**Supplementary Table 1 Risk of bias assessment using cochrane RoB 2.0 tool**

| Study (Year) | Randomization Process | Deviations from Intended Interventions | Missing Outcome Data | Measurement of the Outcome | Selection of the Reported Result | Overall Risk of Bias |
|---|---|---|---|---|---|---|
| Li Zhi Guo (2019) | Low | Low | Low | Some concerns | Low | Low |
| Hwang SH (2022) | Low | Low | Low | Low | Low | Low |
| Park DJ (2023) | Low | Low | Low | Some concerns | Low | Low |
| Katsutoshi S (2024) | Some concerns | Low | Low | Some concerns | Some concerns | Some concerns |

**Supplementary Table 2 ROBINS-I based risk of bias assessment**

| Study (Year) | Study Type | Bias due to Confounding | Bias in Selection of Participants | Bias in Classification of Interventions | Bias due to Deviations from Intended Interventions | Bias due to Missing Data | Bias in Measurement of Outcomes | Bias in Selection of the Reported Result | Overall Risk of Bias |
|---|---|---|---|---|---|---|---|---|---|
| Dong JK (2016) | Retrospective | High | High | High | High | Low | Some concerns | Some concerns | High |
| Jung DH (2017) | Retrospective | High | High | High | High | Low | Some concerns | Some concerns | High |
| Li Zhi Guo (2018) | Retrospective | High | High | High | High | Low | Some concerns | Some concerns | High |
| Ko HJ (2019) | Retrospective | High | High | High | High | Low | Some concerns | Some concerns | High |
| Ma F (2020) | PSM | Moderate | Low | Low | Moderate | Low | Some concerns | Some concerns | Moderate |
| Ji X (2020) | Retrospective | High | High | High | High | Low | Some concerns | Some concerns | High |

| Study | Type | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Wang L (2020) | Retrospective | High | High | High | High | Low | Some concerns | Some concerns | High |
| Sato R (2021) | Retrospective | High | High | High | High | Low | Some concerns | Some concerns | High |
| Kimuro K (2021) | Retrospective | High | High | High | High | Low | Some concerns | Some concerns | High |
| Eom BW (2021) | Retrospective | High | High | High | High | Low | Some concerns | Some concerns | High |
| Ma X (2022) | Retrospective | High | High | High | High | Low | Some concerns | Some concerns | High |
| Wang ZJ (2024) | Retrospective | High | High | High | High | Low | Some concerns | Some concerns | High |
| Sun Y (2024) | Retrospective | High | High | High | High | Low | Some concerns | Some concerns | High |
| Wu CY (2024) | Retrospective | High | High | High | High | Low | Some concerns | Some concerns | High |
| Hasegawa T (2024) | Retrospective | High | High | High | High | Low | Some concerns | Some concerns | High |