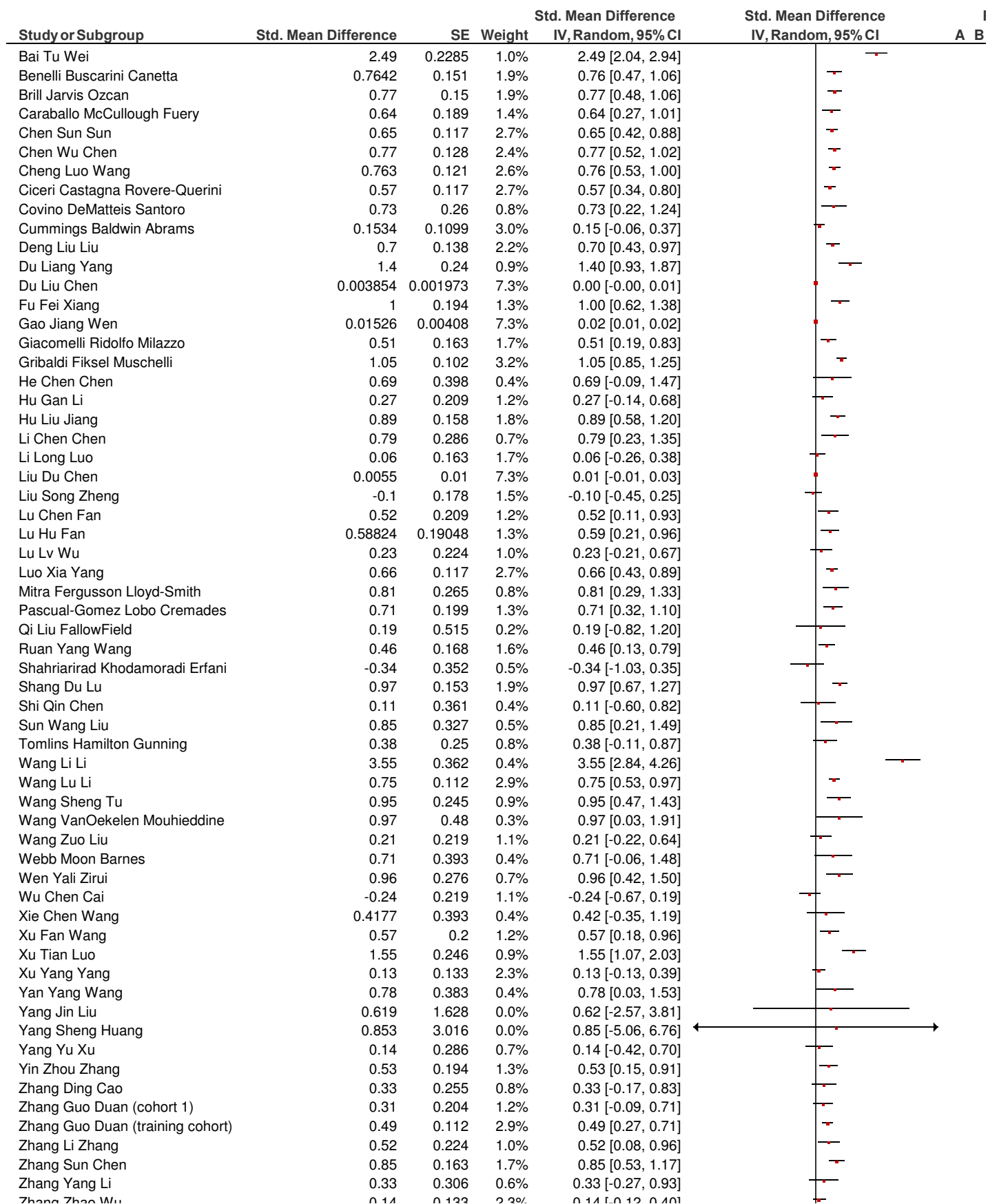
4.28 Blood Urea Nitrogen (BUN) and Mortality SMD Combined



Risk of bias legend

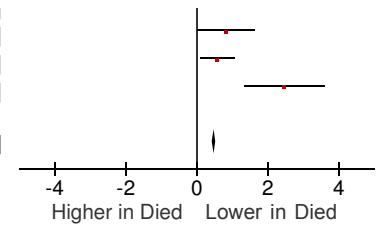
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)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

4.29 Creatinine and Mortality SMD Combined



Author	OR	95% CI	Weight	OR [95% CI]
Zhang Zhao Wu	0.14	0.133	2.3%	0.14 [-0.12, 0.40]
Zhou Yu Du	0.817	0.414	0.3%	0.82 [0.01, 1.63]
Zhu Zhao Lai	0.57	0.25	0.8%	0.57 [0.08, 1.06]
Zou Li Fang	2.465	0.5761	0.2%	2.46 [1.34, 3.59]
Total (95% CI)			100.0%	0.49 [0.44, 0.54]

Heterogeneity: Tau² = 0.01; Chi² = 1012.10, df = 63 (P < 0.00001); I² = 94%
 Test for overall effect: Z = 20.06 (P < 0.00001)



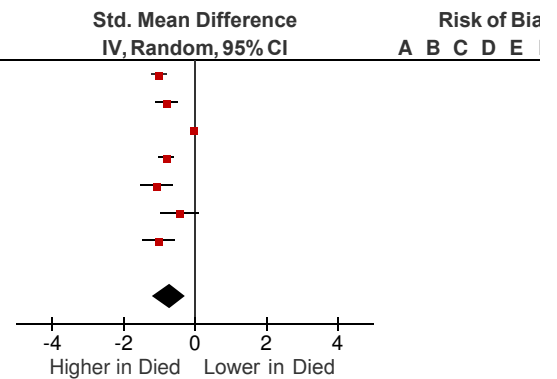
Risk of bias legend

- (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

4.30 Estimated Glomerular filtration rate (eGFR) and Mortality Means

Study or Subgroup	Std. Mean Difference	SE	Weight	Std. Mean Difference		Risk of Bias				
				IV, Random, 95% CI	IV, Random, 95% CI	A	B	C	D	E
Gribaldi Fiksel Muschelli	-1	0.107	15.0%	-1.00 [-1.21, -0.79]						
Hu Liu Jiang	-0.8	0.158	14.5%	-0.80 [-1.11, -0.49]						
Kong Zhang	-0.0168	0.00859	15.5%	-0.02 [-0.03, 0.00]						
Wang Lu Li	-0.8	0.112	15.0%	-0.80 [-1.02, -0.58]						
Wang Zuo Liu	-1.07	0.23	13.6%	-1.07 [-1.52, -0.62]						
Xie Chen Wang	-0.42125	0.27415	12.9%	-0.42 [-0.96, 0.12]						
Zhang Li Zhang	-1.02	0.23	13.6%	-1.02 [-1.47, -0.57]						
Total (95% CI)			100.0%	-0.73 [-1.20, -0.26]						

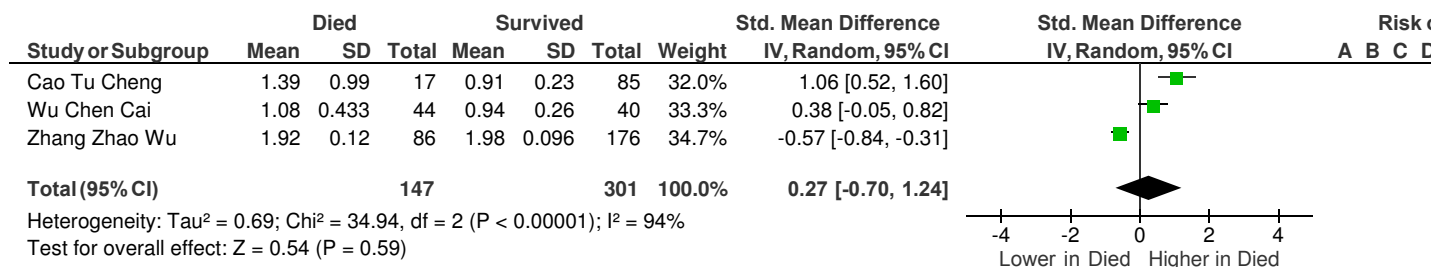
Heterogeneity: Tau² = 0.37; Chi² = 196.44, df = 6 (P < 0.00001); I² = 97%
 Test for overall effect: Z = 3.02 (P = 0.003)



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

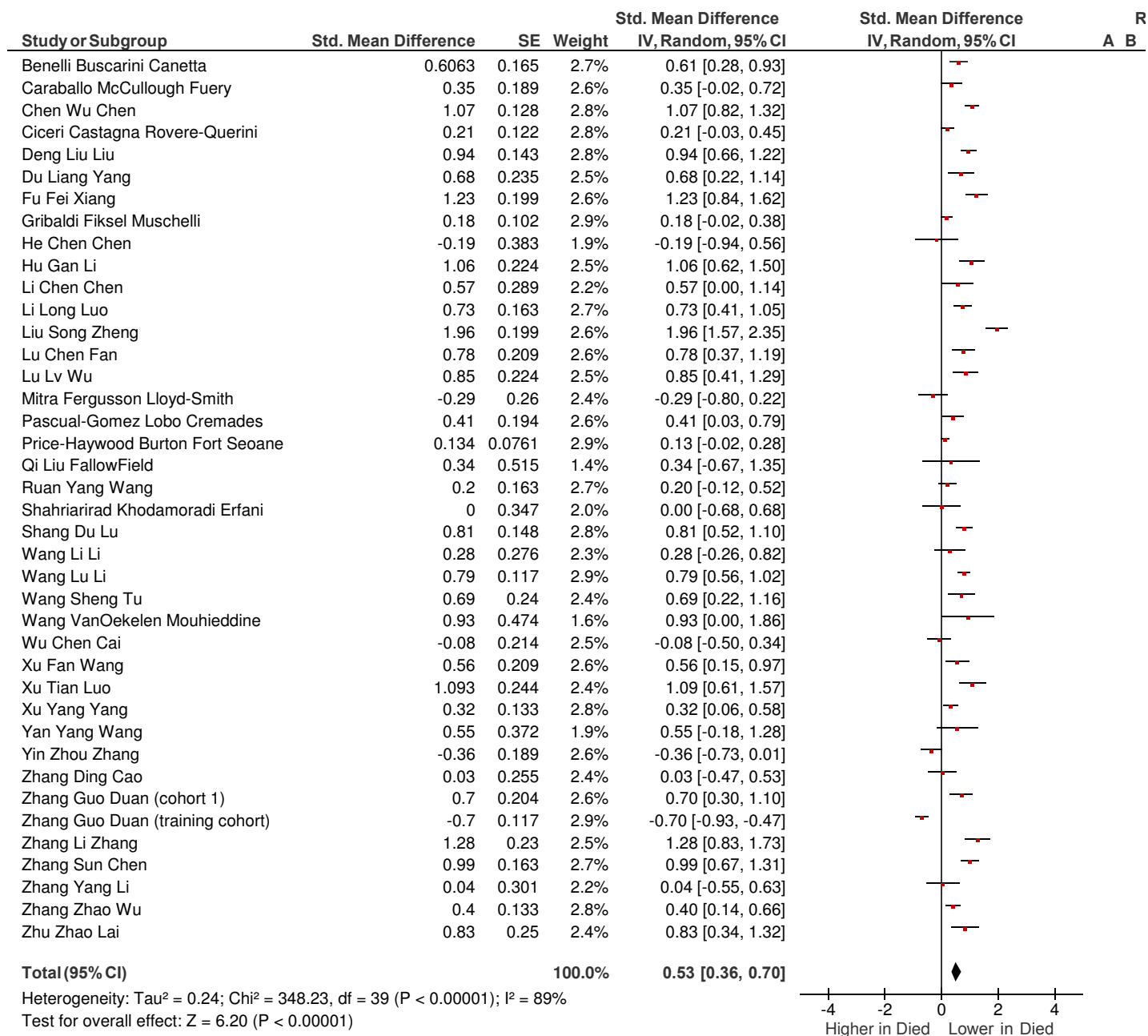
4.31 Cystatin C and Mortality Means



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

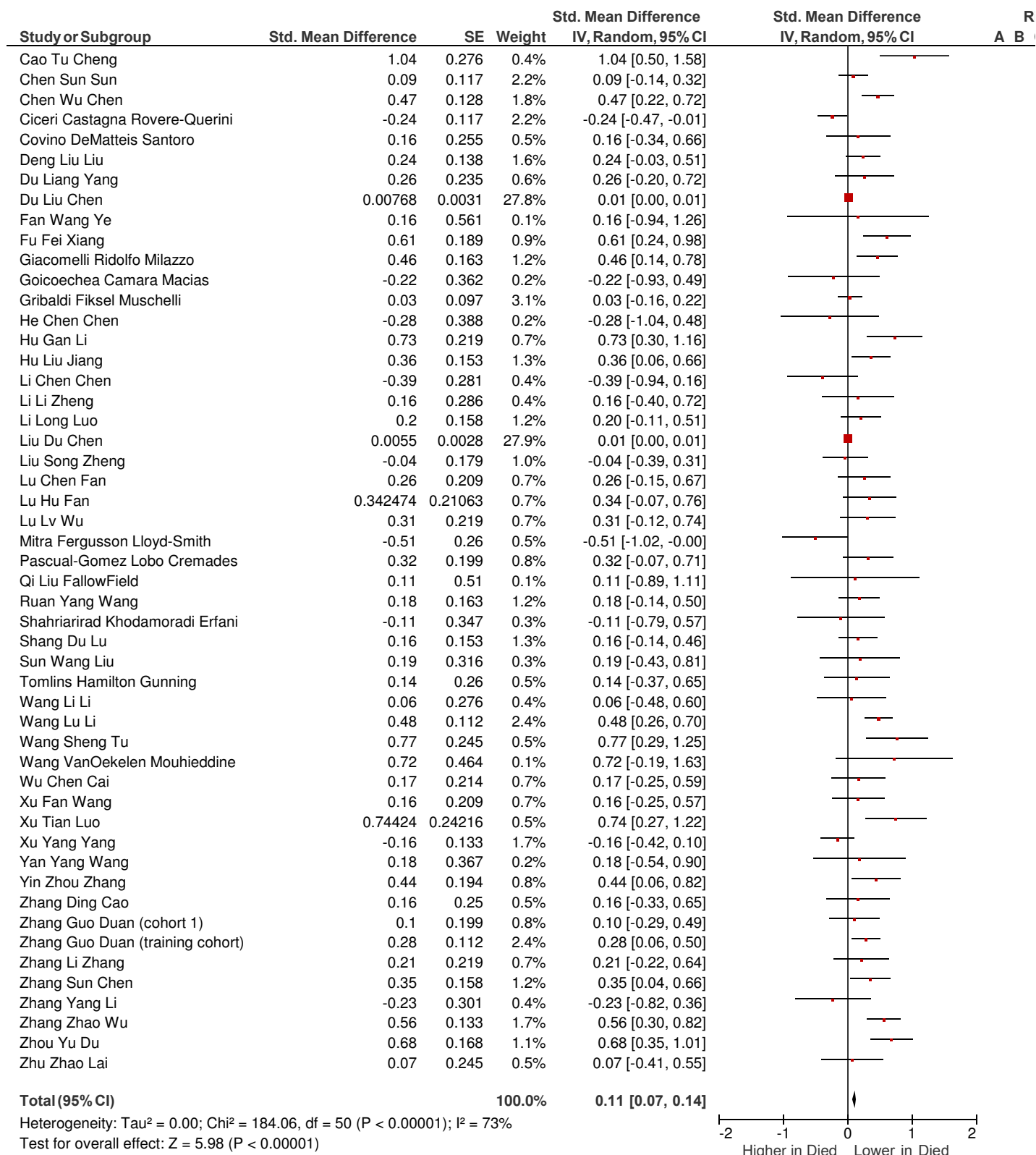
4.32 Aspartate Aminotransferase (AST) and Mortality SMD Combined



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

4.33 Alanine Aminotransferase (ALT) and Mortality SMD Combined

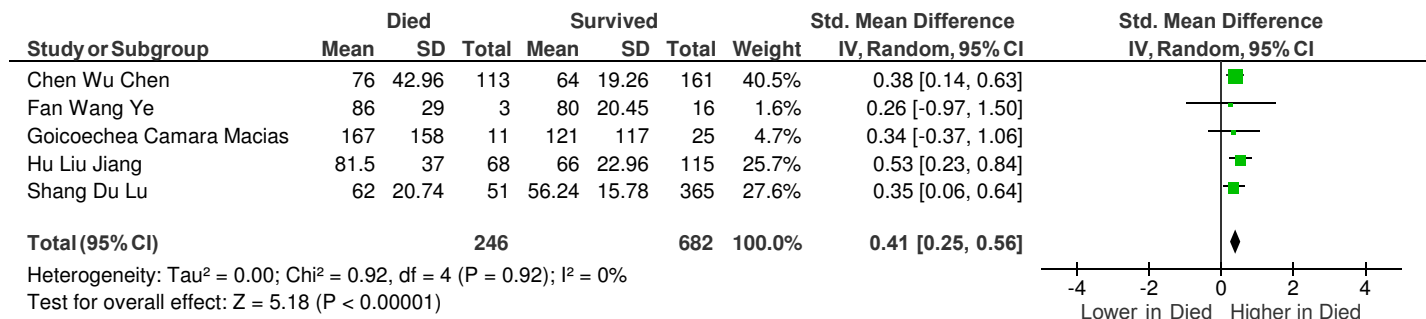


Risk of bias legend

- (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)

- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

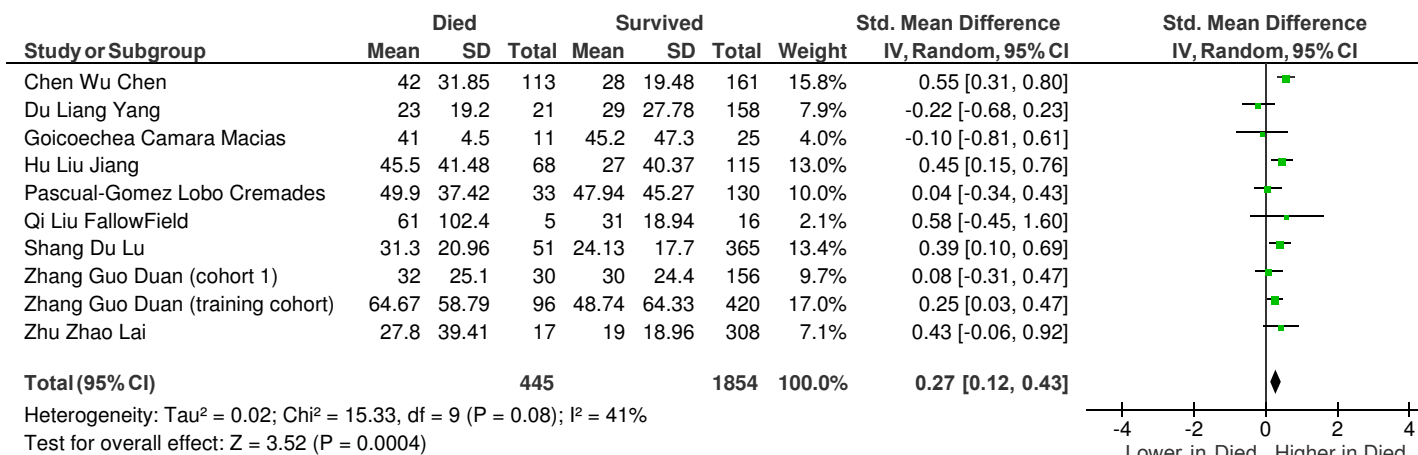
4.34 Alkaline Phosphatase and Mortality Means



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

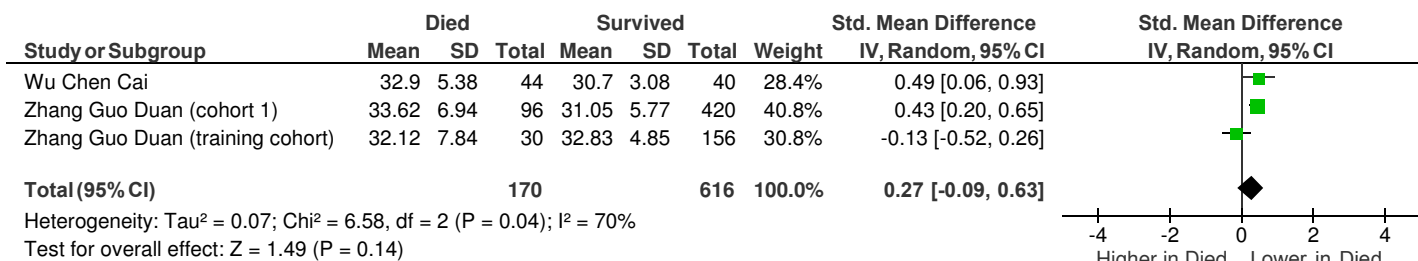
4.35 Gamma Glutamyl Transpeptidase (GGT) and Mortality Means



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

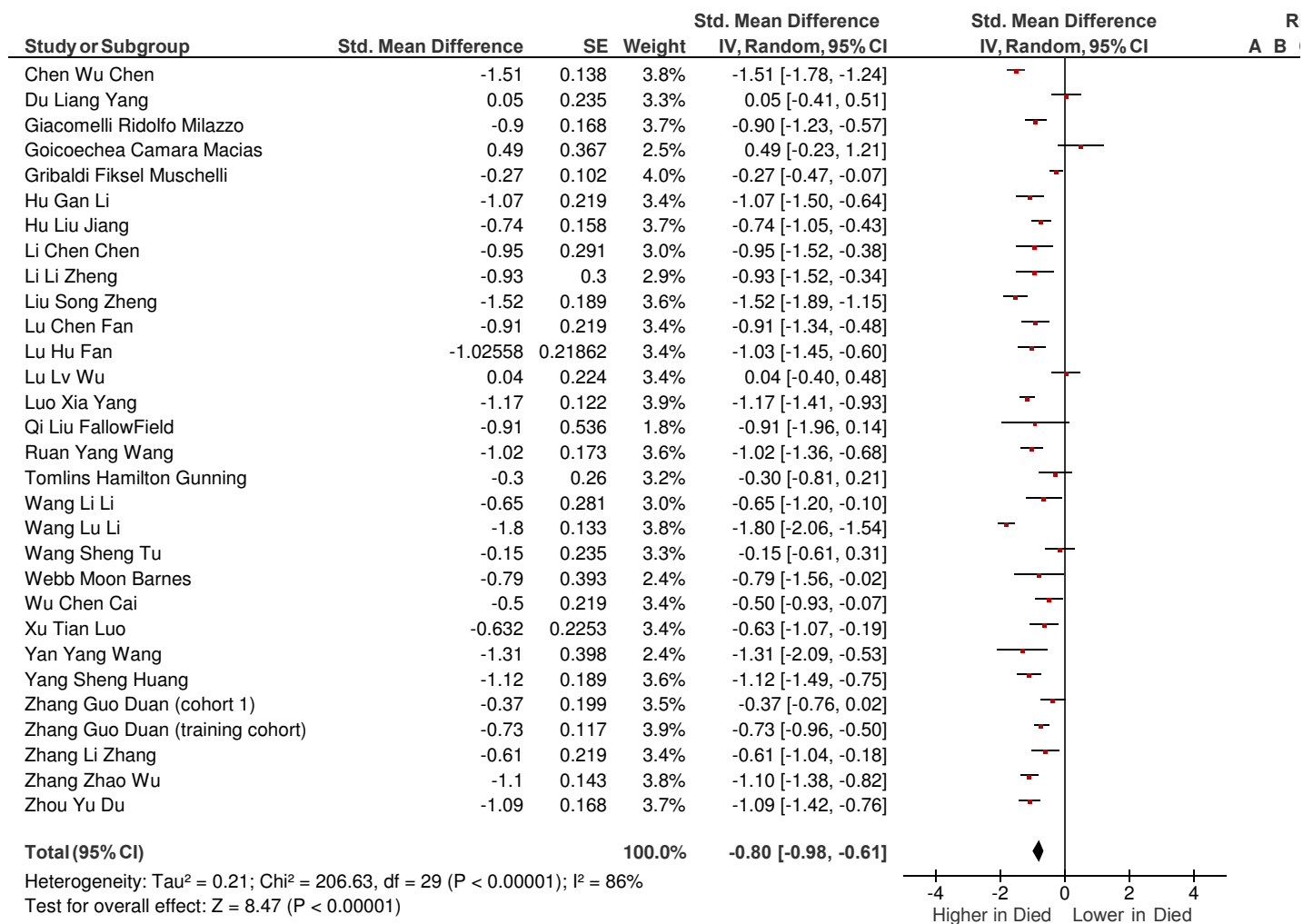
4.36 Globulin and Mortality Means



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

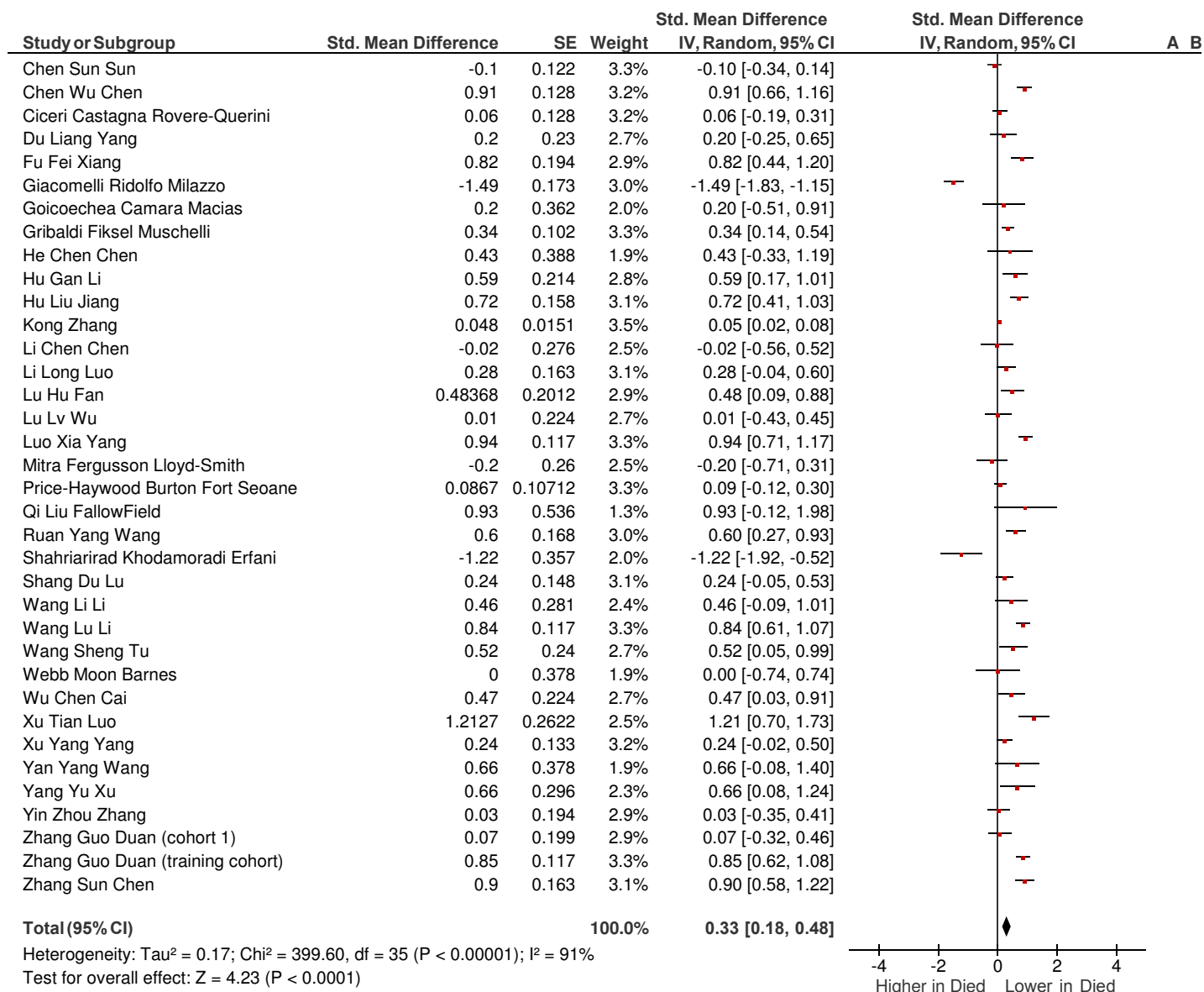
4.37 Albumin and Mortality Means



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

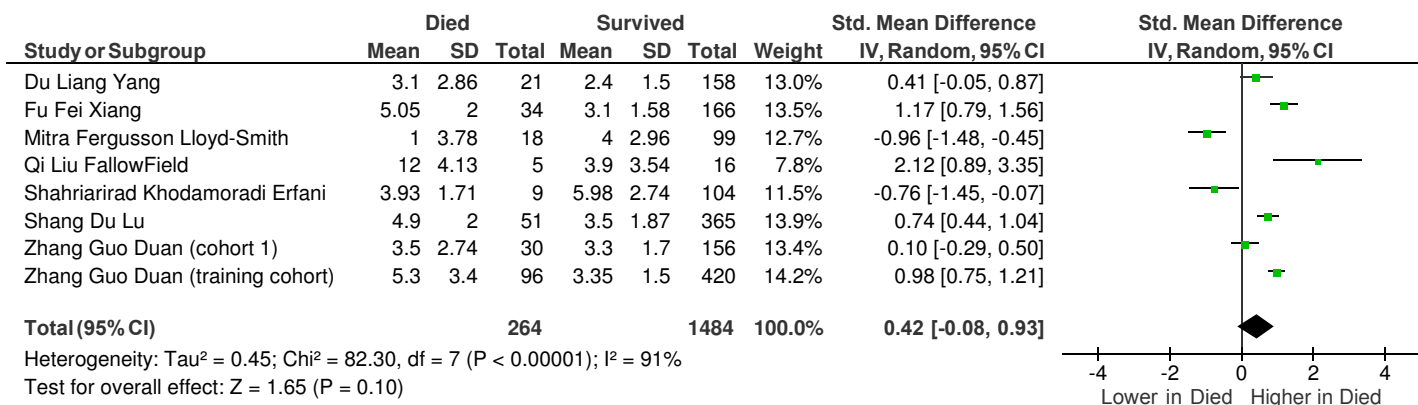
4.38 Total Bilirubin and Mortality SMD Combined



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

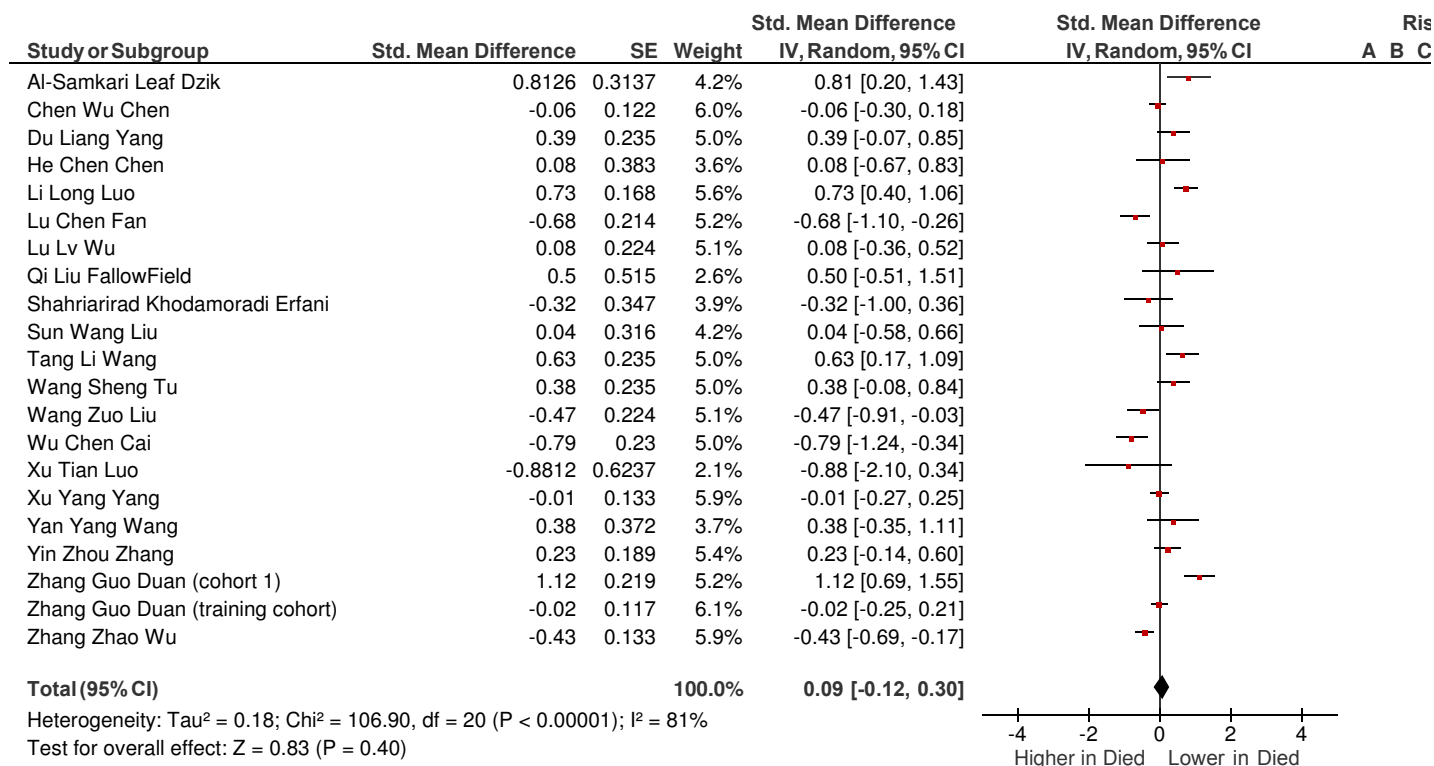
4.39 Direct Bilirubin and Mortality Means



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

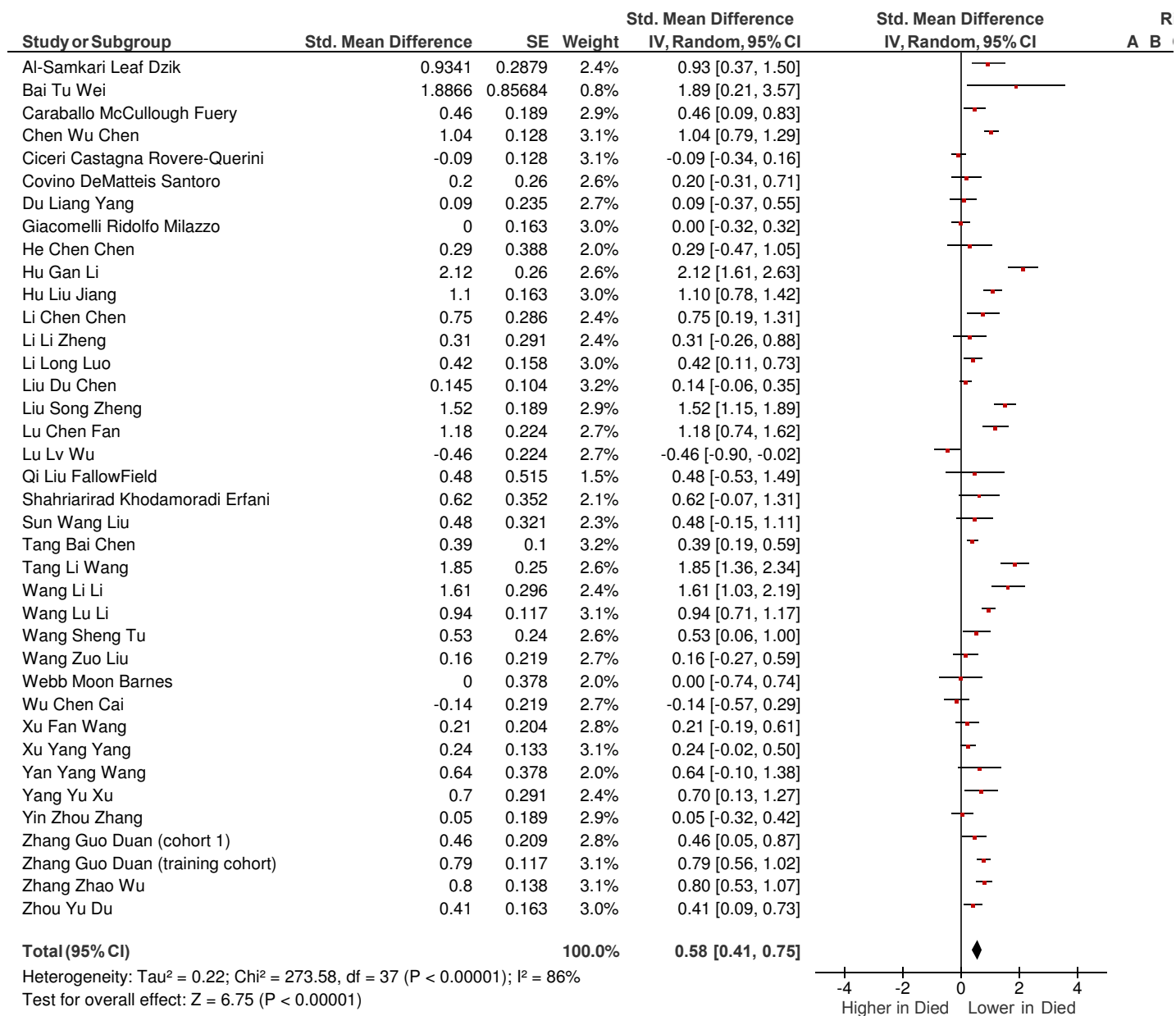
4.40 Acitvated Partial Thromboplastin Time (aPTT) and Mortality Means



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

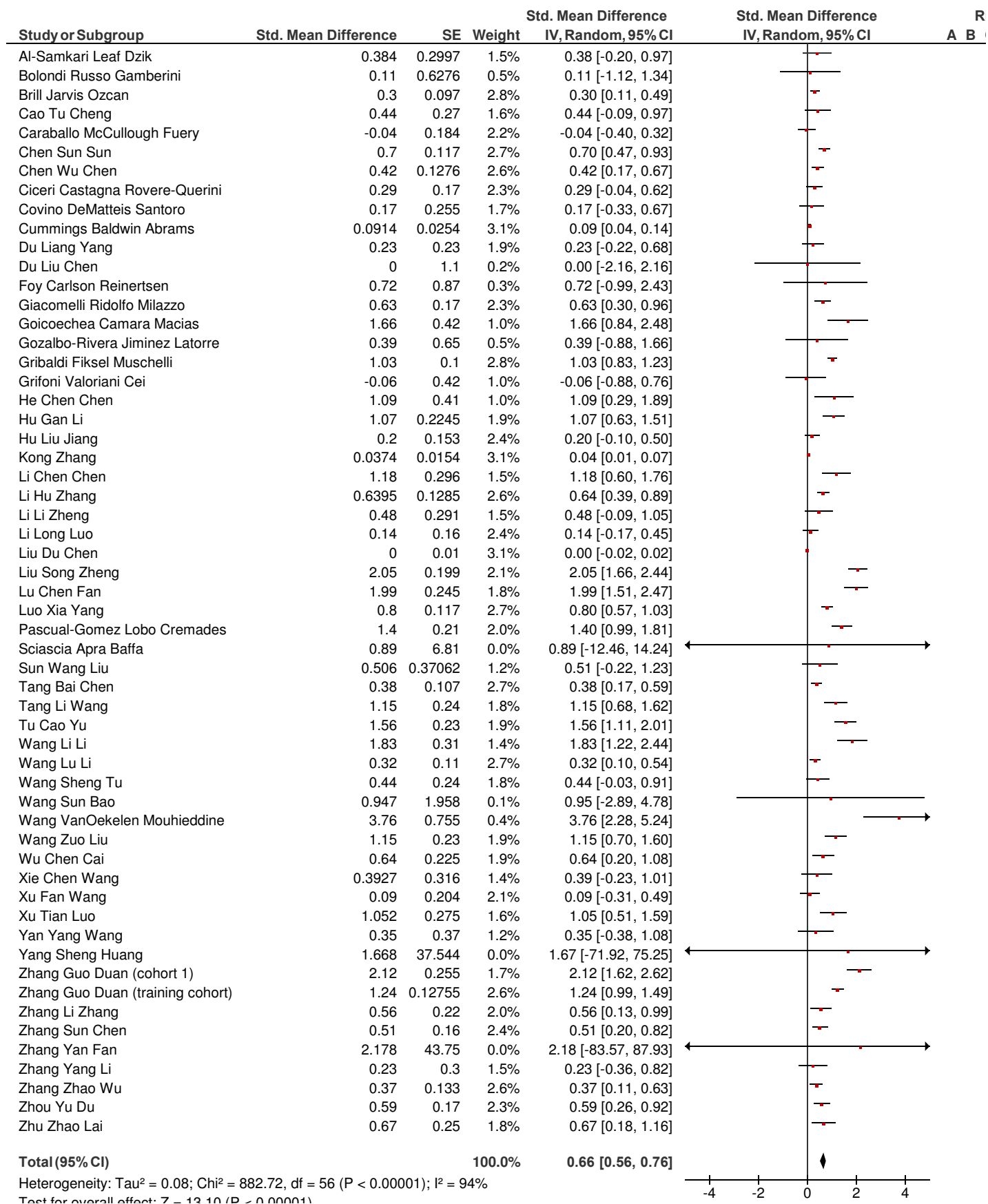
4.41 Prothrombin Time/International Normalized Ratio (PT/INR) and Mortality SMD Combined



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

4.42 D-Dimer and Mortality SMD Combined



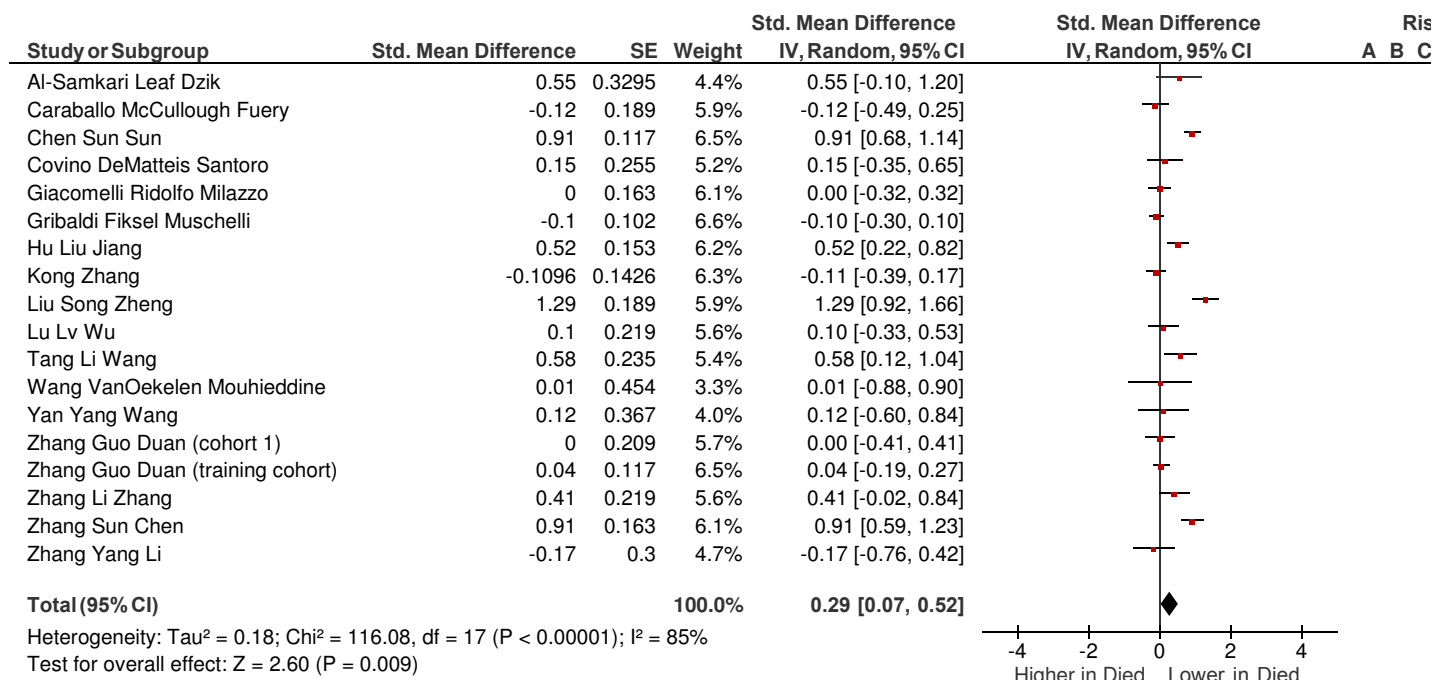
Test for overall effect: $Z = 13.10$ ($P < 0.00001$)

Higher in Died Lower in Died

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

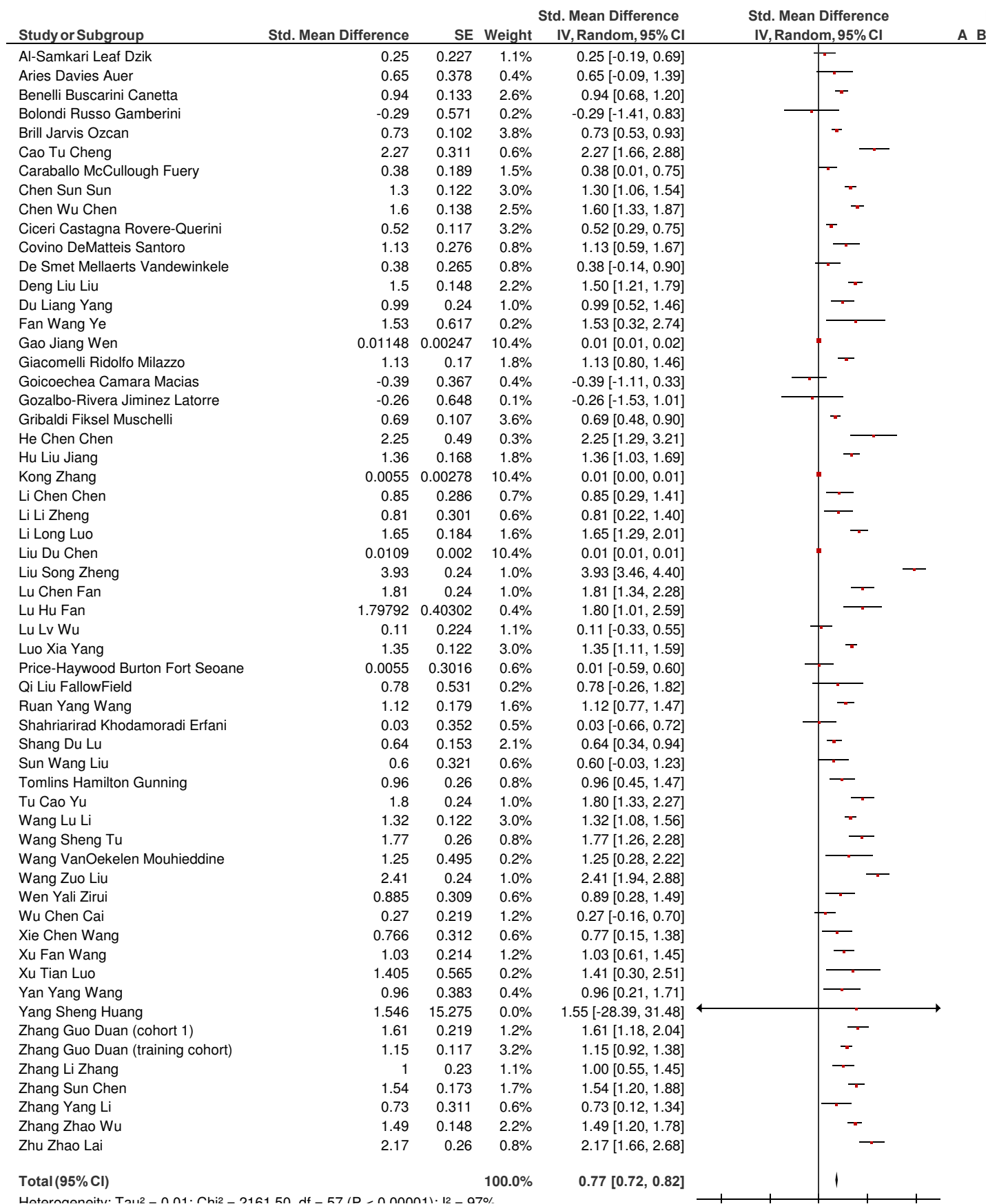
4.43 Fibrinogen and Mortality Means



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

4.44 C Reactive Protein (CRP) and Mortality SMD Combined



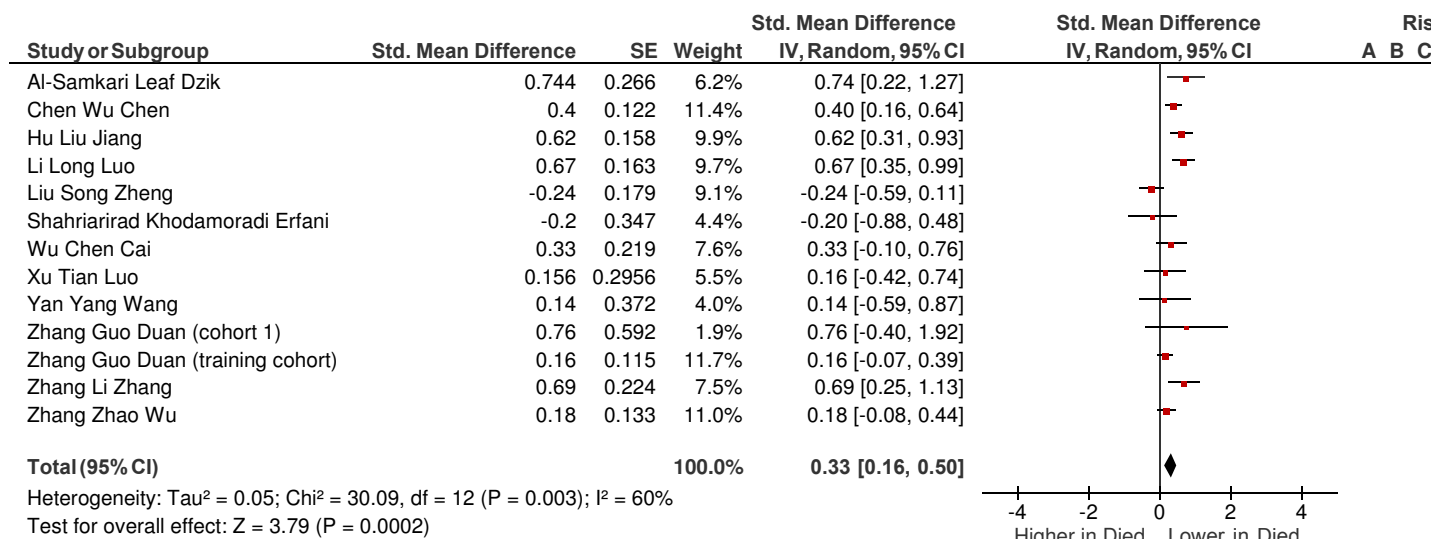
Heterogeneity: $I^2 = 0.01$, $Chi^2 = 2101.50$, $df = 37$ ($P < 0.00001$), $I^2 = 97.7\%$
 Test for overall effect: $Z = 30.93$ ($P < 0.00001$)



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

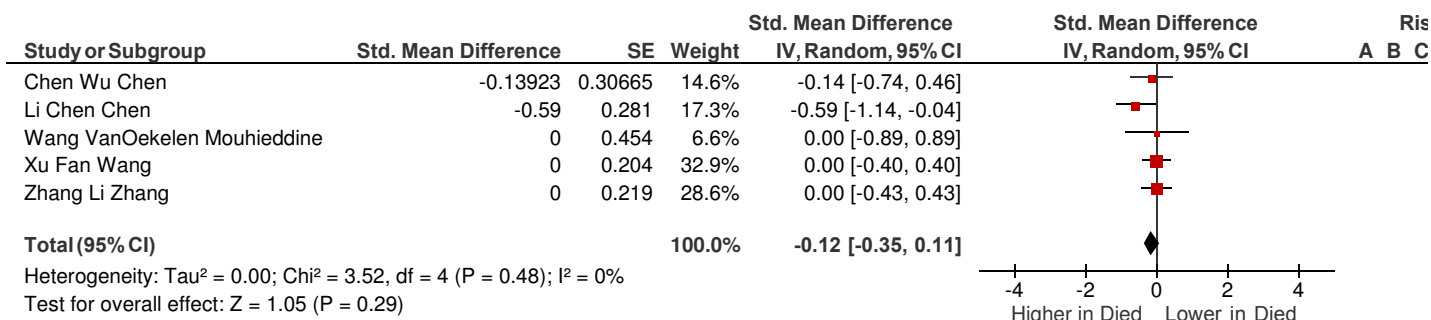
4.45 Erythrocyte Sedimentation Rate (ESR) and Mortality Means



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

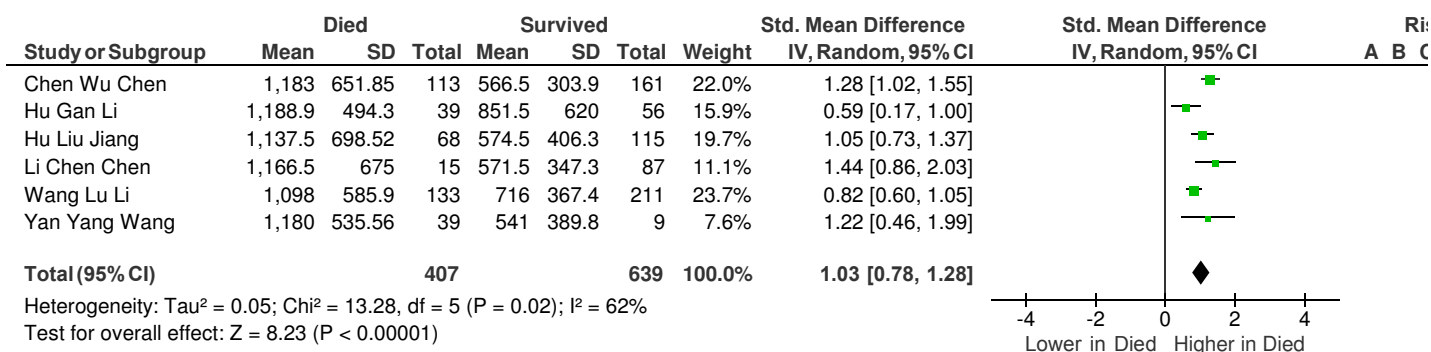
4.46 Interleukin 1 Beta and Mortality SMD Combined



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

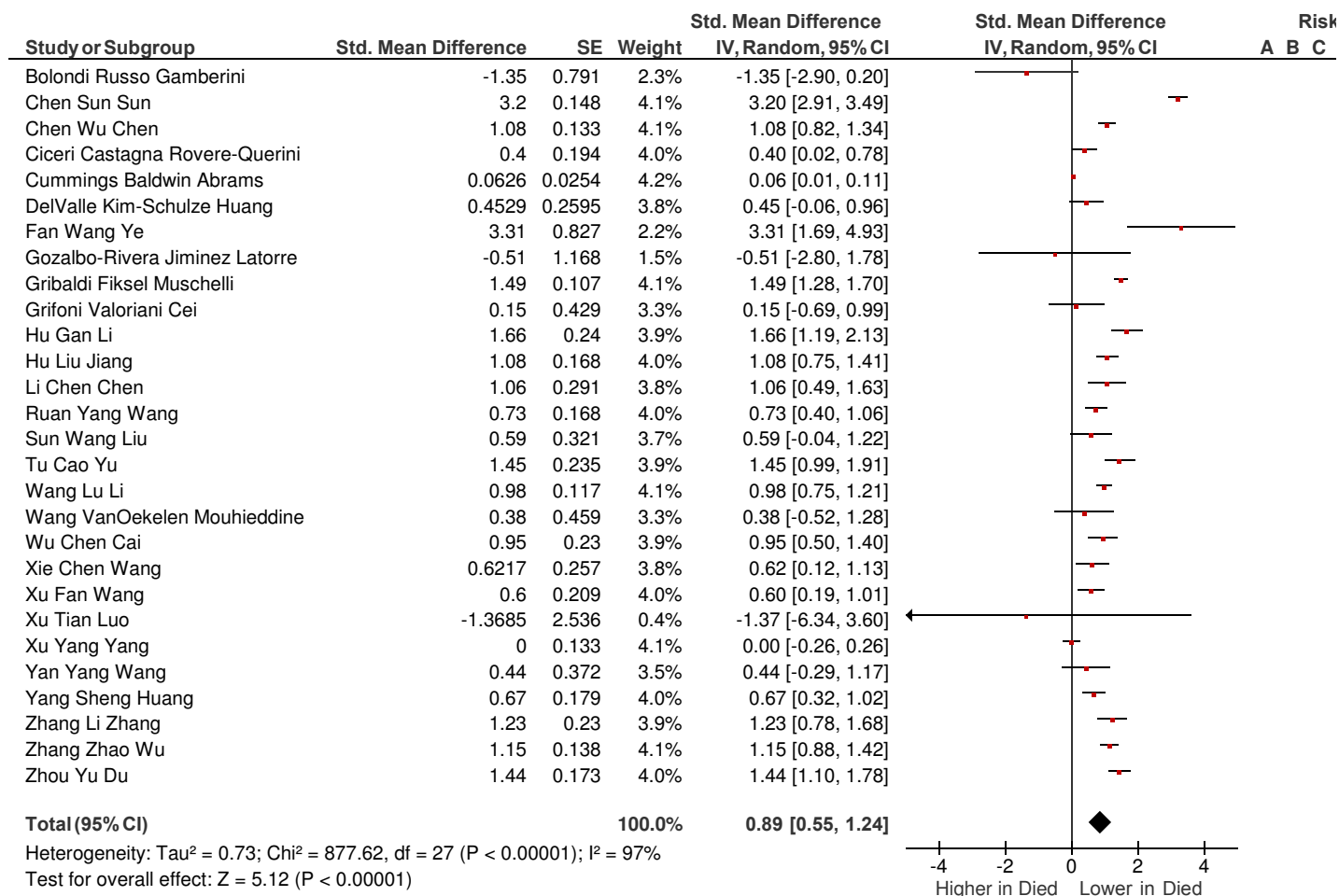
4.47 Interleukin 2 Receptor and Mortality Means



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

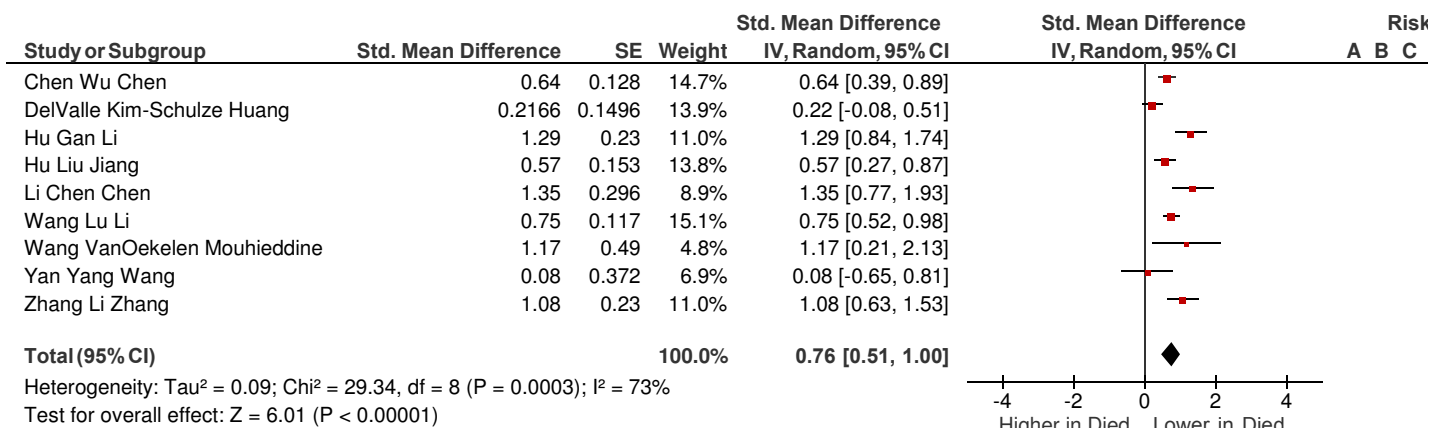
4.48 Interleukin-6 and Mortality SMD Combined



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

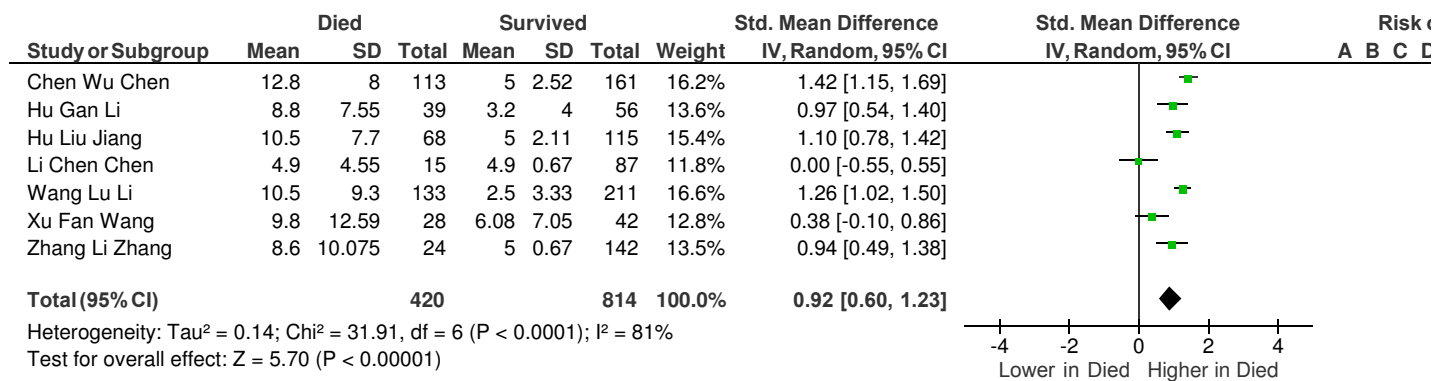
4.49 Interleukin 8 and Mortality Means



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

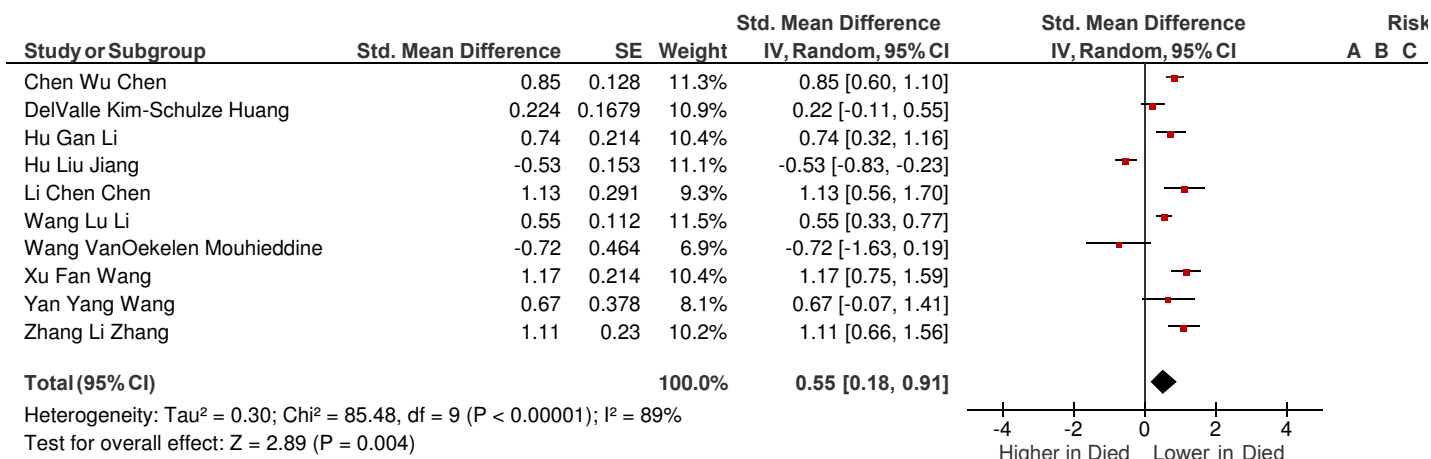
4.50 Interleukin 10 and Mortality Means



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

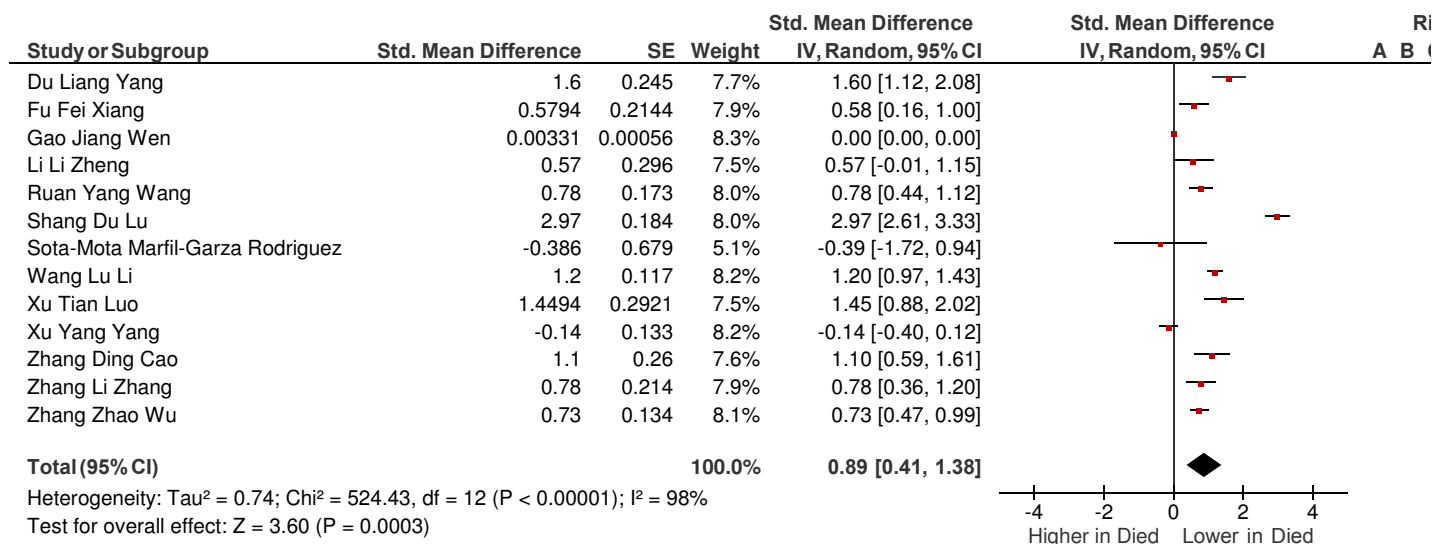
4.51 Tumor Necrosis Factor Alpha and Mortality Means



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

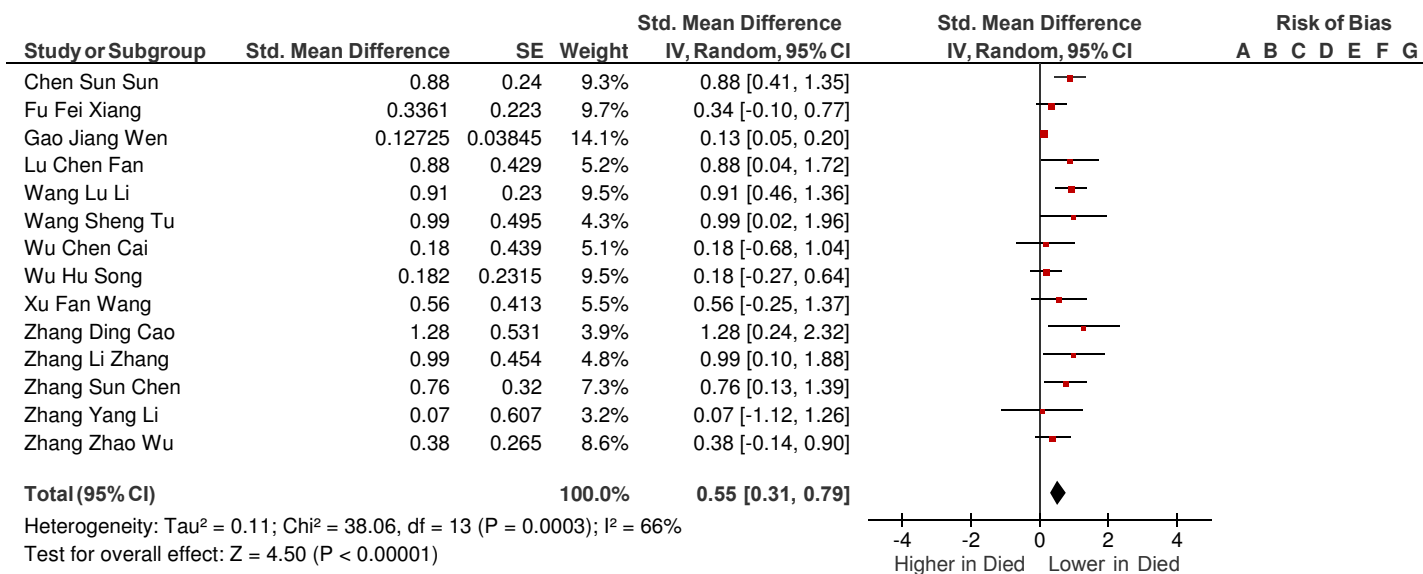
4.52 Myoglobin and Mortality SMD Combined



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

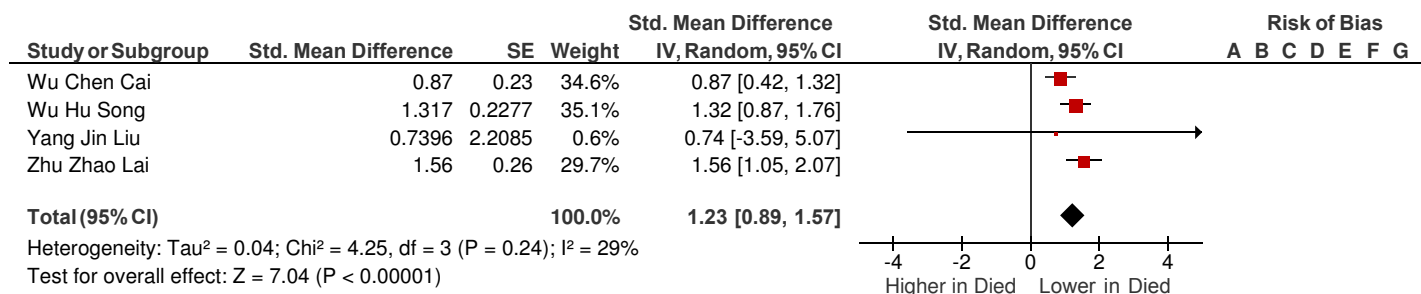
4.53 Creatine Kinase Isoenzymes/Myocardial Band (CKMB) and Mortality SMD Combined



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

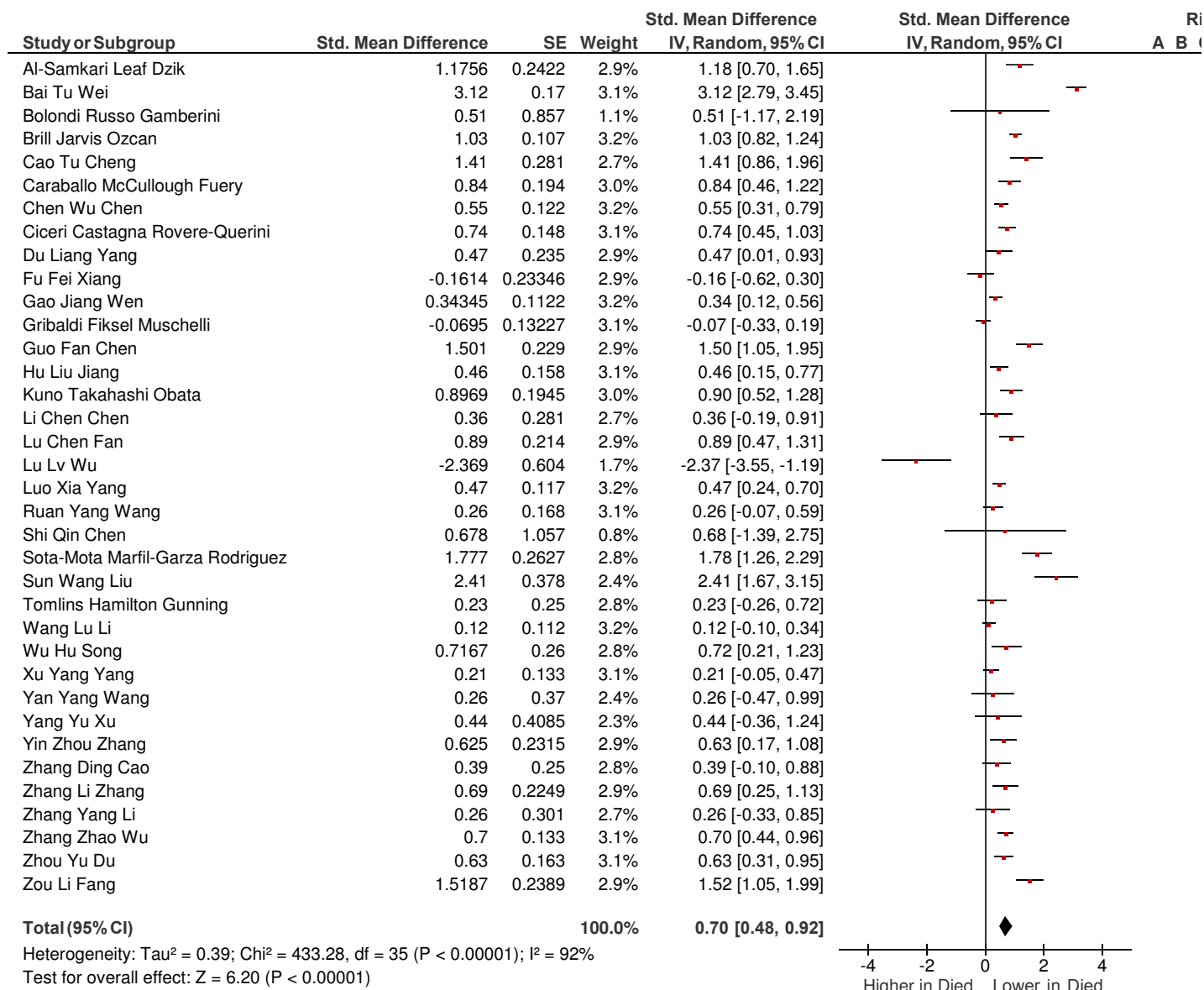
4.54 Alpha Hydroxybutyrate Dehydrogenase and Mortality SMD Combined



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

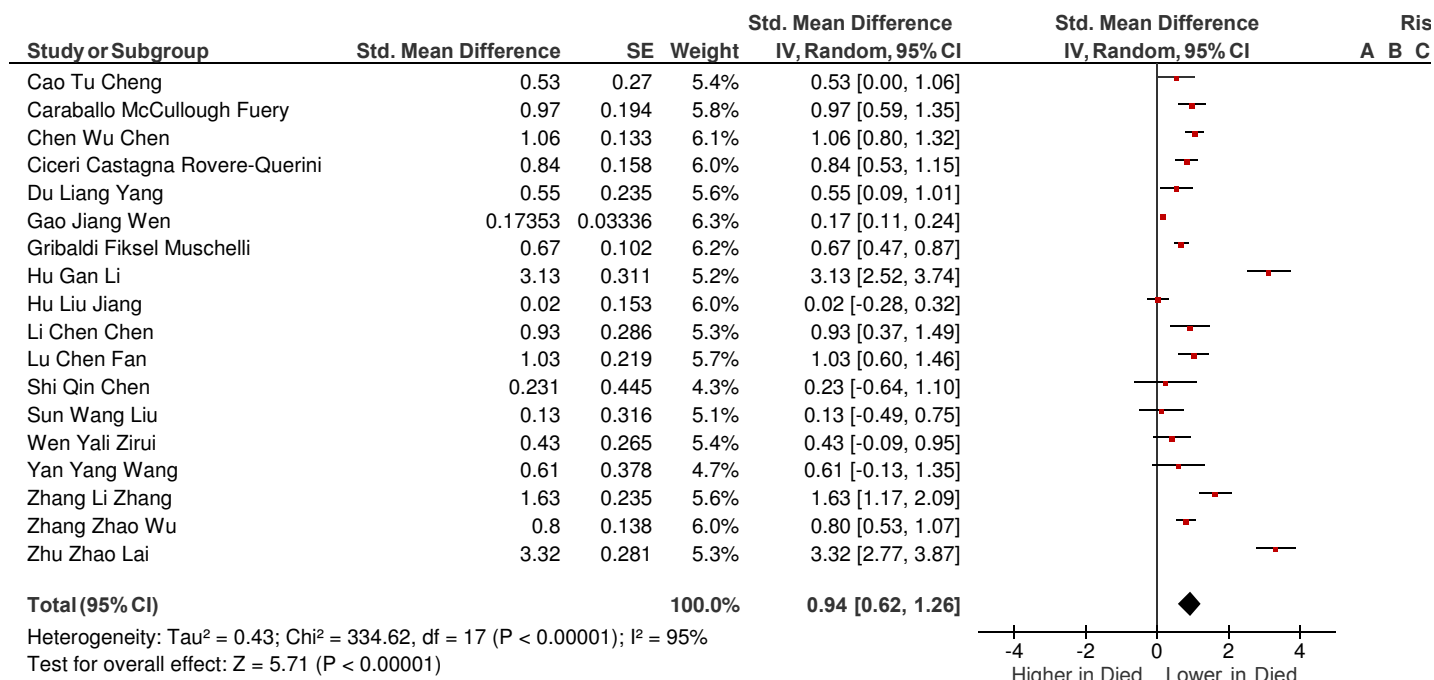
4.55 Troponin and Mortality SMD Combined



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

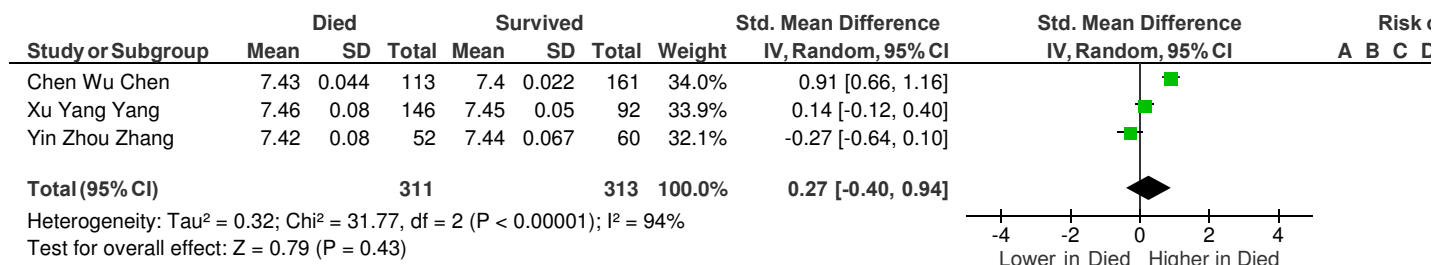
4.56 Brain Natriuretic Peptide and Mortality Means



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

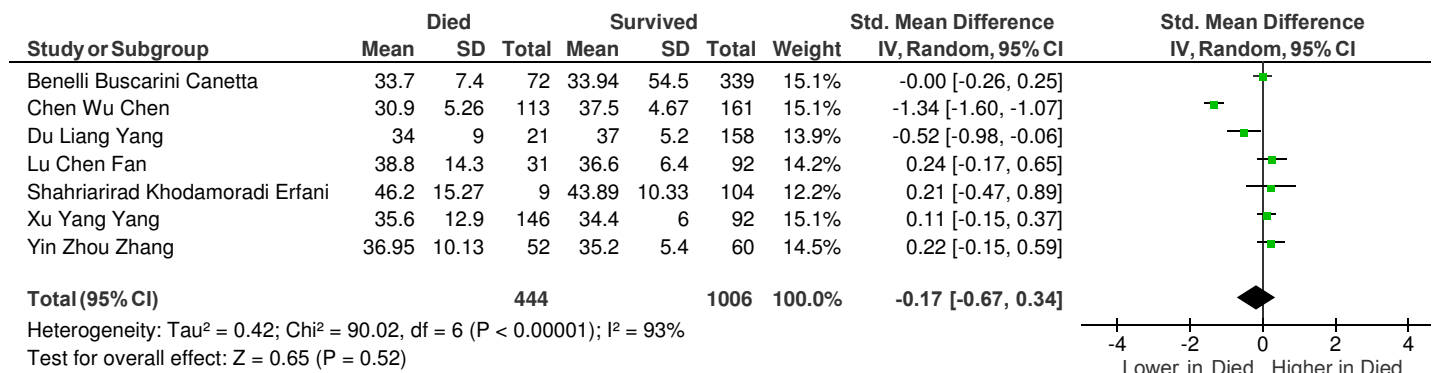
4.57 pH and Mortality Means



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

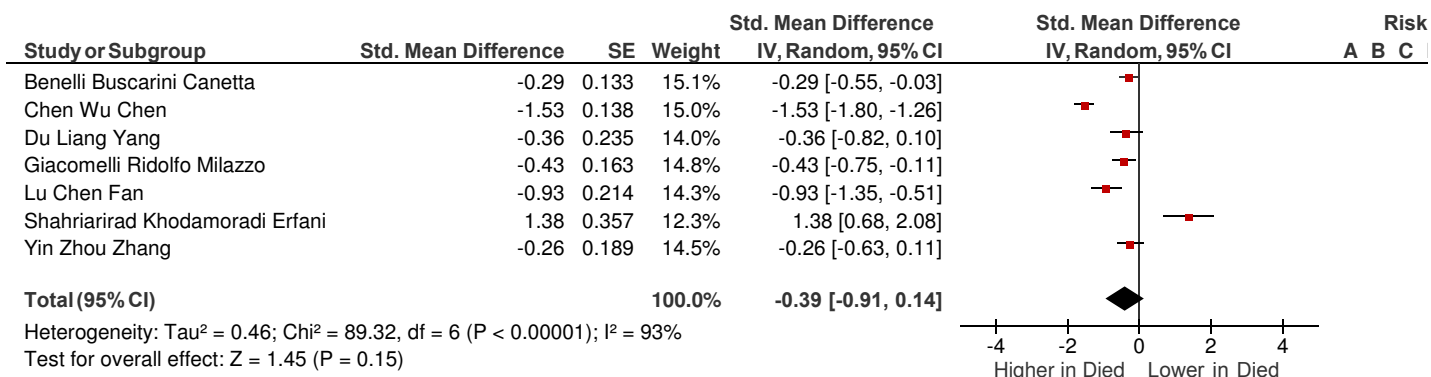
4.58 Partial Pressure of Carbon Dioxide (PaCO2) and Mortality Means



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

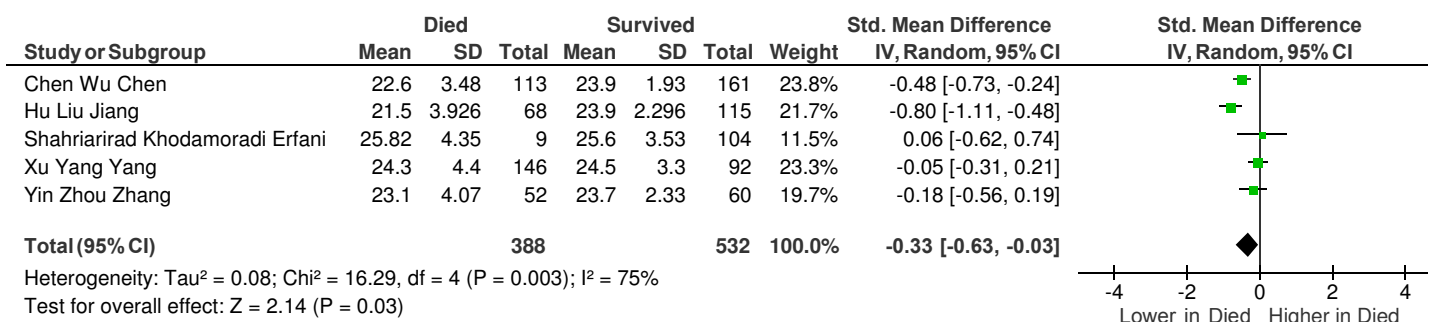
4.59 Partial Pressure of Oxygen (PaO2) and Mortality SMD Combined



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

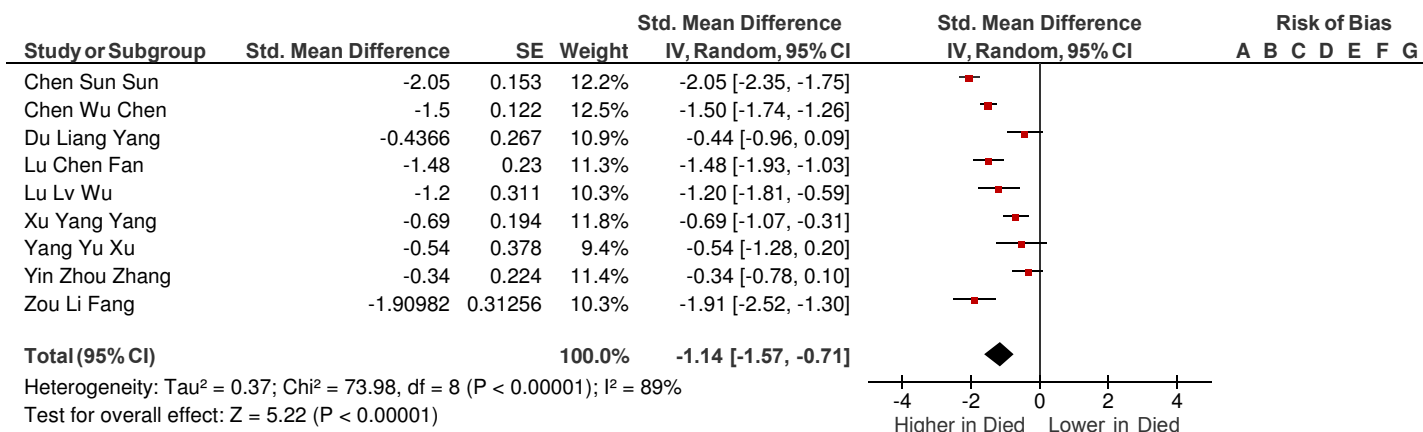
4.60 Bicarbonate (HCO3) and Mortality Means



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

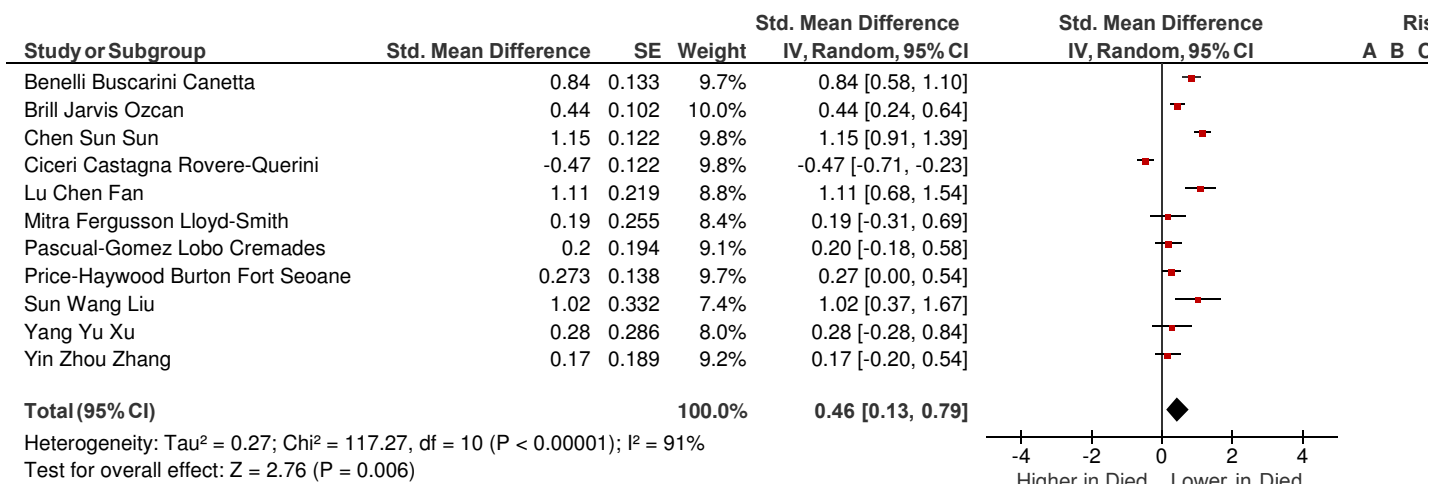
4.61 PaO2:FiO2 Ratio and Mortality Means



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

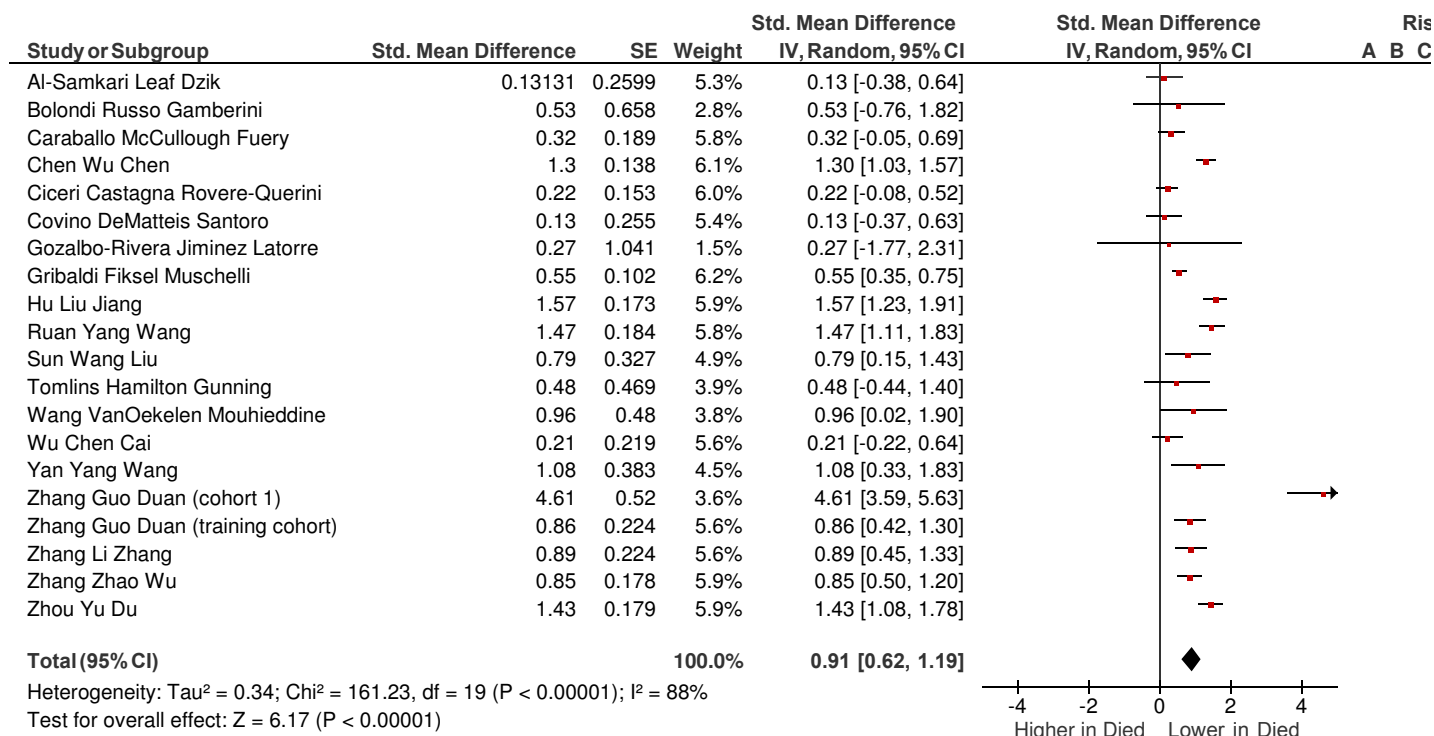
4.62 Lactic Acid and Mortality Means



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

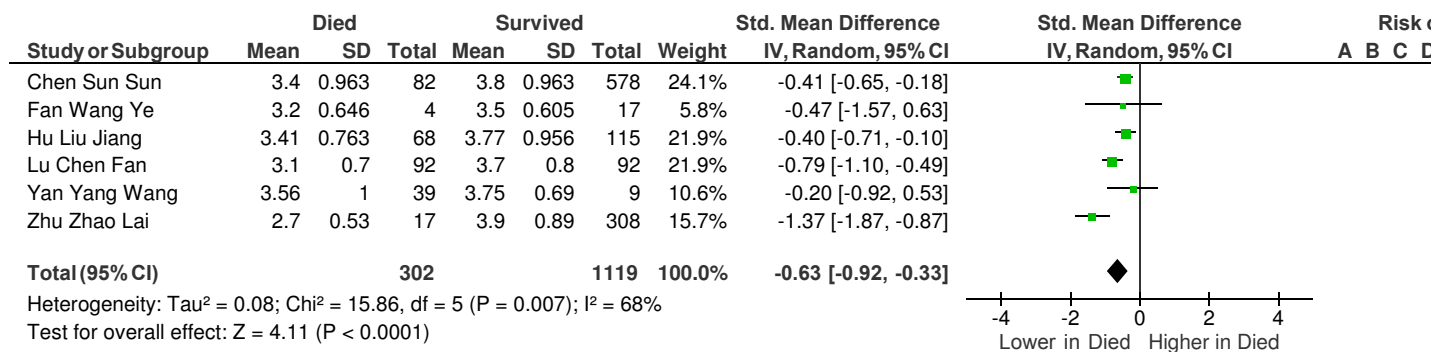
4.64 Ferritin and Mortality Means



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

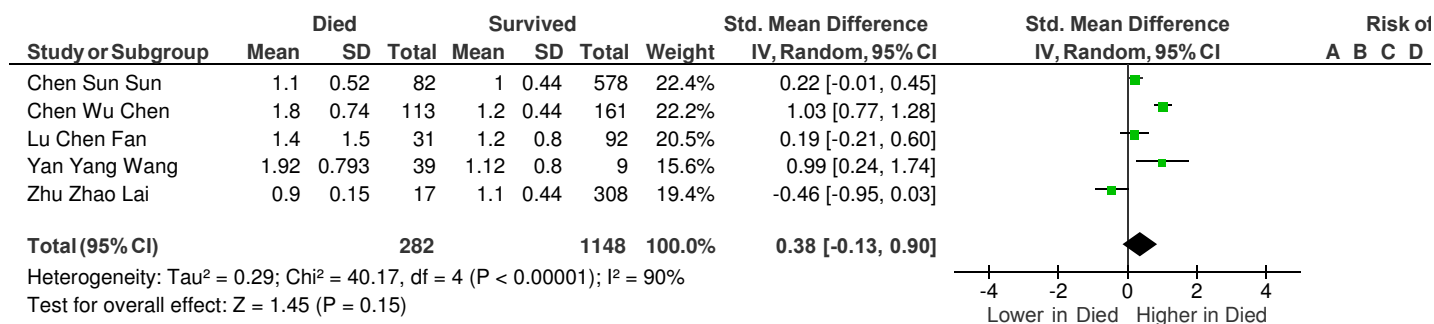
4.65 Total Cholesterol and Mortality Means



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

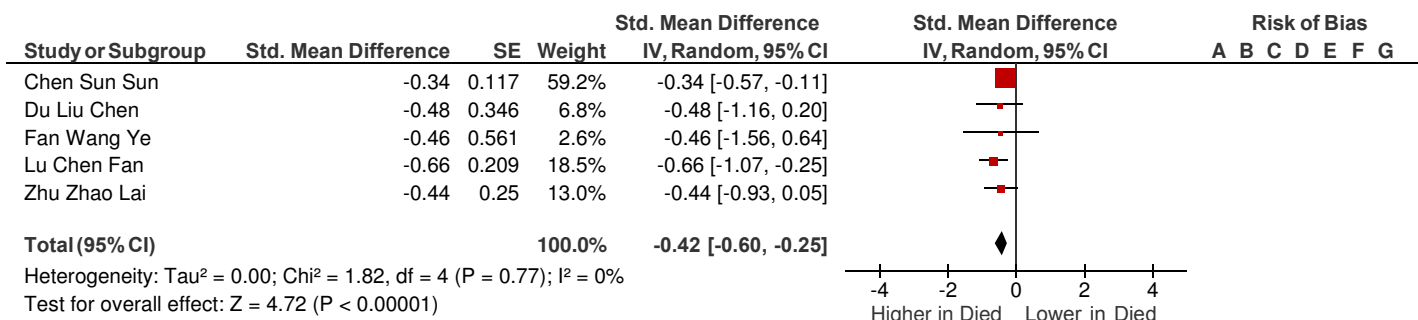
4.66 Triglycerides and Mortality Means



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

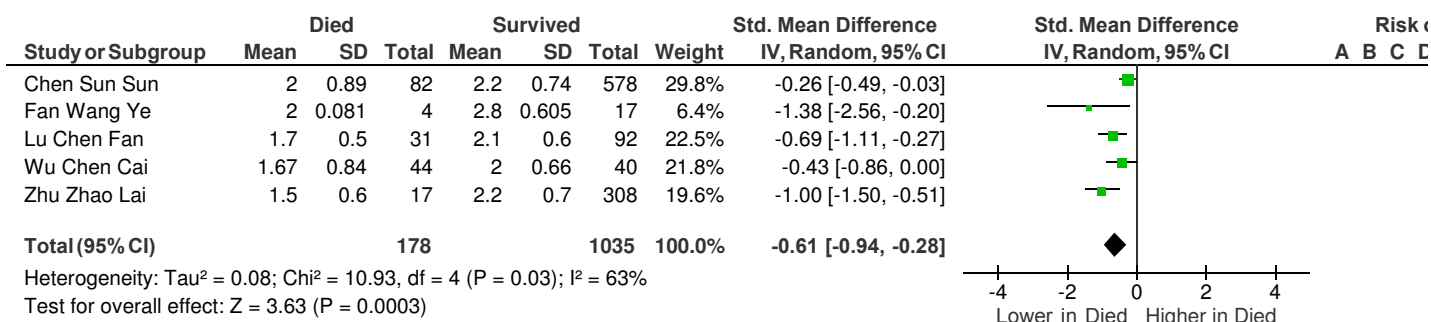
4.67 High Density Lipoprotein and Mortality Means



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

4.68 Low Density Lipoprotein (LDL) and Mortality Means



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

4.69 Hemoglobin A1c and Mortality Means

Study or Subgroup	Died			Alive			Weight	Std. Mean Difference IV, Random, 95% CI	Std. Mean Difference IV, Random, 95% CI
	Mean	SD	Total	Mean	SD	Total			
Caraballo McCullough Fuery	6.4	0.15	34	6.5	1.41	172	19.9%	-0.08 [-0.45, 0.29]	
Chen Sun Sun	7.4	0.815	82	7.3	2	578	29.4%	0.05 [-0.18, 0.28]	
Gribaldi Fiksel Muschelli	7.35	1.133	113	6.681	2.022	729	32.0%	0.35 [0.15, 0.55]	
Yan Yang Wang	7.4	1	39	7.6	1.3	9	7.9%	-0.19 [-0.91, 0.54]	
Zhang Li Zhang	6.9	1.128	13	6.4	0.815	86	10.9%	0.58 [-0.01, 1.17]	
Total (95% CI)			281			1574	100.0%	0.16 [-0.07, 0.38]	

Heterogeneity: Tau² = 0.03; Chi² = 8.45, df = 4 (P = 0.08); I² = 53%
 Test for overall effect: Z = 1.38 (P = 0.17)

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

4.70 Uric Acid and Mortality Means

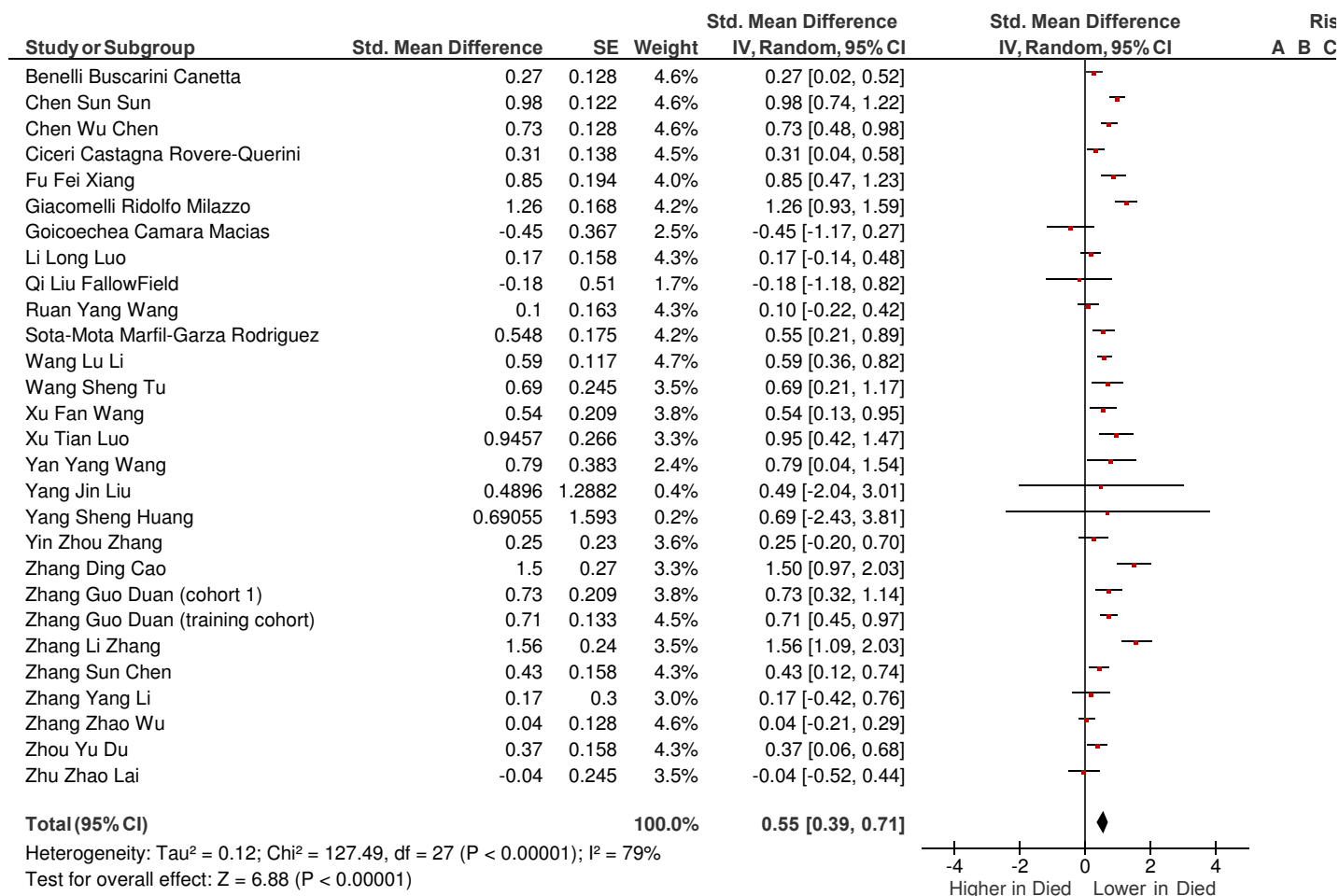
Study or Subgroup	Died			Survived			Weight	Std. Mean Difference IV, Random, 95% CI	Std. Mean Difference IV, Random, 95% CI	R A B
	Mean	SD	Total	Mean	SD	Total				
Cao Tu Cheng	396	136.9	17	243.6	88.15	85	15.3%	1.55 [0.99, 2.11]		
Fu Fei Xiang	280	150.56	34	244	87.4	166	18.2%	0.36 [-0.01, 0.73]		
Hu Liu Jiang	239.5	115.185	68	251	101.48	115	19.1%	-0.11 [-0.41, 0.19]		
Wang Sheng Tu	311	117	21	259	89	113	16.7%	0.55 [0.08, 1.02]		
Xu Fan Wang	308.3	126.56	28	257.4	154.96	159	17.7%	0.34 [-0.07, 0.74]		
Yan Yang Wang	277.3	140.7	39	263	116.6	9	13.0%	0.10 [-0.62, 0.83]		
Total (95% CI)			207			647	100.0%	0.45 [0.03, 0.87]		

Heterogeneity: Tau² = 0.22; Chi² = 27.36, df = 5 (P < 0.0001); I² = 82%
 Test for overall effect: Z = 2.08 (P = 0.04)

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

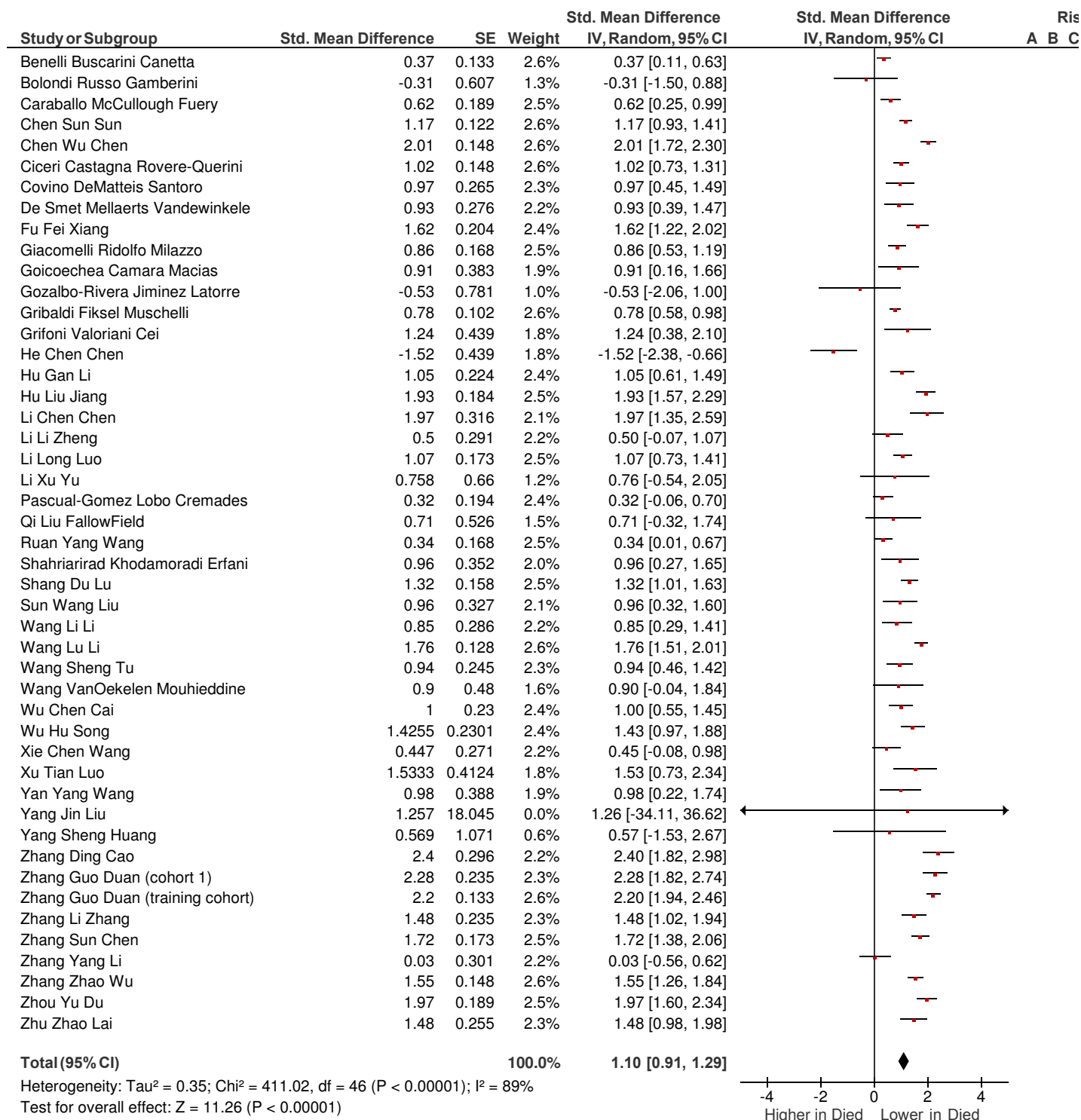
4.71 Creatine Kinase (CK, CPK) and Mortality SMD Combined



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

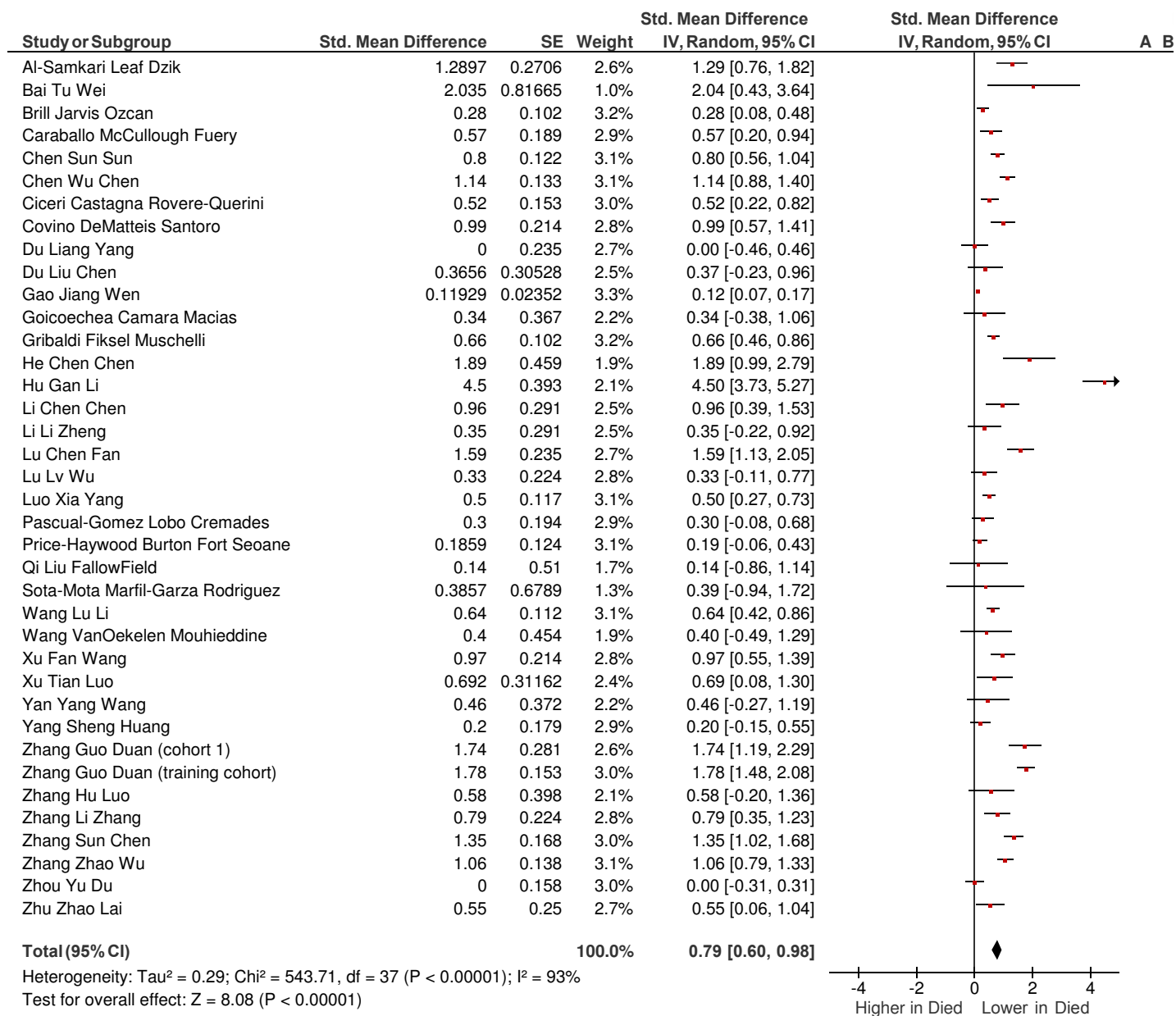
4.72 Lactate Dehydrogenase (LDH) and Mortality SMD Combined



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

4.73 Procalcitonin and Mortality SMD Combined



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