Supplementary Material 1. Assessment of Study Quality included in the meta-analysis

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| study | Selection | | | | Comparability | Outcome | | | Total score |
| Representativeness of the exposed cohort | Selection of the non-exposed cohort | Ascertainment of exposure | 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 |
| Andreotti G, 2010 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 5 |
| Atchison EA, 2011 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 6 |
| Bae, W. J.2018 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 7 |
| Ballotari, p. 2017 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 8 |
| Bhaskaran, K.2014 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 7 |
| Cao, Z. 2020 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 8 |
| Cantwell, M. M. 2006 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 6 |
| Chen,HF 2015 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 6 |
| Choi, J. B. 2018 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 7 |
| Colmers IN 2013 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 7 |
| Evers, J. 2020 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 5 |
| Goossens, M. E. 2015 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 7 |
| Häggström, C.2011 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 7 |
| Hektoen, H. H. 2019 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 7 |
| Hemminki, K. 2010 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 6 |
| Holick CN, 2007 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 5 |
| Huang, W. L. 2020 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 5 |
| Inoue, M, 2006 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 6 |
| Jee,SH. 2005 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 8 |
| Khan M, 2006 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 7 |
| Kim, J. W. 2020 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 7 |
| Kim, S. K. 2020 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 6 |
| Koebnick, C. 2008 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 7 |
| Ko, S. H. 2019 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 7 |
| Kok, V. C. 2018 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 7 |
| Kwon, T. 2014 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 6 |
| Lai, G. Y. 2013 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 6 |
| Larsson, S. C. 2008 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 6 |
| Lee, H. Y. 2020 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 6 |
| Lin, C. C. 2014 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 7 |
| Lo, S. F. 2013 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 7 |
| Lukanova A, 2006 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 7 |
| Newton, C. C.2013 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 6 |
| Ogunleye, A. A. 2009 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 7 |
| Oh SW, 2005 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 7 |
| Peila, R. 2020 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 8 |
| Prizment, A. E. 2013 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 6 |
| Rastad, H. 2019 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Roswall, N. 2014 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 8 |
| Rapp,K .2005 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 8 |
| Rapp, K. 2006 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 8 |
| Reeves GK, 2007 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 6 |
| Russo, A. 2008 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 6 |
| Samanic C, 2006 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 8 |
| Stocks, T. 2012 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 7 |
| Swerdlow, A. J 2005 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 8 |
| Teleka, S. 2021 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 7 |
| Tseng, C. H. 2011 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 7 |
| Tripathi, A .2002 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 7 |
| Walker, J. J. 2013 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 5 |
| Wolk, A .2001 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 5 |
| Woolcott, C. G. 2011 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 6 |
| Xu HL, 2015 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 6 |
| Xu, T. 2015 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 7 |
| Yood,M,U, 2009 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 7 |

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