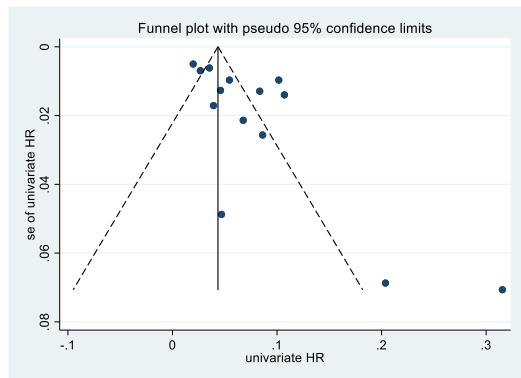
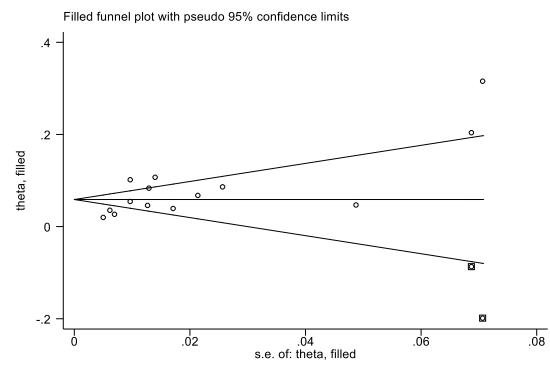


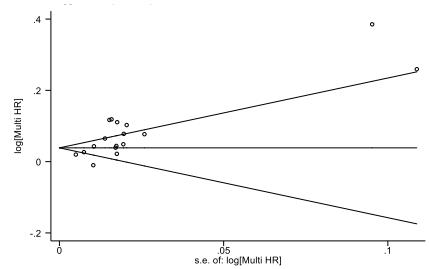
## Supplementary Figure



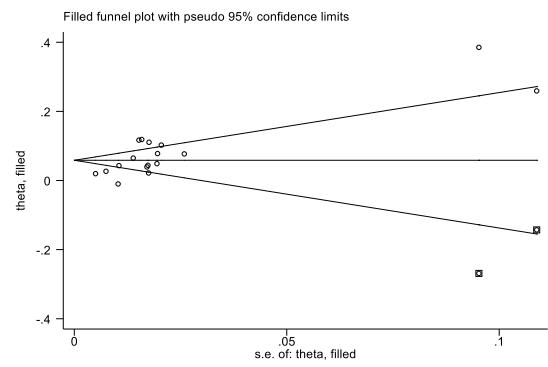
Supplementary Figure 1 Funnel plot depicting the publication bias in studies reporting Univariate HR



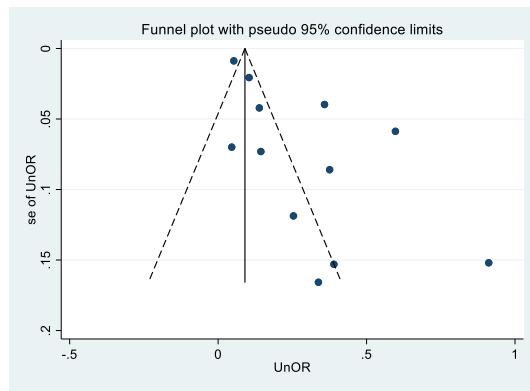
**Supplementary Figure 2** Filled funnel plot depicting the publication bias in studies reporting Univariate HR



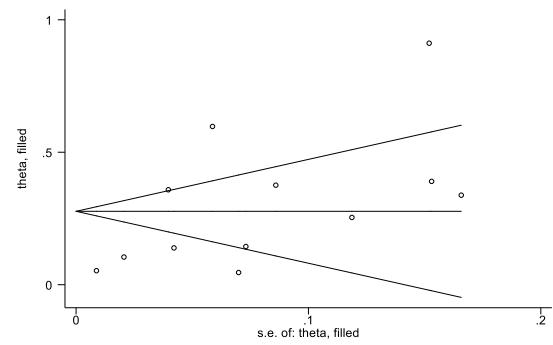
**Supplementary Figure 3** Funnel plot depicting the publication bias in studies reporting Multivariate HR



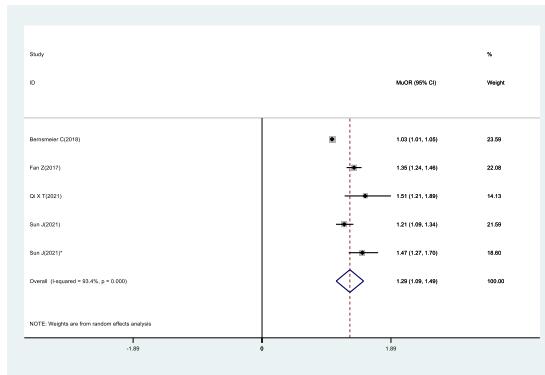
**Supplementary Figure 4** Filled funnel plot depicting the publication bias in studies reporting Multivariate HR



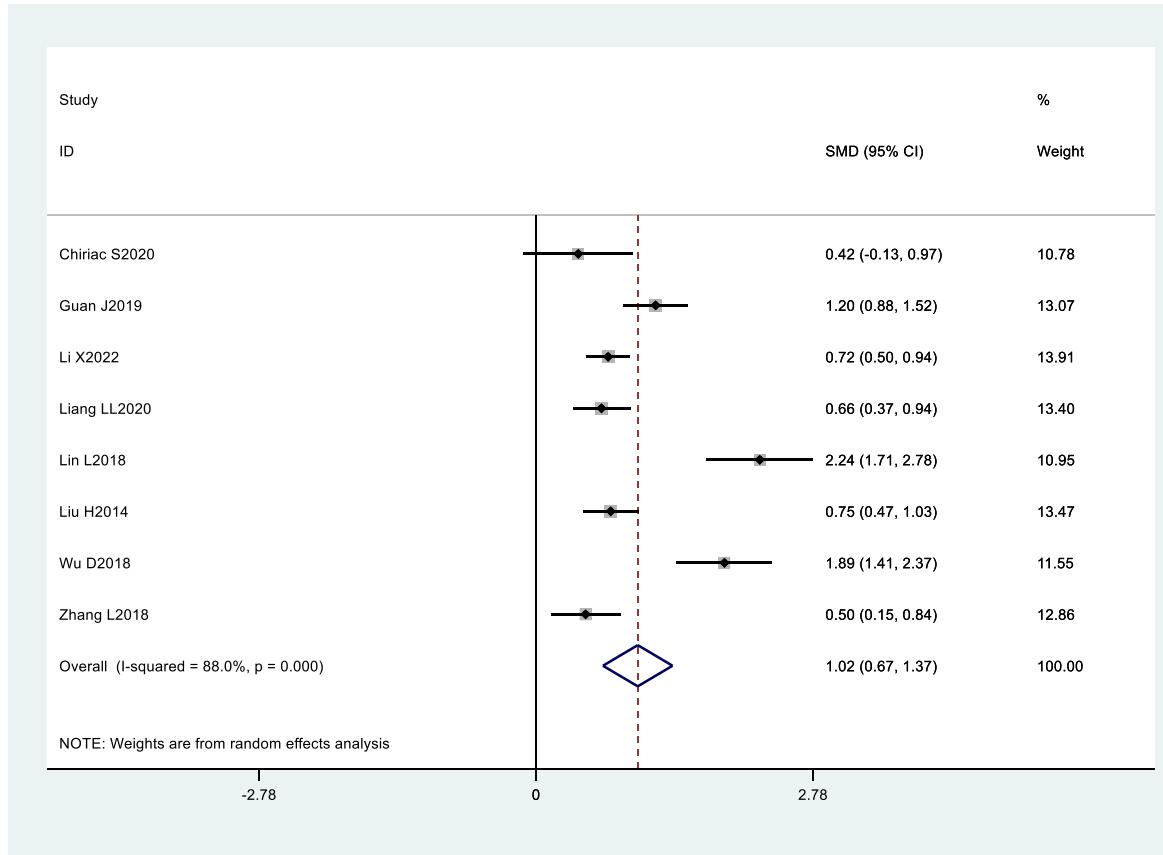
Supplementary Figure 5 Funnel plot depicting the publication bias in studies reporting Univariate OR



**Supplementary Figure 6** Filled funnel plot depicting the publication bias in studies reporting Univariate OR



**Supplementary Figure 7** Funnel plot depicting the publication bias in studies reporting Multivariate OR.



**Supplementary Figure 8 Forest plot of the standard mean differences of NLR between on-survivors than in survivor**

## Supplementary Table 1 Meta-regression

|           |        |       |       |       |        |       |
|-----------|--------|-------|-------|-------|--------|-------|
| Mean      | 0.004  | 0.012 | 0.33  | 0.743 | -0.020 | 0.027 |
| age       |        |       |       |       |        |       |
| Sex radio | -0.020 | 0.030 | -0.65 | 0.516 | -0.079 | 0.040 |
| (M/F)     |        |       |       |       |        |       |

### Search strategy

#### #1 Search strategy in PubMed database

PubMed: Search: (End stage liver disease OR Liver Cirrhosis OR Hepatic Cirrhosis OR Liver Fibrosis OR Liver Failure OR Hepatic Failure OR Liver Transplantation OR Hepatic Transplantation OR Liver Transplant) AND (neutrophil lymphocyte ratio OR neutrophil-to-lymphocyte OR NLR)

#### #2 Search strategy in Web of Science database

TS=((End stage liver disease OR Liver Cirrhosis OR Hepatic Cirrhosis OR Liver Fibrosis OR Liver Failure OR Hepatic Failure OR Liver Transplantation OR Hepatic Transplantation OR Liver Transplant) AND (neutrophil lymphocyte ratio OR neutrophil-to-lymphocyte OR NLR))

All database.

#### #3 Search strategy in Embase

#15. #13 AND #14

#14. #9 OR #10 OR #11

#13. #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR

#12. end AND stage AND liver AND disease

#11. nlr

#10. 'neutrophil to lymphocyte'

#9. neutrophil AND lymphocyte AND ratio

#8. liver AND transplant

#7. hepatic AND transplantation

#6. liver AND transplantation

#5. hepatic AND failure

#4. liver AND failure

#3. liver AND fibrosis

#2. hepatic AND cirrhosis

#1. liver AND cirrhosis

#### **#4 Search strategy in Cochrane**

All text=((End stage liver disease OR Liver Cirrhosis OR Hepatic Cirrhosis OR Liver Fibrosis OR Liver Failure OR Hepatic Failure

OR Liver Transplantation OR Hepatic Transplantation OR Liver Transplant) AND (neutrophil lymphocyte ratio OR neutrophil-to-lymphocyte OR NLR))

#### #5 Search strategy in Chinese National Knowledge Infrastructure (CNKI)

检索条件：(FT=中性粒细胞淋巴细胞比 OR FT=中性淋巴比 OR FT=NLR)AND(FT=肝衰竭 ORFT=肝硬化 ORFT=终末期肝病 ORFT=肝纤维化 OR FT=肝移植)，同义词扩展；限定学术期刊。

#### #6 Search strategy in Weipu

高级检索：(((任意字段=中性粒细胞淋巴细胞比 OR 任意字段=中性淋巴比) OR 任意字段=NLR) AND (((任意字段=终末期肝病 OR 任意字段=肝衰竭) OR 任意字段=肝硬化) OR 任意字段=肝纤维化) OR 任意字段=肝移植))

#### #7 Search strategy in Wanfang

全部：((中性粒细胞淋巴细胞比 or 中性淋巴比 or NLR) and (终末期肝病 or 肝硬化 or 肝衰竭 or 肝纤维化 or 肝移植))，中英文扩展和主题词扩展；限定期刊论文。

Table 1 Risk-of-Bias Analysis of the Included Studies

| Study                     | Selections                               |                                    |                           |  | Comparability | Outcome  |                          |   |                                  | Quality score |
|---------------------------|--|------------------------------------|---------------------------|--|---------------|--|--------------------------|---|----------------------------------|---------------|
|                           | 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 the basis of the design or analysis | Ascertainment of outcome | Was follow-up long enough for outcomes to occur | Adequacy of follow-up of cohorts |               |
| Agiasotelli D et al, 2016 | ★  | ★                                  | ★                         | ★  | ★★            | ★  | ★                        | ☆   | 8                                |               |

|                         |   |   |   |   |    |   |   |   |   |   |
|-------------------------|---|---|---|---|----|---|---|---|---|---|
| Bernsmeier C et al,2020 | ★ | ★ | ★ | ★ | ★★ | ★ | ★ | ★ | ★ | 8 |
| Cai J et al,2018        | ★ | ★ | ★ | ★ | ★★ | ★ | ★ | ★ | ★ | 8 |
| Cai Y J et al,2017      | ★ | ★ | ★ | ★ | ★★ | ★ | ★ | ★ | ★ | 8 |
| Chiriac S et al,2020    | ★ | ★ | ★ | ★ | ★☆ | ★ | ★ | ★ | ★ | 7 |
| Fan Z et al,2017        | ★ | ★ | ★ | ★ | ★★ | ★ | ★ | ★ | ★ | 8 |
| Gao F et al,2017        | ★ | ★ | ★ | ★ | ★★ | ★ | ★ | ★ | ★ | 8 |
| Guan J et al,2019       | ★ | ★ | ★ | ★ | ★★ | ★ | ★ | ★ | ★ | 6 |
| Li X et al,2022         | ★ | ★ | ★ | ★ | ★☆ | ★ | ★ | ★ | ★ | 7 |

|                        |   |   |   |   |    |   |   |   |   |
|------------------------|---|---|---|---|----|---|---|---|---|
| Li X et al,2020        | ★ | ★ | ★ | ★ | ★★ | ★ | ★ | ★ | 8 |
| Liang L et al,2020     | ★ | ★ | ★ | ★ | ★☆ | ☆ | ★ | ☆ | 6 |
| Lin L et al,2018       | ★ | ★ | ★ | ★ | ★★ | ★ | ★ | ★ | 9 |
| Liu H et al,2014       | ★ | ★ | ★ | ★ | ★★ | ★ | ★ | ☆ | 8 |
| Liu X Y et al,2021     | ★ | ★ | ★ | ★ | ★★ | ☆ | ★ | ☆ | 7 |
| Maccali C et al,2021   | ★ | ★ | ★ | ★ | ★★ | ★ | ★ | ☆ | 8 |
| Moreau N et al,2018    | ★ | ★ | ★ | ★ | ★★ | ☆ | ★ | ☆ | 7 |
| Oikonomou T et al,2020 | ★ | ★ | ★ | ★ | ★★ | ☆ | ★ | ☆ | 7 |

|                       |   |   |   |   |    |   |   |   |   |
|-----------------------|---|---|---|---|----|---|---|---|---|
| Qi X T et<br>al,2021  | ★ | ★ | ★ | ★ | ★★ | ★ | ★ | ★ | 8 |
| Qiang L et<br>al,2021 | ★ | ★ | ★ | ★ | ★★ | ☆ | ★ | ☆ | 7 |
| Shi K et<br>al,2022   | ★ | ★ | ★ | ★ | ★★ | ☆ | ★ | ☆ | 7 |
| Sun J et<br>al,2021   | ★ | ★ | ★ | ★ | ★★ | ★ | ★ | ★ | 9 |
| Sun J et<br>al,2021   | ★ | ★ | ★ | ★ | ★★ | ★ | ★ | ★ | 9 |
| Wang J et<br>al,2019  | ★ | ★ | ★ | ★ | ★☆ | ☆ | ★ | ☆ | 6 |
| Wang P et<br>al,2020  | ★ | ★ | ★ | ★ | ★☆ | ☆ | ★ | ☆ | 6 |
| Wu D et<br>al,2018    | ★ | ★ | ★ | ★ | ★☆ | ☆ | ★ | ☆ | 6 |

|                       |   |   |   |   |    |   |   |   |   |
|-----------------------|---|---|---|---|----|---|---|---|---|
| Xue H et<br>al,2021   | ★ | ★ | ★ | ★ | ★★ | ☆ | ★ | ☆ | 6 |
| Zhang et<br>al,2016   | ★ | ★ | ★ | ★ | ★★ | ☆ | ★ | ☆ | 7 |
| Zhang L<br>et al,2018 | ★ | ★ | ☆ | ★ | ★★ | ☆ | ★ | ☆ | 5 |
| Zhang W<br>et al,2022 | ★ | ★ | ★ | ★ | ★★ | ★ | ★ | ★ | 9 |
| Zhou Y et<br>al,2022  | ★ | ★ | ★ | ★ | ★★ | ★ | ★ | ★ | 9 |