

## Supplementary Materials

**Supplementary Table S1.** Quality assessment of the included studies

Source	Selection				Comparability		Outcome		Total score
	Representativeness of the exposed cohort*	Selection of the non-exposed cohort <sup>†</sup>	Ascertainment of exposure <sup>‡</sup>	Demonstration that outcome of interest was not present at start of study <sup>§</sup>	Comparability of cohorts on the basis of the design or analysis <sup>  </sup>	Assessment of outcome	Was follow-up long enough for outcomes to occur <sup>¶</sup>	Adequacy of follow-up of cohorts <sup>**</sup>	
Suissa et al. (2020) <sup>11</sup>	-	1	1	1	-	1	1	1	6
Husebo et al. (2019) <sup>14</sup>	1	-	-	1	2	1	1	-	6
Raymakers et al. (2019) <sup>12</sup>	-	1	1	1	1	1	1	1	7
Lee et al. (2018) <sup>19</sup>	-	-	-	1	1	1	1	-	4
Sandelin et al. (2018) <sup>13</sup>	1	1	-	1	-	1	-	-	4
Sorli et al. (2018) <sup>15</sup>	-	-	-	1	-	1	-	-	2
Wang et al. (2018) <sup>16</sup>	-	-	-	1	1	1	-	-	3
Liu et al. (2017) <sup>20</sup>	-	-	-	1	1	1	1	-	4
Jian et al. (2015) <sup>17</sup>	-	-	-	1	-	1	1	-	3
Kok et al. (2015) <sup>21</sup>	-	1	-	1	-	1	1	-	4
Lee et al. (2013) <sup>22</sup>	-	-	-	1	-	1	-	-	2
Kiri et al. (2009) <sup>18</sup>	1	-	-	1	1	1	-	-	4
Parimon et al. (2007) <sup>5</sup>	1	-	1	1	1	2	1	-	7

\*Studies with physician or spirometry-driven diagnosis of chronic obstructive pulmonary disease and/or asthma. <sup>†</sup>Studies that adjusted immortal time bias. <sup>‡</sup>Studies assessing adherence or person-in-time under the exposure. <sup>§</sup>Studies excluded patients with lung cancer within 1 to 2 years of study entry. <sup>||</sup>Two main confounders adjusted for comparability were smoking history and asthma or asthma-chronic obstructive pulmonary disease overlap syndrome. <sup>¶</sup>Studies with a mean or median follow-up longer than 3 years. Rated studies excluded patients with a follow-up shorter than 3 years. <sup>\*\*</sup>Studies excluded patients with a follow-up shorter than 1 year.