

**Supplementary Table 3.** Quality assessment of observational studies using Newcastle–Ottawa Scale

No	Author, year	Selection			Comparability			Outcome		Overall score
		Representativeness of the exposed cohort (1 point)	Selection of the non-exposed cohort (1 point)	Ascertainment of exposure (1 point)	Demonstration that outcome of interest was not present at start of study (1 point)	Comparability of cohorts on the basis of the design or analysis controlled for confounders (2 point)	Assessment of outcome (1 point)	Was follow-up long enough for outcomes to occur (1 point)	Adequacy of follow-up of cohorts (1 point)	
1	Bacaksiz et al. <sup>20</sup> , 2021	1	1	1	0	0	1	1	1	6
2	Chang et al. <sup>21</sup> , 2021	1	1	1	1	2	1	1	1	9
3	Li et al. <sup>12</sup> , 2021	1	1	1	1	2	1	1	1	9
4	Mak et al. <sup>10</sup> , 2021	1	1	1	1	2	1	1	1	9
5	Yu et al. <sup>25</sup> , 2021	1	1	1	1	1	1	1	1	8
6	Con et al. <sup>11</sup> , 2020	1	1	1	1	2	1	1	1	9
7	Lim et al. <sup>9</sup> , 2020	1	1	1	0	2	1	1	1	8
8	Wong et al. <sup>15</sup> , 2020	1	1	1	1	2	1	1	1	9
9	Choi et al. <sup>8</sup> , 2020	1	1	1	1	2	1	1	1	9
10	Kim et al. <sup>13</sup> , 2019	1	1	1	0	0	1	1	1	6
11	Peleg et al. <sup>7</sup> , 2019	1	1	1	1	2	1	1	1	9
12	Chen et al. <sup>16</sup> , 2017	1	1	1	0	1	1	1	0	6
13	Chan et al. <sup>5</sup> , 2017	1	1	1	0	1	1	1	1	7
14	Lee et al. <sup>6</sup> , 2019	1	1	1	0	2	1	1	1	8
15	Ieluzzi et al. <sup>18</sup> , 2014	1	1	1	0	1	1	1	1	7
16	Mak et al. <sup>23</sup> , 2020	1	1	1	0	1	1	1	1	7
17	Gong et al. <sup>24</sup> , 2015	1	1	1	0	0	1	0	1	5
18	Chu et al. <sup>22</sup> , 2013	1	1	1	0	0	1	1	1	6
19	Wong et al. <sup>14</sup> , 2014	1	1	1	1	0	1	1	1	7

Quality assessment performed based on HCC or primary outcomes (when HCC is not reported).