

	MTX exposed	Other sDMARD exposed	TNF exposed	Rituximab exposed	Other biologics exposed	Total
N of deaths	96	126	182	36	25	463
Cause of death:						
Infectious disease	32 (4.6)	31 (8.8)	56 (3.3)	18 (6.9)	8 (4.8)	143 (4.6)
Cardiovascular disease	25 (3.6)	25 (7.1)	41 (2.4)	4 (1.5)	9 (5.4)	105 (3.3)
Stroke	3 (0.4)	5 (1.4)	14 (0.8)	0	3 (1.8)	25 (0.8)
Malignancy	24 (3.4)	32 (9.1)	26 (1.5)	10 (3.8)	1 (0.6)	92 (2.9)
Other	15 (2.1)	22 (6.3)	34 (2.0)	4 (1.5)	3 (1.8)	78 (2.5)
Unknown	9 (1.3)	17 (4.8)	19 (1.1)	1 (0.4)	2 (1.2)	48 (1.5)

Supplementary table ST1: Cause of death by treatment group. Deaths per 1000 patient-years are given in parenthesis. Six (12) months risk window approach was used to assign deaths to treatment groups (see Methods).

	Six months risk window			Ever exposed approach		
	deaths	PYRS	HR (95% CI)	deaths	PYRS	HR (95% CI)
At follow-up						
Methotrexate	96	7012	Referent	78	6469	Referent
Etanercept	93	7226	0.77 (0.58 to 1.01)	167	10443	0.94 (0.77 to 1.18)
Infliximab	21	2457	0.55 (0.34 to 0.88)	79	4818	1.04 (0.80 to 1.36)
Adalimumab	73	7523	0.60 (0.45 to 0.81)	159	11381	0.90 (0.73 to 1.11)
Abatacept	8	672	0.55 (0.26 to 1.17)	15	961	0.80 (0.46 to 1.41)
Tocilizumab	15	1037	0.83 (0.48 to 1.47)	19	1185	0.99 (0.61 to 1.63)

Supplementary table ST2. Secondary analysis of the impact of individual agents on mortality given as hazard ratios (HR) adjusted for co-variables as shown in table 4 using treatment with methotrexate as referent. (Risk windows are overlapping.); PYRS: patient years

	Six months risk window	Ever exposed approach
	HR (95% CI)	HR (95% CI)
At follow-up		
Etanercept	Referent	Referent
Infliximab	0.69 (0.42 to 1.13)	1.05 (0.79 to 1.38)
Adalimumab	0.76 (0.56 to 1.06)	0.94 (0.75 to 1.18)

Supplementary table ST3. Secondary analysis of the impact of individual TNF α inhibitors on mortality given as hazard ratios (HR) adjusted for co-variables as shown in table 4 using treatment with etanercept as referent. (Risk windows are overlapping.)