

Supplementary Table S1.1 Quality of cohort and single-arm studies

| Article (Author, year) | Selection | | | | Comparability | Outcome | | | Total 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 | | Assessment of outcome | Length of follow-up | Adequacy of follow-up | |
| Akimoto, 2022 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 6 |
| Choi, 2008 | 1 | 1 | 1 | 1 | 2 | 1 | 0 | 1 | 8 |
| Ego, 2020 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 9 |
| Fukuda, 2016 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 9 |
| Goto, 2020 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 5 |
| Hahn, 2017 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 6 |
| Han, 2020 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 6 |
| Kawata, 2018 | 1 | 1 | 1 | 1 | 2 | 1 | 0 | 1 | 8 |
| Kikuchi, 2019 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 9 |
| Maekawa, 2015 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 5 |
| Nishiyama, | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 5 |

| | | | | | | | | | |
|-------------------|---|---|---|---|---|---|---|---|---|
| 2022 | | | | | | | | | |
| Sabramaniam, 2019 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 6 |
| Shiotsuki, 2021 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 9 |
| Tan, 2016 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 9 |
| Uraoka, 2016 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 6 |
| Wang, 2020 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 9 |
| Yoshida, 2021 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 5 |
| Yu, 2022 | 1 | 1 | 1 | 1 | 2 | 1 | 0 | 0 | 7 |

Supplementary Table S1.2 Quality of non-randomized controlled studies

| | Bias due to confounding | Bias in selection of participants into the study | Bias in classification of interventions | Bias due to deviations from intended intervention | Bias due to missing data | Bias in measurement of outcomes | Bias in selection of the reported result | Overall bias |
|-------------|--------------------------------|---|--|--|---------------------------------|--|---|---------------------|
| Tsuji, 2015 | Moderate risk | low risk | low risk | low risk | low risk | low risk | low risk | Moderate risk |

Supplementary Table 1.3 Quality of randomized controlled studies

| Random sequence | Allocation concealment | Blinding of participants and | Blinding of outcome | Incomplete outcome data | Selective reporting | Other bias |
|------------------------|-------------------------------|-------------------------------------|----------------------------|--------------------------------|----------------------------|-------------------|
|------------------------|-------------------------------|-------------------------------------|----------------------------|--------------------------------|----------------------------|-------------------|

| | generation (selection bias) | (selection bias) | personnel (performance bias) | assessment (detection bias) | (attrition bias) | (reporting bias) | |
|------------------|--|-------------------------|---|--|-------------------------|-----------------------------|-------------|
| Hwang, 2018 | low risk | unclear risk | high risk | high risk | low risk | low risk | low risk |
| Jung, 2021 | low risk | low risk | high risk | high risk | low risk | low risk | low risk |
| Kataoka, 2019 | unclear risk | unclear risk | high risk | high risk | low risk | low risk | low risk |
| Lee, 2011 | unclear risk | unclear risk | high risk | high risk | low risk | low risk | low risk |
| Mori, 2018 | unclear risk | low risk | high risk | high risk | low risk | low risk | low risk |
| Zhang, 2013 | unclear risk | unclear risk | high risk | high risk | low risk | low risk | low risk |

Supplementary Table S1.4 Quality of case series

| | Selection | Ascertainment | | | Causality | | Reporting | |
|------------------|--------------------|----------------------|---------|------------------------------------|-------------------------------------|-----------------------------|------------------------|---|
| | Representativeness | exposure | outcome | Ruled out alternative causes | Challenge/rechallenge phenomenon | Dose- response effect | Length of follow-up | |
| Abiko, 2021 | 1 | 1 | 1 | 0 | - | - | 0 | 1 |
| Haddara, 2016 | 1 | 1 | 1 | 0 | - | - | 1 | 1 |
| Goto, 2017 | 1 | 1 | 1 | 0 | - | - | 1 | 1 |
| Kantsevov, | 1 | 1 | 1 | 0 | - | - | 1 | 1 |

| | | | | | | | | |
|------------|---|---|---|---|---|---|---|---|
| 2014 | | | | | | | | |
| Kobayashi, | 1 | 1 | 1 | 0 | - | - | 0 | 1 |
| 2021 | | | | | | | | |
| Pioche, | 1 | 1 | 1 | 0 | - | - | 1 | 1 |
| 2016 | | | | | | | | |