**Supplemental Table 1**. Risk of bias assessment based on the Cochrane tool for observational studies.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Study | Confounding | Selection | Measurement of interventions | Deviation from intended interventions | Missing data | Measurement of data | Selection of the reported result |
| Chivukula 2015 | moderate | moderate | low | low | low | moderate | low |
| Liu 2015 | moderate | moderate | low | low | low | moderate | low |
| Young 1990 | moderate | moderate | low | low | moderate | moderate | low |
| Friedman 1988 | moderate | moderate | low | low | moderate | moderate | low |
| Rath 1998 | moderate | moderate | low | low | moderate | moderate | low |
| Kim 2017 | moderate | moderate | low | low | low | moderate | low |
| Kim 2008 | moderate | moderate | low | low | low | moderate | low |
| Dureja 2010 | moderate | moderate | low | low | low | moderate | low |
| Kikuchi 1999 | moderate | moderate | low | low | low | moderate | low |
| Zacest 2009 | moderate | moderate | low | low | low | moderate | low |
| Grigoryan 1994 | moderate | moderate | low | low | moderate | moderate | low |
| Schvarcz 1989 | moderate | moderate | low | low | moderate | moderate | low |
| Teixeira 2004 | moderate | moderate | low | low | moderate | moderate | low |
| Hitchock 1972 | moderate | moderate | low | low | moderate | moderate | low |
| Chivukula 2014 | moderate | moderate | low | low | low | moderate | low |
| Yanamoto 2012 | moderate | moderate | low | low | low | moderate | low |
| Baek 2011 | moderate | moderate | low | low | moderate | moderate | low |
| Iseki 2009 | moderate | moderate | low | low | low | moderate | low |
| Moriyama 2009 | moderate | moderate | low | low | moderate | moderate | low |
| Harke 2002 | moderate | moderate | low | low | low | moderate | low |
| Kumar 1996 | moderate | moderate | low | low | moderate | moderate | low |
| Shimoji 1993 | moderate | moderate | low | low | moderate | moderate | low |
| Meglio 1989 | moderate | moderate | low | low | moderate | moderate | low |
| Ledesma 1989 | moderate | moderate | low | low | moderate | moderate | low |
| Johnson 2004 | moderate | moderate | low | low | moderate | moderate | low |
| Jacobs 2016 | moderate | moderate | low | low | low | moderate | low |
| Zibly 2014 | moderate | moderate | low | low | low | moderate | low |
| Keep 2005 | moderate | moderate | low | low | moderate | moderate | low |
| Urgosivc 2000 | moderate | moderate | low | low | moderate | moderate | low |
| Kumar 1997 | moderate | moderate | low | low | moderate | moderate | low |
| Brown 2005 | moderate | moderate | low | low | low | moderate | low |
| Tomycz 2013 | moderate | moderate | low | low | moderate | moderate | low |
| Ducic 2013 | moderate | moderate | low | low | moderate | moderate | low |
| Teixeira 2006 | moderate | moderate | low | low | moderate | moderate | low |
| Taub 1997 | moderate | moderate | low | low | moderate | moderate | low |
| Kanpolat 2008 | moderate | moderate | low | low | moderate | moderate | low |