

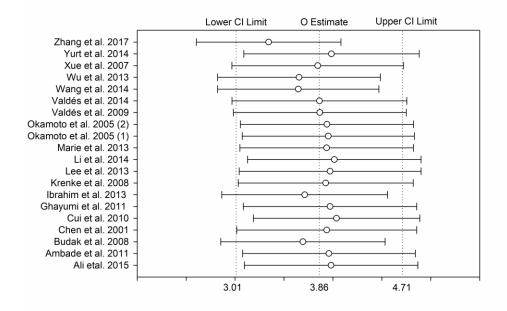
Sensitivity analysis of the all 19 studies on TNF- $\alpha$  included in the meta-analysis. The circle indicates the total combined effect SMD, the two ends of every broken line represent the respective 95% confidence interval.

## Fig. S2a

Study or Subgroup	Mean	TPE SD	Total	Mean	MPE SD	Total	Weight	Std. Mean Difference IV, Random, 95% Cl	Std. Mean Difference IV, Random, 95% Cl
Ali etal. 2015	2.26	1.61	20	0.29	0.19	20	5.1%	1.68 [0.95, 2.42]	
Ambade et al. 2011	1,958.6	896.5	48	191	440	6	5.0%	2.02 [1.08, 2.95]	-
Budak et al. 2008	156.1	32.4	35	1.2	0.1	39	4.8%	6.88 [5.66, 8.11]	
Chen et al. 2001	664.5	724.6	26	0.7	2.4	202	5.2%	2.75 [2.26, 3.23]	•
Cui et al. 2010	148.57	61.2	36	121.02	41.98	30	5.2%	0.51 [0.02, 1.00]	
Ghayumi et al. 2011	57.7	64.6	10	4.2	8.7	44	5.1%	1.88 [1.10, 2.66]	+
lbrahim et al. 2013	435.6	36	26	220.2	28.9	34	4.7%	6.61 [5.29, 7.94]	-
Krenke et al. 2008	614.1	324.5	28	12.5	14.1	35	5.1%	2.75 [2.05, 3.45]	+
Lee et al. 2013	782	521.75	60	45	7	84	5.3%	2.18 [1.76, 2.60]	+
Li et al. 2014	114.97	27.85	47	87.15	18.77	43	5.2%	1.15 [0.70, 1.60]	-
Marie et al. 2013	524	190.12	38	93	35.32	11	5.1%	2.50 [1.66, 3.35]	+
Okamoto et al. 2005 (1)	2,006.3	1,659.963	7	201.75	178.85	19	4.9%	2.07 [1.01, 3.13]	+
Okamoto et al. 2005 (2)	2,063	1,659.904	11	38	33	32	5.0%	2.42 [1.55, 3.29]	+
Valdés et al. 2009	1,952	726	39	22.4	10.875	42	5.1%	3.80 [3.05, 4.54]	+
Valdés et al. 2014	1,021	447.05	70	15.2	3.3167	146	5.2%	3.95 [3.48, 4.42]	•
Wang et al. 2014	1,128.44	234.25	33	5.6	0.495	54	4.8%	7.74 [6.49, 9.00]	
Wu et al. 2013	2,345.2	362.9	46	67.3	11.8	26	4.7%	7.74 [6.36, 9.13]	
Xue et al. 2007	153.7	36.4	45	41.7	8.3	42	5.1%	4.14 [3.38, 4.90]	+
Yurt et al. 2014	185	88.75	43	58.75	23.75	23	5.2%	1.70 [1.12, 2.29]	+
Zhang et al. 2017	468.6	24.8	60	131.3	18.7	60	4.1%	15.26 [13.26, 17.26]	
Total (95% CI)			728			992	100.0%	3.82 [2.97, 4.66]	•
Heterogeneity: Tau <sup>2</sup> = 3.4	6: Chi <sup>2</sup> = 54	5.64. df = 19	) (P < 0	.00001):	<b>≈</b> = 97%				-20 -10 0 10 2
Test for overall effect: Z =									-20 -10 0 10 2 Favours [MPE] Favours [TPE]

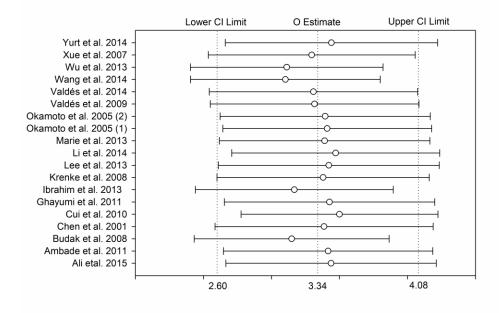
Forest plot for remaining 20 studies comparing IFN- $\gamma$  levels in tuberculous pleural effusions and malignant effusions.

Supplementary Fig. S2b



Sensitivity analysis of the all 20 studies on IFN- $\gamma$  included in the meta-analysis.

Supplementary Fig. 2c



Sensitivity analysis of the remaining 19 studies on IFN- $\gamma$  included in the meta-analysis.

2.29

Fig. S3a							
		TPE					
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight
Budak et al. 2008	22.2	5.1	35	23.9	4.3	39	13.8%
Chen et al. 2001	27.5	42.9	26	24.3	29.2	202	14.8%
Chen et al. 2016	33.9875	12.3691	5	23.0925	5.2225	22	5.5%
Ciledag et al. 2010	4.86	4.39	14	4.2	6.29	19	9.6%
Ghayumi et al. 2011	28.1	25.4	10	21.6	19.4	44	9.6%

2.31

47

6.2

6.12

Shu et al. 2015 339.8 483.2 35 95.3 161.6 46 13.9% 0.71 [0.26, 1.17] -0.08 [-0.33, 0.17] Zhang et al. 2020 6.3 10.255 108 12 94.3333 134 18.1% 549 100.0% Total (95% CI) 280 0.17 [-0.12, 0.46] Heterogeneity: Tau<sup>2</sup> = 0.10; Chi<sup>2</sup> = 20.38, df = 7 (P = 0.005); l<sup>2</sup> = 66% Test for overall effect: Z = 1.15 (P = 0.25) -2 -1 ò Favours [MPE] Favours (TPE)

43 14.7%

Std. Mean Difference IV, Random, 95% Cl

-0.36 [-0.82, 0.10] 0.10 [-0.31, 0.51]

1.53 [0.47, 2.60] 0.12 [-0.58, 0.81]

0.31 [-0.38, 1.00]

-0.03 [-0.45, 0.38]

Std. Mean Difference

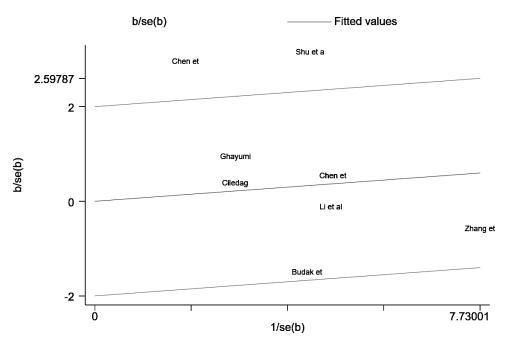
IV, Random, 95% Cl

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Forest plot for combined total 8 studies comparing IL-10 levels in tuberculous pleural effusions and malignant effusions.

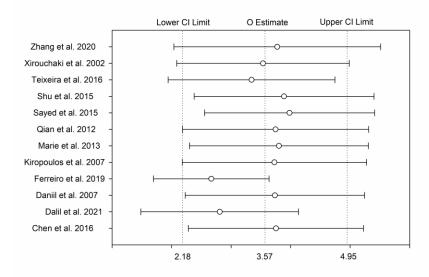
Fig. S3b

Li et al. 2014



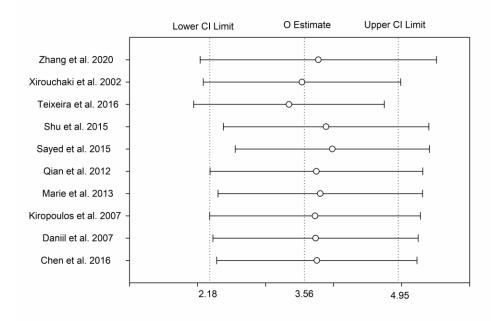
Galbraith radial plot for the heterogeneity across studies on IL-10.

Fig. S4a



Sensitivity analysis of the all 12 studies on IL-6 included in the meta-analysis.

Fig. S4b



Sensitivity analysis of the remaining 10 studies on IL-6 included in the meta-analysis.

Fig.	S4c

TPE			MPE					Std. Mean Difference	Std. Mean Difference		
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% Cl	IV, Random, 95% Cl		
Chen et al. 2016	16,132.5	3,715.2606	5	10,485	3,540	22	9.3%	1.53 [0.47, 2.60]			
Daniil et al. 2007	23,622.75	8,316.62	12	8,494.66	7,754.58	45	10.2%	1.90 [1.16, 2.63]			
<iropoulos 2007<="" al.="" et="" td=""><td>24,268</td><td>8,640</td><td>25</td><td>8,085</td><td>7,191</td><td>57</td><td>10.6%</td><td>2.09 [1.52, 2.67]</td><td>-</td></iropoulos>	24,268	8,640	25	8,085	7,191	57	10.6%	2.09 [1.52, 2.67]	-		
vlarie et al. 2013	701.93	248.61	38	436.7	93.12	11	10.3%	1.16 [0.45, 1.87]			
Qian et al. 2012	23,688	12,011	23	10,343	4,430	79	10.7%	1.93 [1.39, 2.47]	-		
Sayed et al. 2015	1,264.8	141.76	7	1,501.1	274.29	7	9.1%	-1.01 [-2.15, 0.12]			
Shu et al. 2015	4,641	5,869	35	3,110	3,512	46	10.8%	0.32 [-0.12, 0.77]	-		
Feixeira et al. 2016	6,885	708	41	3,213	524	39	9.4%	5.82 [4.79, 6.84]			
(irouchaki et al. 2002	24,699	8,751	9	4,291	2,451	20	8.5%	3.82 [2.50, 5.14]			
Zhang et al. 2020	5,374.21	1,988.5883	108	2,133.59	1,260.705	134	11.0%	1.99 [1.68, 2.30]	-		
fotal (95% CI)			303			460	100.0%	1.92 [1.13, 2.71]	•		
Heterogeneity: Tau <sup>2</sup> = 1	46; Chi <sup>z</sup> = 13	9.51, df = 9 (F	° < 0.00	0001); I <b>z</b> = 9	94%				-4 -2 0 2 4		
Test for overall effect: $Z = 4.76$ (P < 0.00001)								-4 -2 0 2 4 Favours ITPE1 Favours IMPE1			

Forest plot for remaining 10 studies comparing IL-6 levels in tuberculous pleural effusions and malignant effusions.