## Table S1. Quality assessment of prognosis cohort studies by QUIPS tool

Study	Study participation	Study attrition	Prognostic factor measurement	Study confounding	Outcome measurement	Statistical analysis and reporting
Zhang et al[12]	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk
Xie et al[13]	Low risk	Low risk	Low risk	Moderate risk	Low risk	Low risk
Wu et al[14]	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk
Gu et al[15]	Low risk	Low risk	Low risk	Low risk	Moderate	Low risk
Gershman et al[16]	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk
Chipollini et al[17]	Low risk	Low risk	Low risk	Moderate	Low risk	Moderate risk
NguyenHoang et al[18]	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk
Khor et al[19]	Low risk	Moderate risk	Low risk	Low risk	Low risk	Low risk
Lee et al[20]	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk
Kara et al[21]	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk
Jeon et al[22]	Low risk	Low risk	Low risk	Low risk	Low risk	Moderate risk
Errarte et al[23]	Moderate risk	Low risk	Low risk	Low risk	Low risk	Low risk
Yu et al[24]	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk
Schiavina et al[25]	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk
Psutka et al[26]	Low risk	Low risk	Low risk	Moderate risk	Low risk	Low risk
Lee et al[27]	Low risk	Low risk	Low risk	Low risk	Low risk	Moderate
Kim et al[28]	Moderate risk	Low risk	Low risk	Low risk	Low risk	Low risk
Weiss et al[29]	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk

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Teng et al[30]	Low risk	Low risk	Low risk	Moderate risk	Low risk	Low risk
Haddad et al[31]	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk
El-Mokadem et al[32]	Moderate risk	Low risk	Low risk	Low risk	Low risk	Low risk
Tosco et al[33]	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk
Kruck et al[34]	Low risk	Low risk	Low risk	Moderate risk	Low risk	Low risk
Kondo et al[35]	Moderate risk	Low risk	Low risk	Low risk	Low risk	Low risk
Volpe et al[36]	Low risk risk	Low risk	Low risk	Low risk	Low risk	Low risk
Sukov et al[37]	Low risk	Low risk	Low risk	Moderate risk	Low risk	Moderate risk
Sameh et al[38]	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk
Ku et al[39]	Moderate risk	Low risk	Low risk	Low risk	Low risk	Low risk
Rodríguez et al[40]	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk
Poon et al[41]	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk
Klatte et al[42]	Low risk	Low risk	Low risk	Moderate risk	Low risk	Low risk
Coons et al[43]	Low risk	Low risk	Low risk	Moderate risk	Low risk	Low risk
Kwak et al[44]	Low risk	Low risk	Low risk	Low risk	Low risk	Moderate risk
Lee et al[45]	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk
Sanchez et al[46]	Low risk	Low risk	Low risk	Low risk	Moderate risk	Low risk

Supplementary Figure 1. Forest plots of the association between sarcomatoid differentiation and clinicopathological features of RCC: A) TNM stage, (B) Fuhrman grade, (C) lymph node involvement, (D) pathological types,(E) gender and (F) average age.
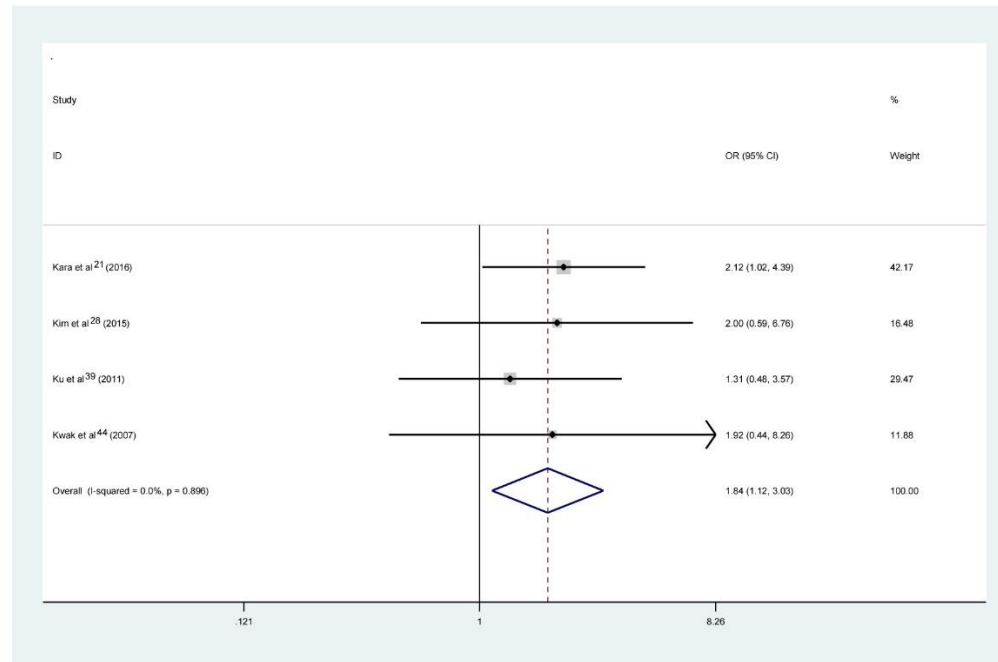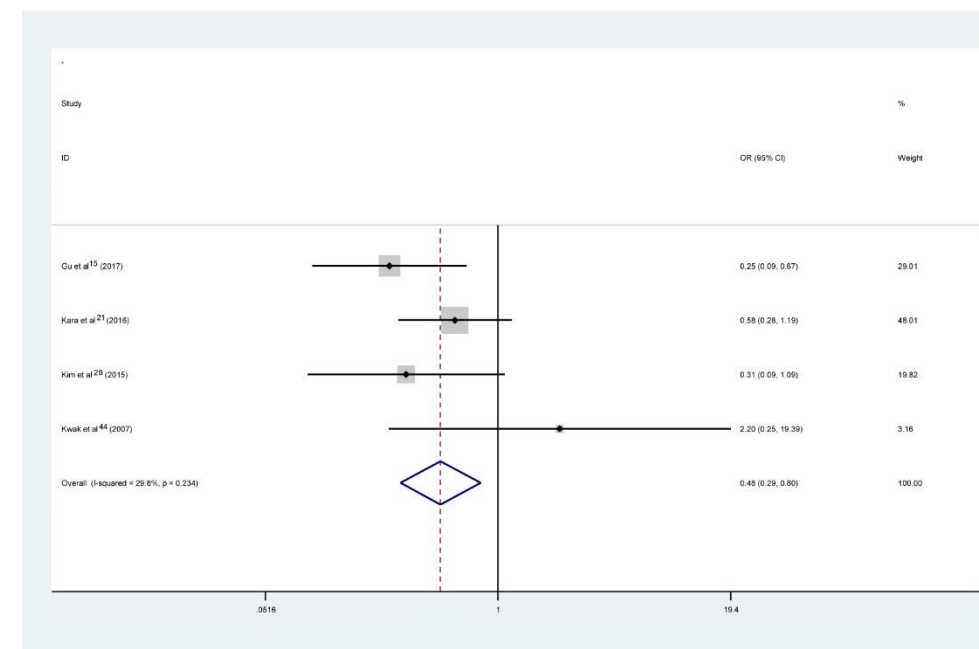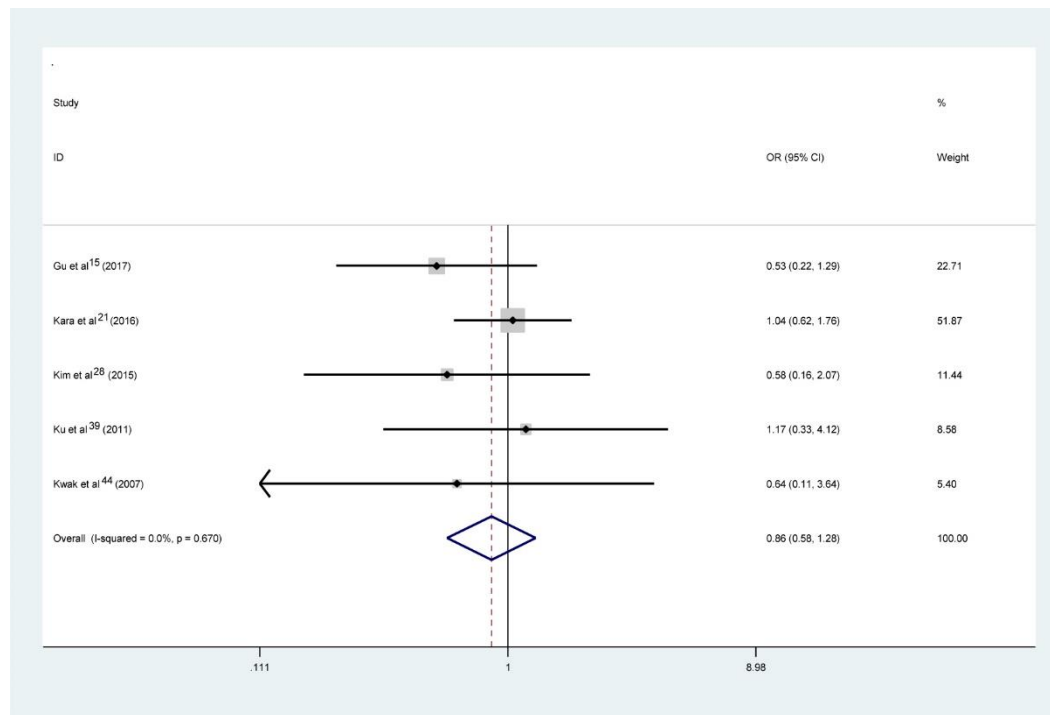

Supplementary Figure 1A
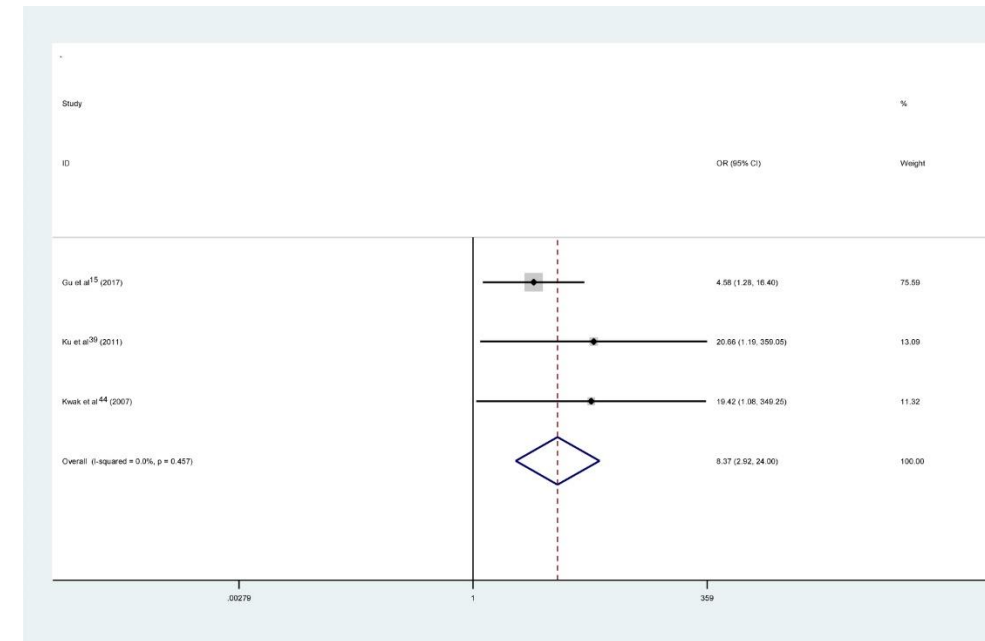
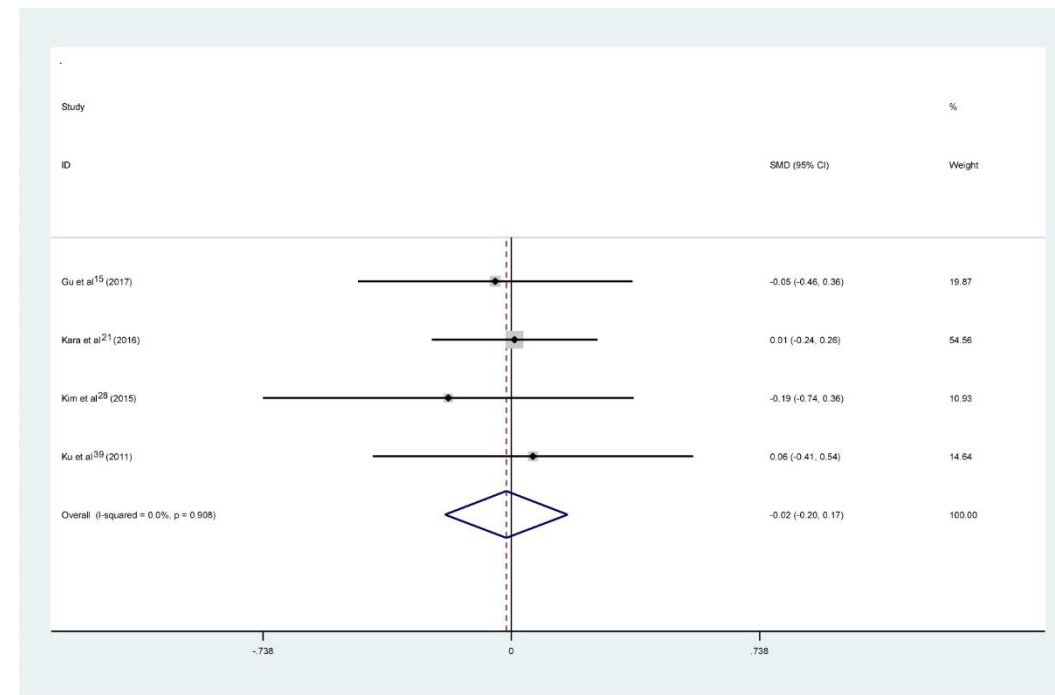Supplementary Figure 1B
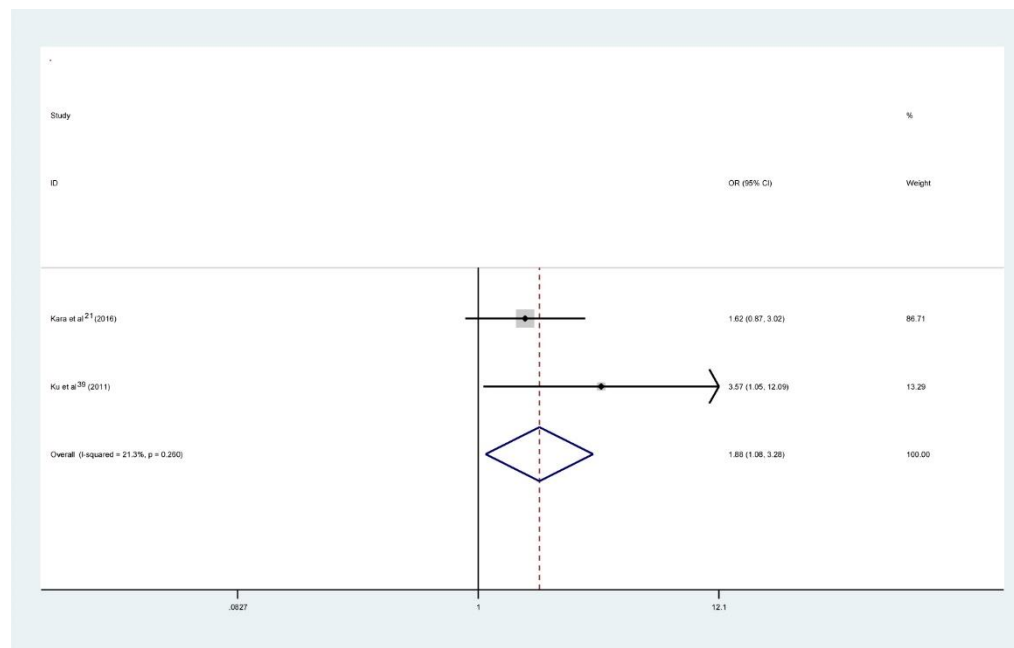
Supplementary Figure 1C

Supplementary Figure 1D
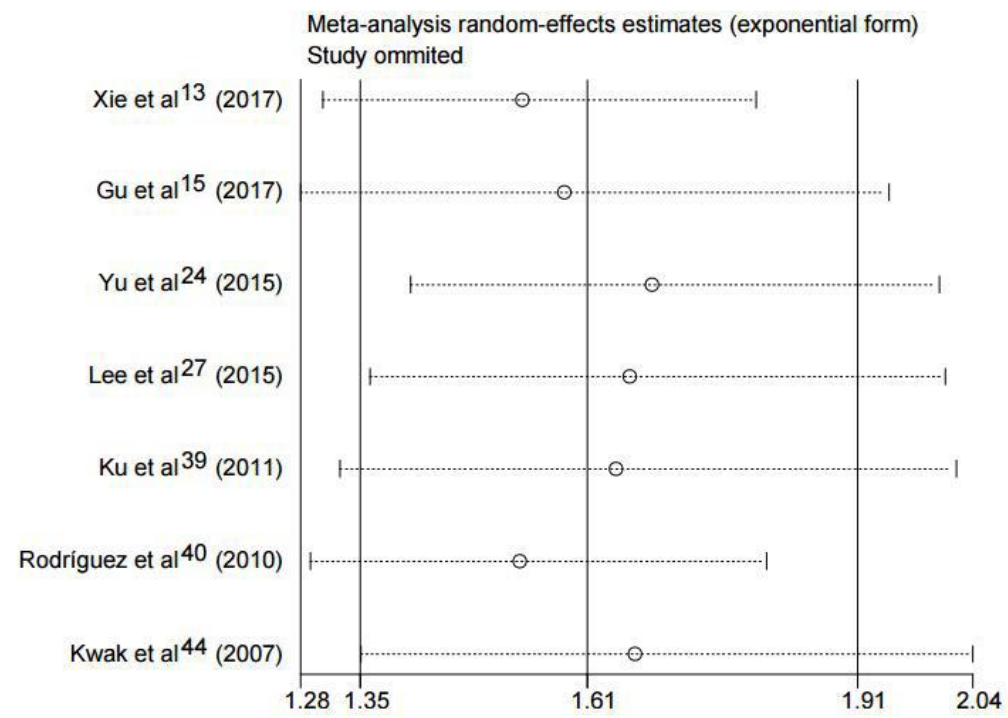
Supplementary Figure 1E

Supplementary Figure 1F

Supplementary Figure 2.Sensitivity analysis in this meta-analysis. (A) Sensitivity analysis for CSS; (B) Sensitivity analysis for OS; (C) Sensitivity analysis for PFS; (D) Sensitivity analysis for RFS; (E) Sensitivity analysis for CSM
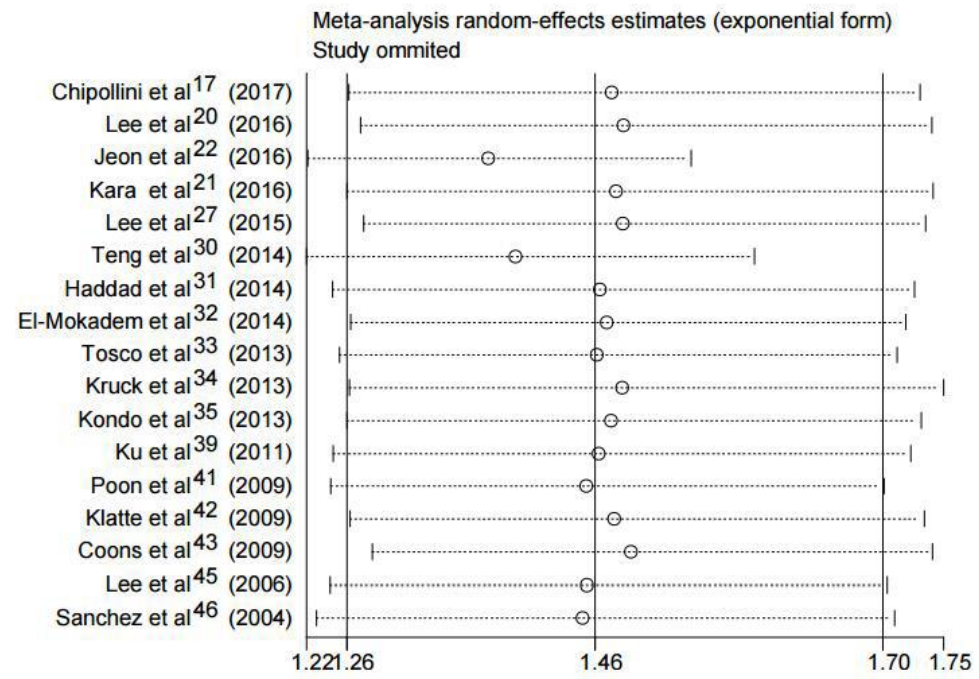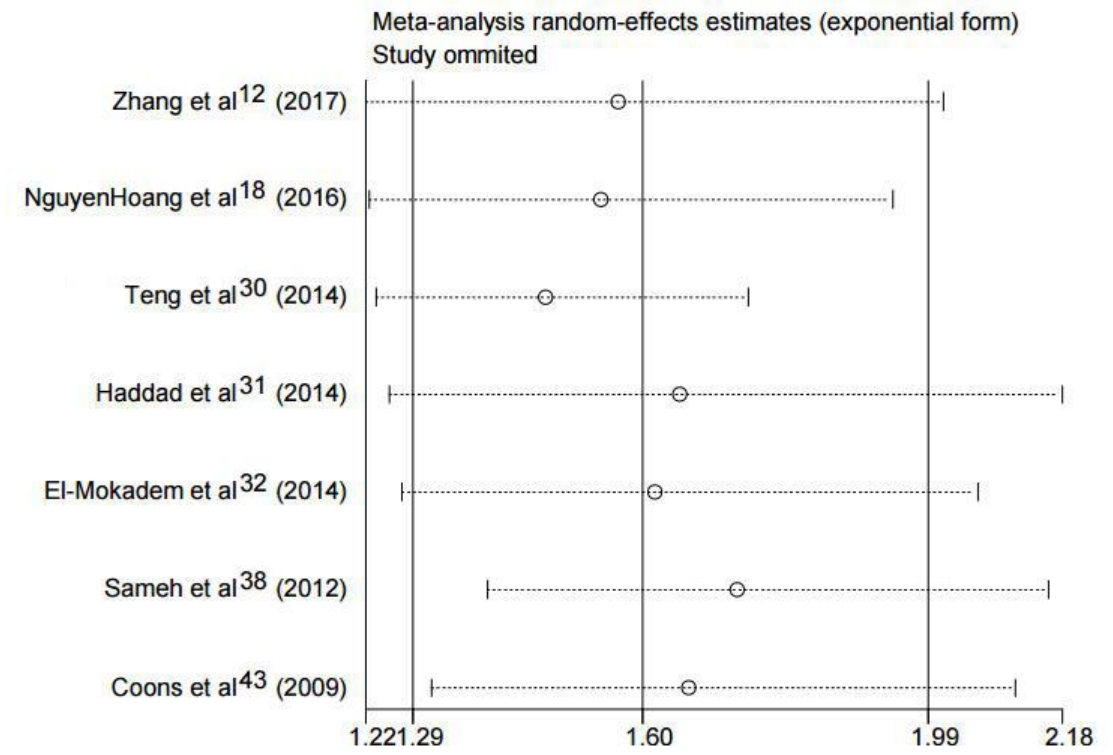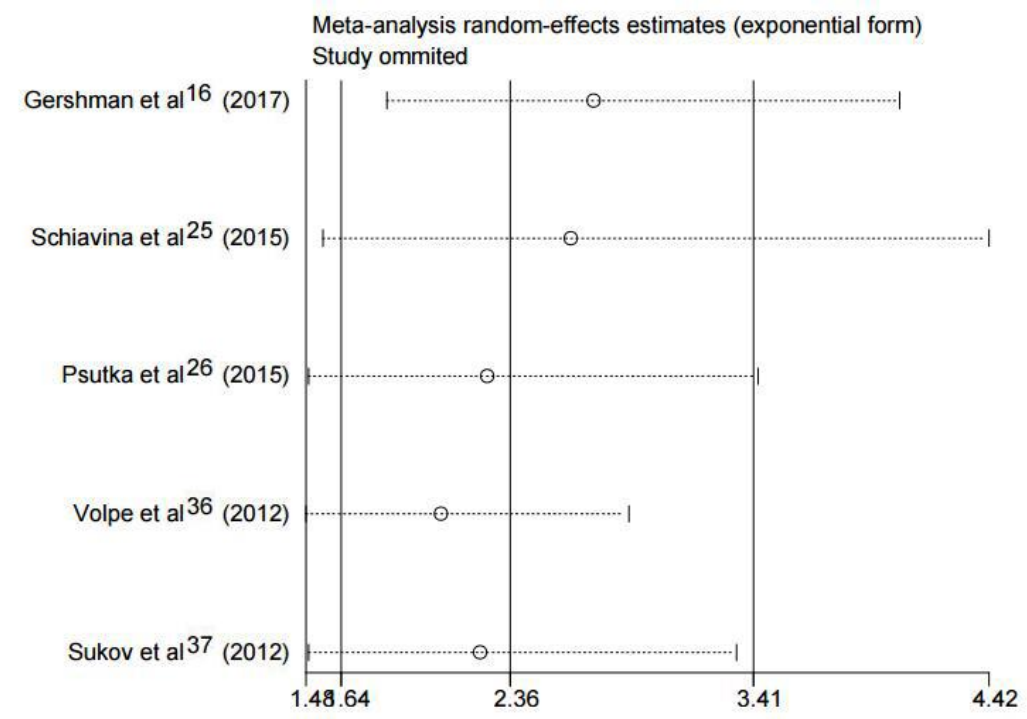
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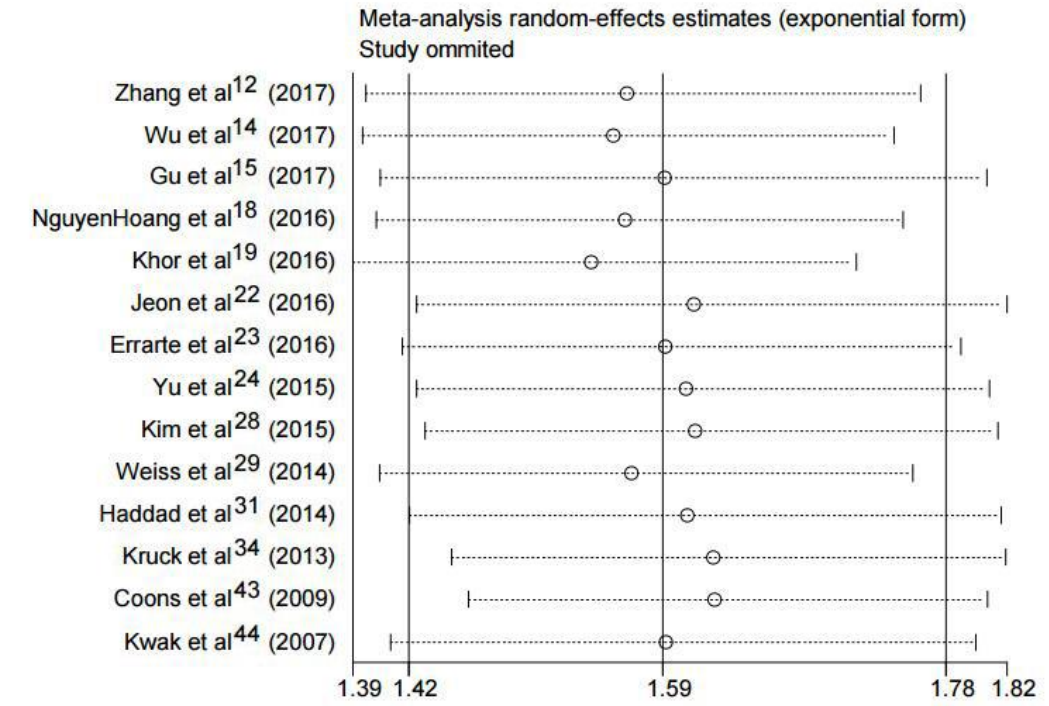
Supplementary Figure 2B

Supplementary Figure 2C

Supplementary Figure 2D

Supplementary Figure 2E