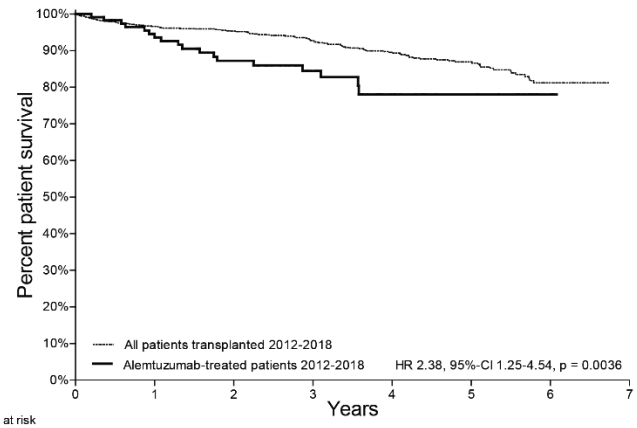
Supplemental digital content

Figures

SDC Figure 1

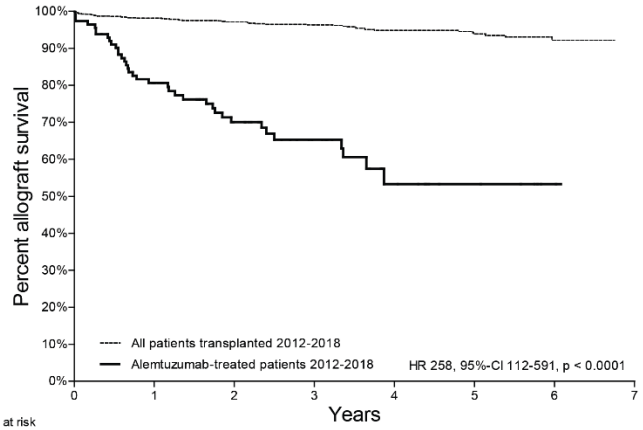
A



No. at risk

Total group	1101	981	778	603	430	273	107
Alemtuzumab	116	98	78	54	23	14	4

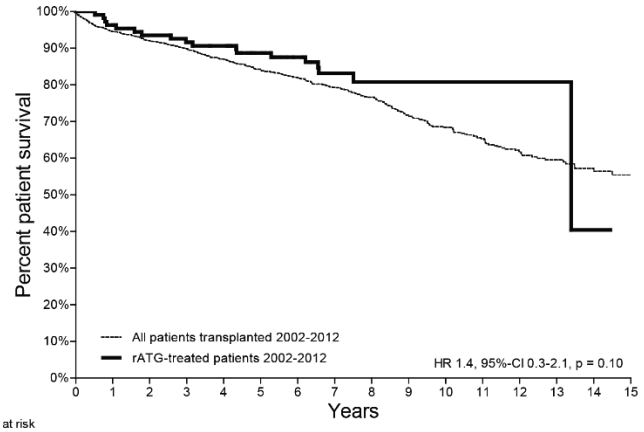
B



No. at risk

Total group	1101	981	778	603	430	275	108
Alemtuzumab	116	80	56	35	14	8	3

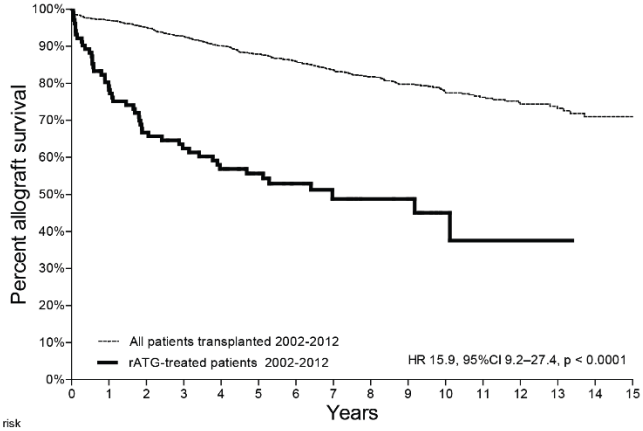
C



No. at risk

Total group	1463	1299	1243	1187	1117	1029	835	678	542	420	315	246	182	122	74	29
rATG	108	78	63	58	51	41	32	19	15	13	6	3	2			

D

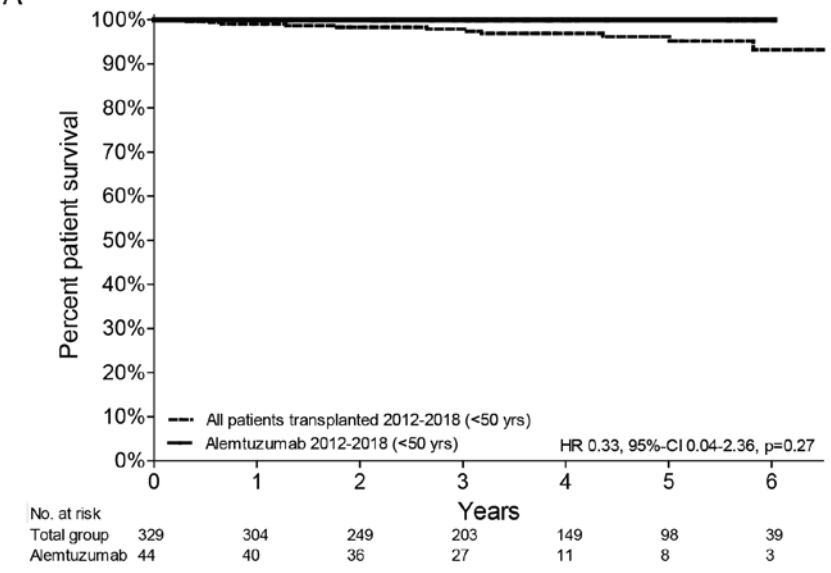


No. at risk

Total group	1463	1325	1267	1209	1141	1052	857	699	561	429	321	248	183	122	74	29
rATG	108	104	99	97	94	81	67	47	30	27	16	11	6	2		

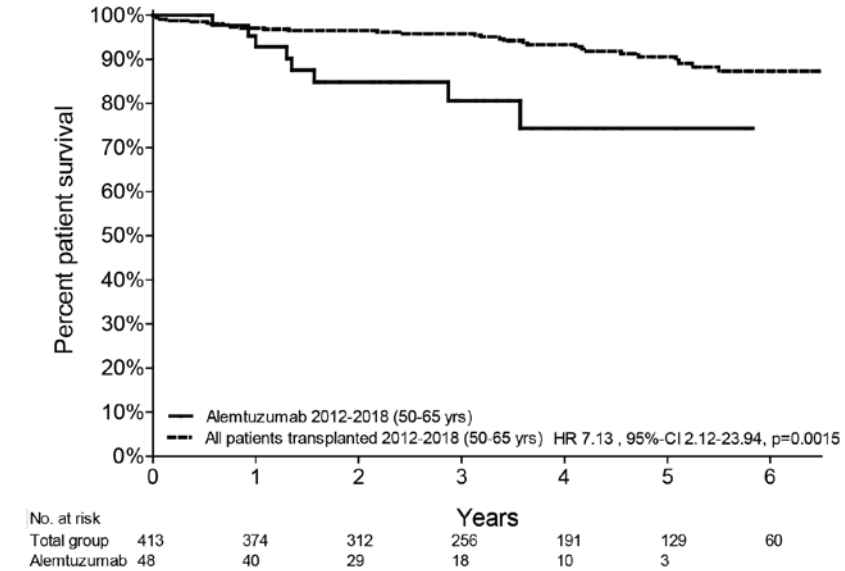
SDC Figure 2

A



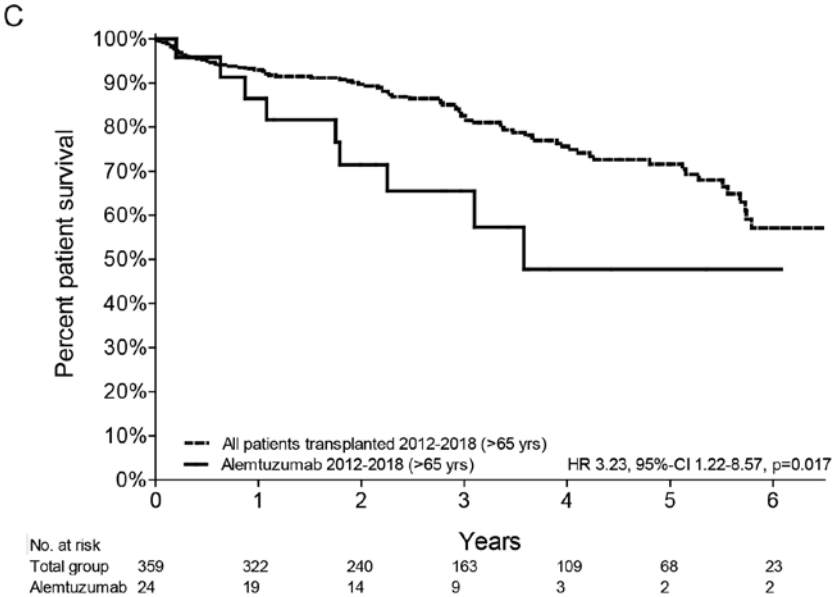
No. at risk							
Total group	329	304	249	203	149	98	39
Alemtuzumab	44	40	36	27	11	8	3

B



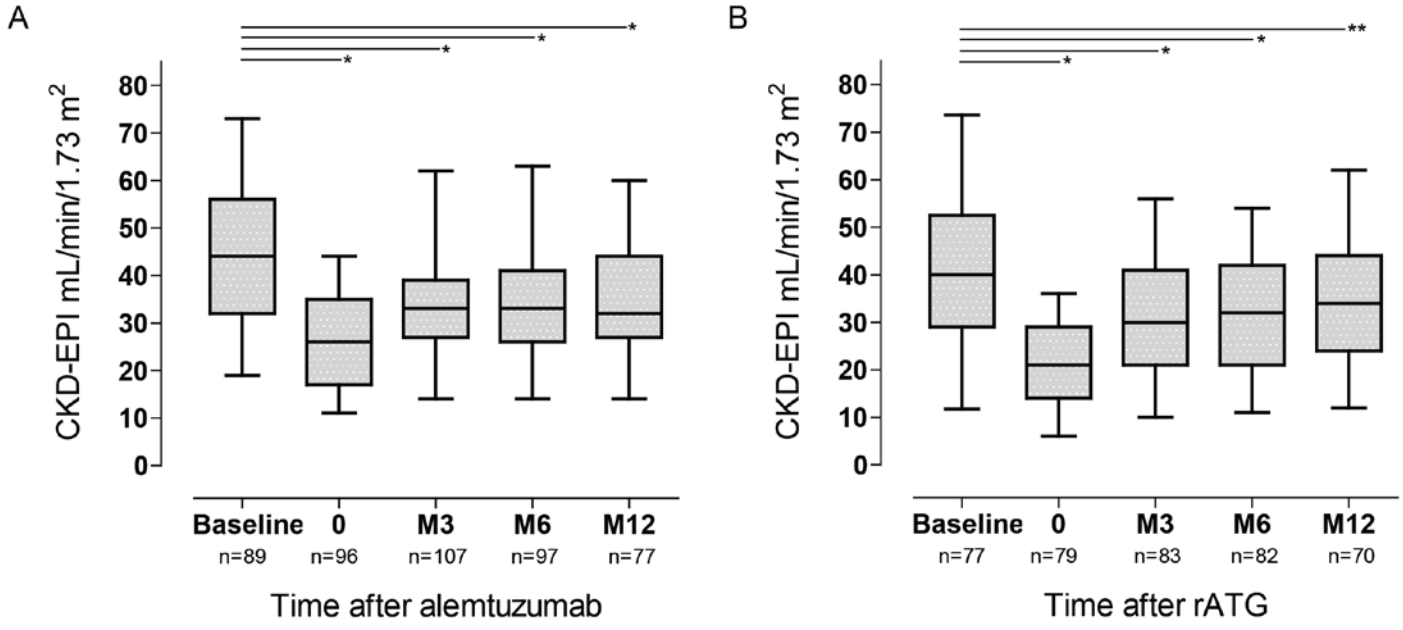
No. at risk							
Total group	413	374	312	256	191	129	60
Alemtuzumab	48	40	29	18	10	3	

C



No. at risk							
Total group	359	322	240	163	109	68	23
Alemtuzumab	24	19	14	9	3	2	2

SDC Figure 3



Methods

Of patients treated with alemtuzumab or rATG the allograft function (estimated glomerular filtration rate (eGFR; Chronic Kidney Disease Epidemiology Collaboration [CKD-EPI][1]) was assessed. Baseline eGFR was defined as the highest eGFR in the three months prior to AR. Delayed graft function (DGF) was defined as need for dialysis in the first week after transplantation. A linear mixed-effect model with patient specific random intercepts was constructed to analyze eGFR over time. Gender, ethnicity, primary kidney disease, age and donor type were included as covariates in the mixed effect model.

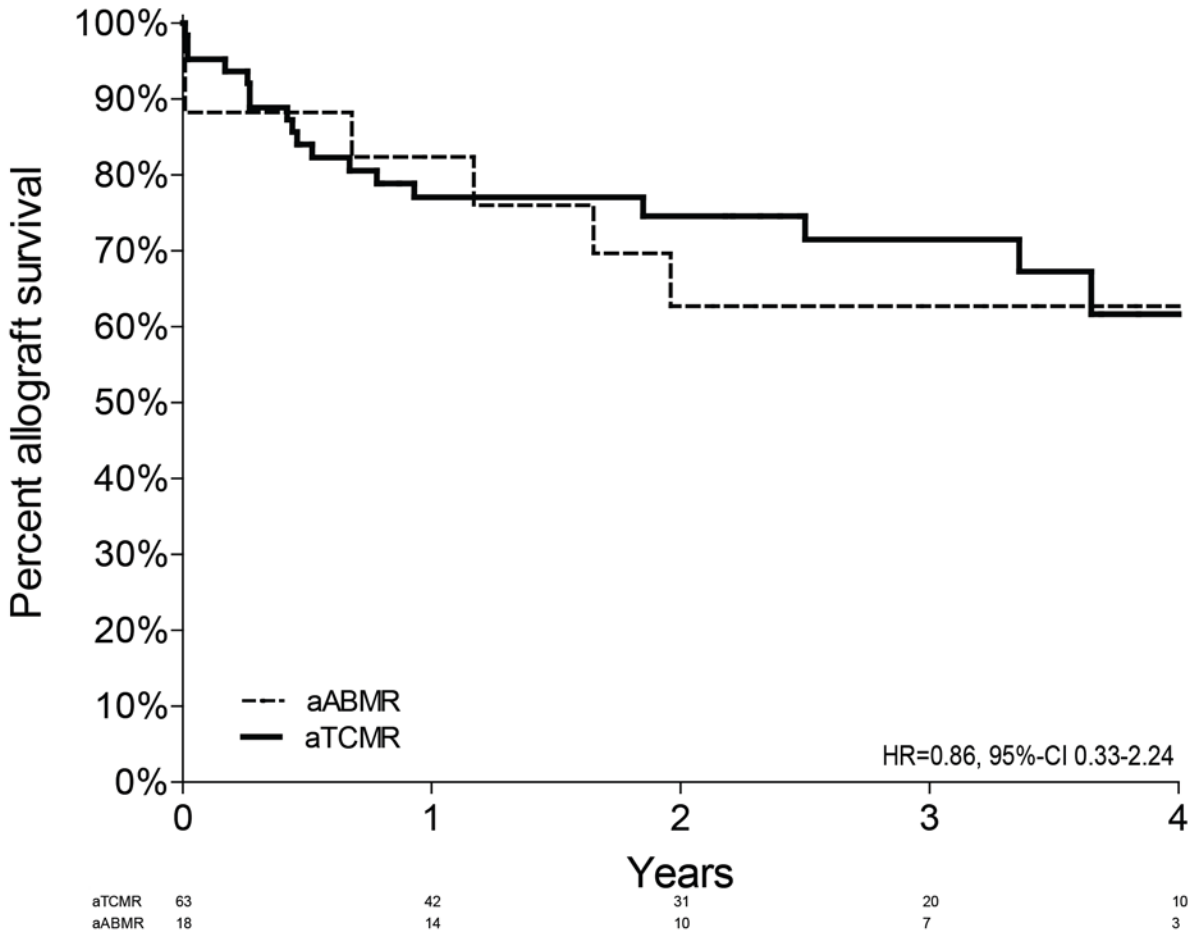
Results

Kidney function one year after alemtuzumab treatment was significantly worse compared to baseline kidney function. A good response (i.e. a return to >75% of baseline eGFR one year after alemtuzumab treatment) was seen in 46% of alemtuzumab-treated patients. Twenty-three percent of the patients had a partial response (return to 50-75% of baseline eGFR) after alemtuzumab, and 31% of the patients showed no response (return to baseline <50% of eGFR). Thirty-three patients (28.4%) had DGF during AR. Eight of these 33 patients lost their allograft in the first year, including six patients with PNF. Serum creatinine of the remaining patients with DGF one year after alemtuzumab was 147 µmol/L (IQR 141-165).

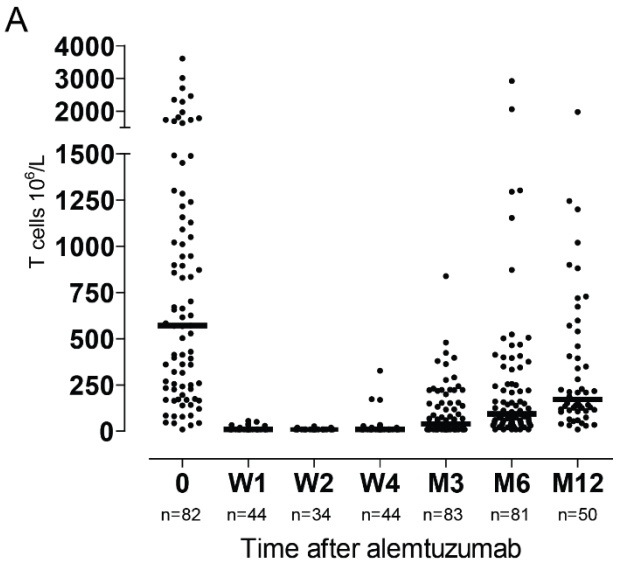
References

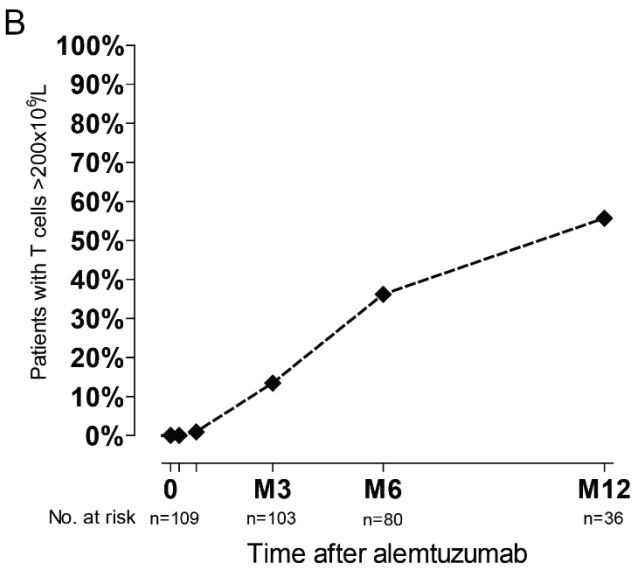
1. Levey AS, Stevens LA, Schmid CH, et al. A new equation to estimate glomerular filtration rate. Ann Intern Med. 2009;150(9):604-612.

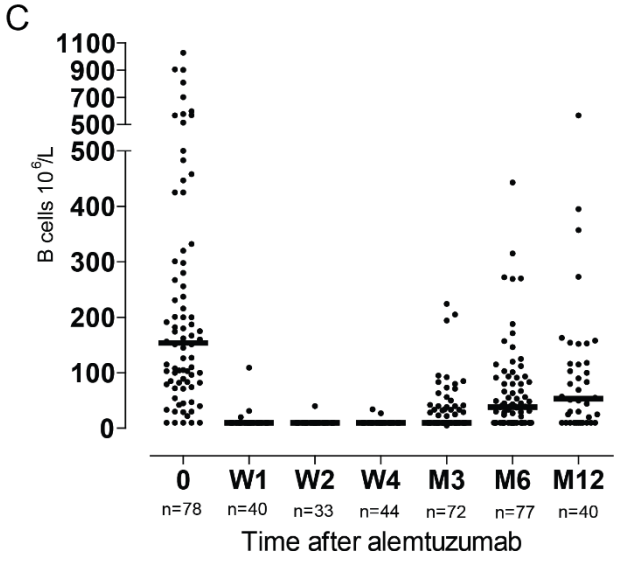
SDC Figure 4

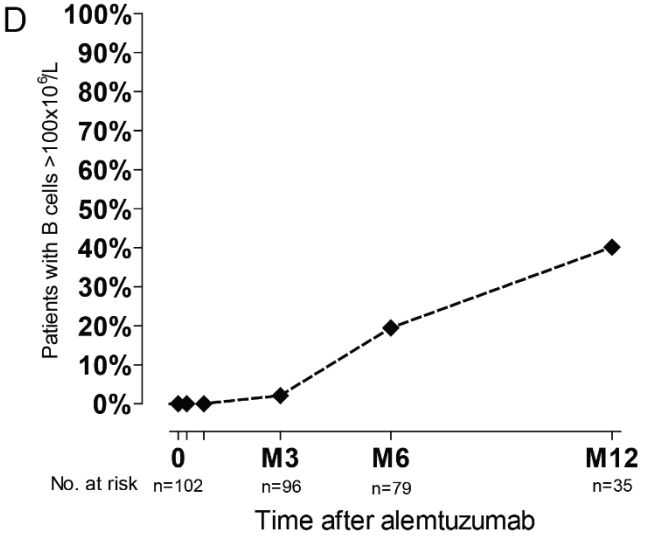

100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percent allograft survival
aABMR
aTCMR
HR=0.86, 95%-CI 0.33-2.24
0
1
2
3
4
Years
aTCMR 63 42 31 20 10
aABMR 18 14 10 7 3

SDC Figure 5


A
4000
3000
2000
1500
1250
1000
750
500
250
0
T cells 10⁶/L
0
W1
W2
W4
M3
M6
M12
n=82
n=44
n=34
n=44
n=83
n=81
n=50
Time after alemtuzumab


B
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Patients with T cells >200x10⁶/L
0
M3
M6
M12
No. at risk n=109
n=103
n=80
n=36
Time after alemtuzumab


C
1100
900
700
500
500
400
300
200
100
0
B cells 10⁶/L
0
W1
W2
W4
M3
M6
M12
n=78
n=40
n=33
n=44
n=72
n=77
n=40
Time after alemtuzumab


D
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Patients with B cells >100x10⁶/L
0
M3
M6
M12
No. at risk n=102
n=96
n=79
n=35
Time after alemtuzumab