Biomolecules and Biomedicine
ISSN: 2831-0896 (Print) | ISSN: 2831-090X (Online)
Journal Impact Factor® (2024): 2.2
CiteScore® (2024): 5.2
www.biomolbiomed.com | blog.bjbms.org

SUPPLEMENTAL DATA

Neutrophil-to-lymphocyte ratio as a prognostic biomarker in lung cancer patients treated with PD-1/PD-L1 inhibitors: A systematic review and meta-analysis

Yong Zeng, Junlin Gu, Weiqiong Chen, Wensheng He*, Jianjun Luo*

Department of Pharmacy, The Affiliated Dazu's Hospital of Chongqing Medical University, Chongqing, China

*Correspondence to Jianjun Luo: luojianjun@hospital.cqmu.edu.cn and Wensheng He: hewensheng.dz@163.com.

Full article is available at the following link: Neutrophil-to-lymphocyte ratio as a prognostic biomarker in lung cancer patients treated with PD-1/PD-L1 inhibitors: A systematic review and meta-analysis

Table S1. Search strategy for meta-analysis

Database	Search strategy
Pubmed (543)	(((((("Neutrophils"[Mesh]) OR ((((((Neutrophil) OR (Polymorphonuclear Neutrophils)) OR (Polymorphonuclear Leukocyte)) OR (Polymorphonuclear Leukocytes)) OR (LE Cells)) OR (LE Cell))) AND (("Lymphocytes"[Mesh]) OR (((Lymphocyte) OR (Lymphoid Cells)) OR (Lymphoid Cell)))) AND (ratio)) AND (("Lung Neoplasms"[Mesh]) OR (((((((((Pulmonary Neoplasm) OR (Pulmonary Neoplasms)) OR (Lung Neoplasm)) OR (Lung Cancer)) OR (Lung Cancers)) OR (Cancer of Lung)) OR (Pulmonary Cancer)) OR (Pulmonary Cancers)) OR (Cancer of the Lung)))) AND (("Immune Checkpoint Inhibitors"[Mesh]) OR ((((((((((Immune Checkpoint Blockers) OR (Immune Checkpoint Inhibitor)) OR (Immune checkpoint blocker)) OR (Immunotherapy)) OR (PD-1)) OR (PD 1)) OR (PD L1)) OR (PD-L1)) OR (Programmed Cell Death Protein 1 Inhibitor)) OR (Programmed Cell Death Protein 1 Inhibitors)) OR (Programmed Death-Ligand 1 Inhibitors)) OR (Programmed Death Ligand 1 Inhibitors)))
Embase (1288)	((Neutrophils or (Neutrophil or Polymorphonuclear Neutrophils or Polymorphonuclear Leukocyte or Polymorphonuclear Leukocytes or LE Cells or LE Cell)) and (Lymphocytes or (Lymphocyte or Lymphoid Cells or Lymphoid Cell)) and ratio and (Lung Neoplasms or (Pulmonary Neoplasm or Pulmonary Neoplasms or Lung Neoplasm or Lung Cancer or Lung Cancers or Cancer of Lung or Pulmonary Cancer or Pulmonary Cancers or Cancer of the Lung)) and (Immune Checkpoint Inhibitors or (Immune Checkpoint Blockers or Immune Checkpoint Inhibitor or Immune checkpoint blocker or Immunotherapy or PD-1 or PD 1 or PD L1 or PD-L1 or Programmed Cell Death Protein 1 Inhibitor or Programmed Cell Death Protein 1 Inhibitors or Programmed Death-Ligand 1 Inhibitors or Programmed Death Ligand 1 Inhibitors))).af.
Cochrane	((Neutrophils or (Neutrophil or Polymorphonuclear Neutrophils or Polymorphonuclear Leukocyte or Polymorphonuclear Leukocytes or LE Cells

(32)	or LE Cell)) and (Lymphocytes or (Lymphocyte or Lymphoid Cells or Lymphoid Cell)) and ratio and (Lung Neoplasms or (Pulmonary Neoplasm or Pulmonary Neoplasms or Lung Neoplasm or Lung Cancer or Lung Cancers or Cancer of Lung or Pulmonary Cancer or Pulmonary Cancers or Cancer of the Lung)) and (Immune Checkpoint Inhibitors or (Immune Checkpoint Blockers or Immune Checkpoint Inhibitor or Immune checkpoint blocker or Immunotherapy or PD-1 or PD 1 or PD L1 or PD-L1 or Programmed Cell Death Protein 1 Inhibitor or Programmed Cell Death Protein 1 Inhibitors or Programmed Death-Ligand 1 Inhibitors or Programmed Death Ligand 1 Inhibitors))).af.
Web of Science (543)	(((((Neutrophils) OR ((((((Neutrophil) OR (Polymorphonuclear Neutrophils)) OR (Polymorphonuclear Leukocyte)) OR (Polymorphonuclear Leukocytes)) OR (LE Cells)) OR (LE Cell))) AND ((Lymphocytes) OR (((Lymphocyte) OR (Lymphoid Cells)) OR (Lymphoid Cell)))) AND (ratio)) AND ((Lung Neoplasms) OR (((((((((Pulmonary Neoplasm) OR (Pulmonary Neoplasms)) OR (Lung Neoplasm)) OR (Lung Cancer)) OR (Lung Cancers)) OR (Cancer of Lung)) OR (Pulmonary Cancer)) OR (Pulmonary Cancers)) OR (Cancer of the Lung)))) AND ((Immune Checkpoint Inhibitors) OR ((((((((((Immune Checkpoint Blockers) OR (Immune Checkpoint Inhibitor)) OR (Immune checkpoint blocker)) OR (Immunotherapy)) OR (PD-1)) OR (PD 1)) OR (PD L1)) OR (PD-L1)) OR (Programmed Cell Death Protein 1 Inhibitor)) OR (Programmed Cell Death Protein 1 Inhibitors)) OR (Programmed Death-Ligand 1 Inhibitors)) OR (Programmed Death Ligand 1 Inhibitors))) (Topic)

Abbreviations: af, all fields; LE, lupus erythematosus; MeSH, Medical Subject Headings; PD-1, programmed cell death protein 1; PD-L1, programmed death-ligand 1.

Table S2. Quality assessment of the 49 studies using the Newcastle-Ottawa Scale checklist

Study	Selection				Comparability	Outcome			Quality scores
	Representativeness of the exposed cohort	Selection of the nonexposed cohort	Ascertainment of exposure	Demonstration that outcome of interest was not present at start of study	Comparability of cohorts on the basis of the design or analysis	Assessment of outcome	Was follow-up long enough for outcomes to occur	Adequacy of follow up of cohorts	
Asano 2023	*	*	*	*	-	*	*	*	7
Banna 2020	*	*	*	*	-	*	*	*	7
Banna 2021	*	*	*	*	-	*	*	*	7
Banna 2022	*	*	*	*	*	*	*	*	8
Bolte 2022	*	*	*	*	-	*	*	*	7
Chen 2021	*	*	*	*	**	*	*	*	9
Chen 2023	*	*	*	*	-	*	*	*	7
Colomb 2024	*	*	*	*	-	*	*	*	7
Cortellini 2022	*	*	*	*	*	*	*	*	8
Descourt 2023	*	*	*	*	-	*	*	*	7
Facchinetti 2018	*	*	*	*	-	*	*	*	7
Fang 2023	*	*	*	*	-	*	*	*	7
He 2021	*	*	*	*	-	*	*	*	7
Imai 2021	*	*	*	*	*	*	*	*	8

Imai 2023	*	*	*	*	*	*	*	*	8
Jiang 2024	*	*	*	*	-	*	*	*	7
Kashihara 2023	*	*	*	*	-	*	*	*	7
Katayama 2020	*	*	*	*	**	*	-	*	8
Kim 2022	*	*	*	*	-	*	*	*	7
Krizova 2024	*	*	*	*	-	*	*	*	7
Ksienski 2021	*	*	*	*	*	*	-	*	7
Kutlu 2023	*	*	*	*	-	*	*	*	7
Lu 2022	*	*	*	*	*	*	*	*	8
Luo 2024	*	*	*	*	-	*	*	*	7
Matsumoto 2024	*	*	*	*	*	*	*	*	8
Nishihara-Kato 2024	*	*	*	*	*	*	*	*	8
Ohba 2019	*	*	*	*	-	*	*	*	7
Ozawa 2024	*	*	*	*	-	*	*	*	7
Pavan 2019	*	*	*	*	-	*	*	*	7
Prelaj 2019	*	*	*	*	-	*	*	*	7
Qi 2021	*	*	*	*	-	*	*	*	7
Riemann 2023	*	*	*	*	-	*	*	*	7
Shiroyama 2018	*	*	*	*	-	*	*	*	7
Soyano 2018	*	*	*	*	-	*	*	*	7
Stares 2022	*	*	*	*	-	*	*	*	7
Stratmann 2022	*	*	*	*	-	*	*	*	7
Su 2024	*	*	*	*	-	*	*	*	7

Suh 2018	*	*	*	*	*	*	*	*	8
Takada 2020	*	*	*	*	-	*	*	*	7
Takeyasu 2021	*	*	*	*	-	*	*	*	7
Tian 2025	*	*	*	*	-	*	*	*	7
Ulas 2024	*	*	*	*	-	*	*	*	7
Wang 2021	*	*	*	*	-	*	*	*	7
Wasamoto 2023	*	*	*	*	*	*	*	*	8
Wasamoto 2025	*	*	*	*	-	*	*	*	7
Xiong 2021	*	*	*	*	*	*	*	*	8
Yuan 2024	*	*	*	*	*	*	-	*	7
Zattarin 2022	*	*	*	*	*	*	*	*	8
Zhang 2024	*	*	*	*	-	*	*	*	7