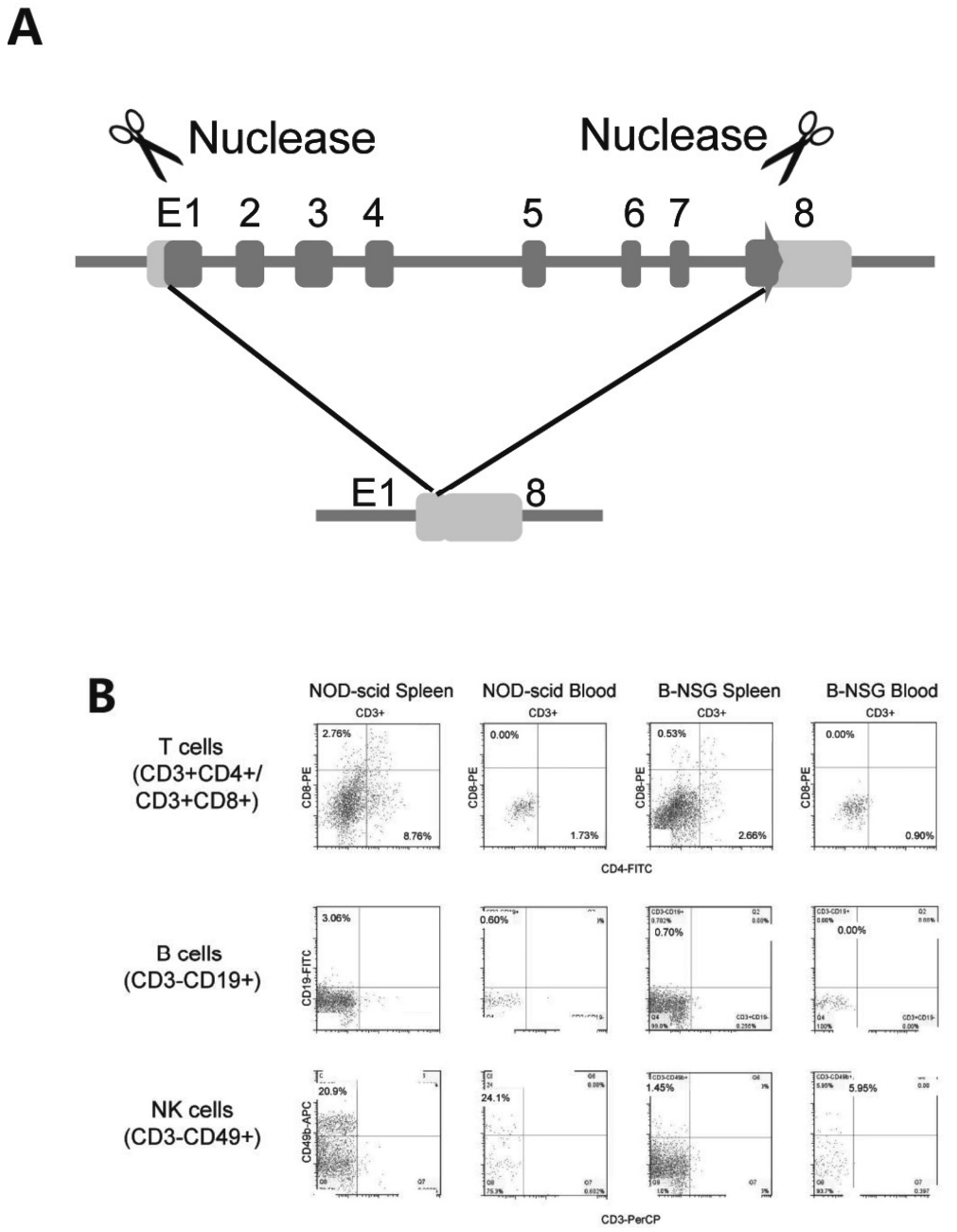

A
Nuclease
Nuclease
E1 2 3 4 5 6 7 8
E1 8
B
NOD-scid Spleen
NOD-scid Blood
B-NSG Spleen
B-NSG Blood
T cells
(CD3+CD4+/
CD3+CD8+)
B cells
(CD3-CD19+)
NK cells
(CD3-CD49+)
CD3+
CD8-PE
CD4-FITC
CD19-FITC
CD49b-APC
CD3-PerCP
2.76%
8.76%
0.00%
1.73%
0.53%
2.66%
0.00%
0.90%
3.06%
0.60%
0.70%
0.00%
20.9%
24.1%
1.45%
5.95%

25

Figure 1

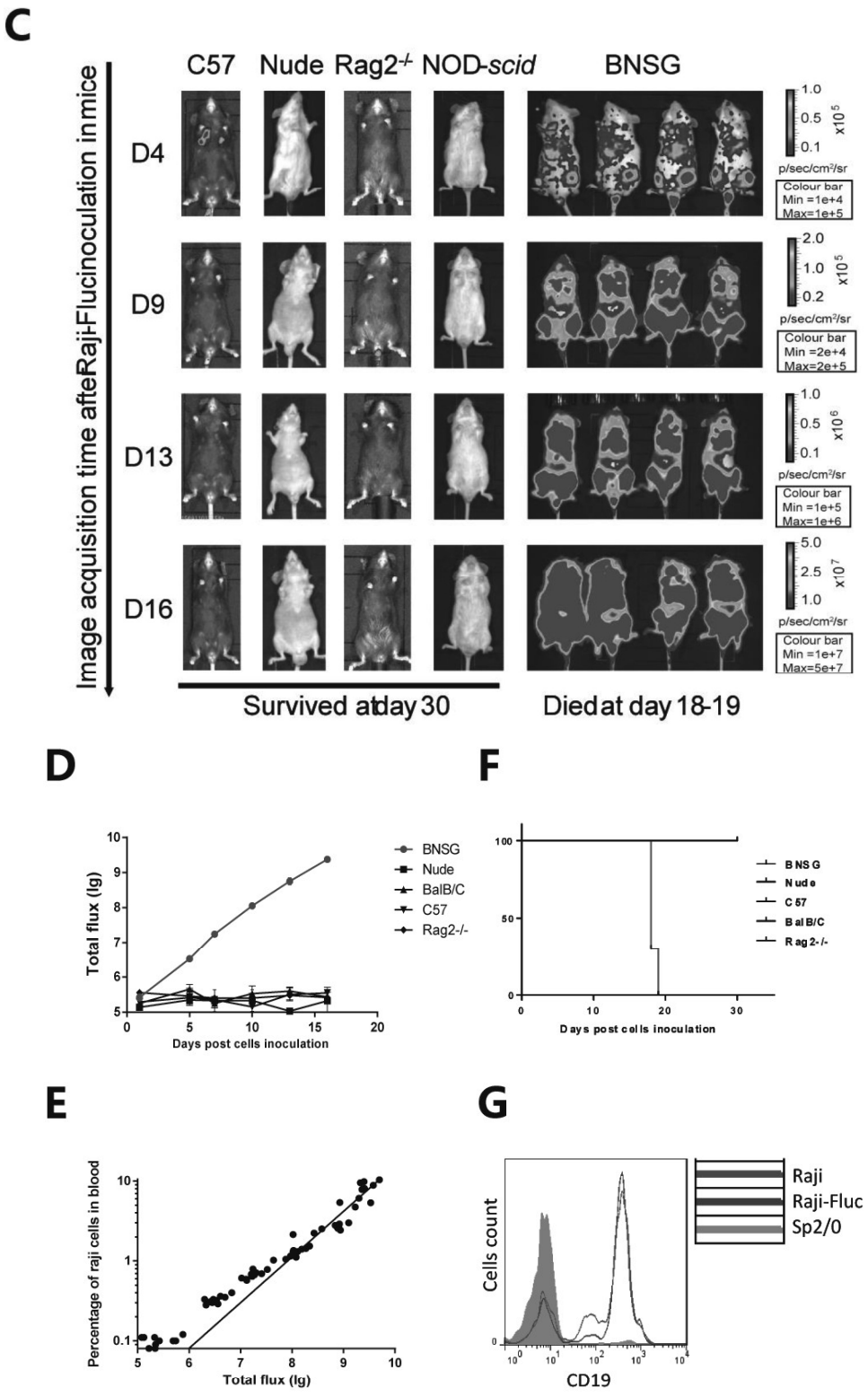


Figure 1(continued)

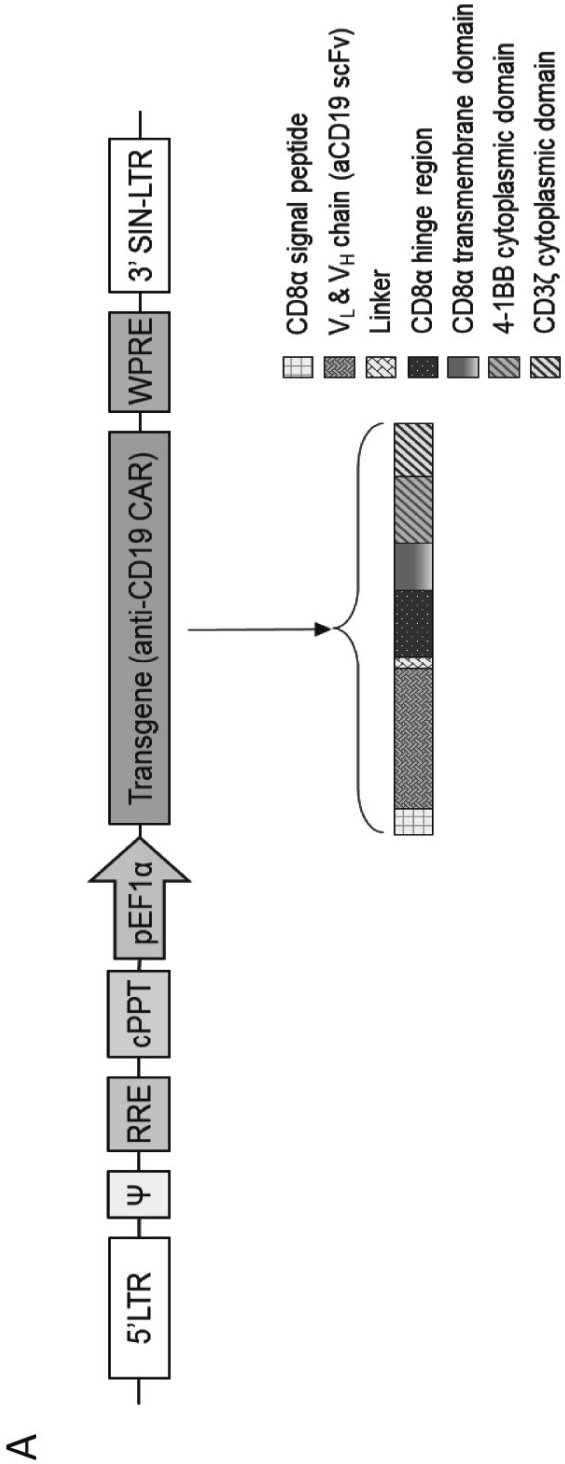

A
5'LTR
Ψ
RRE
cPPT
pEF1α
Transgene (anti-CD19 CAR)
WPRE
3' SIN-LTR
CD8α signal peptide
V_L & V_H chain (aCD19 scFv)
Linker
CD8α hinge region
CD8α transmembrane domain
4-1BB cytoplasmic domain
CD3ζ cytoplasmic domain

Figure 2

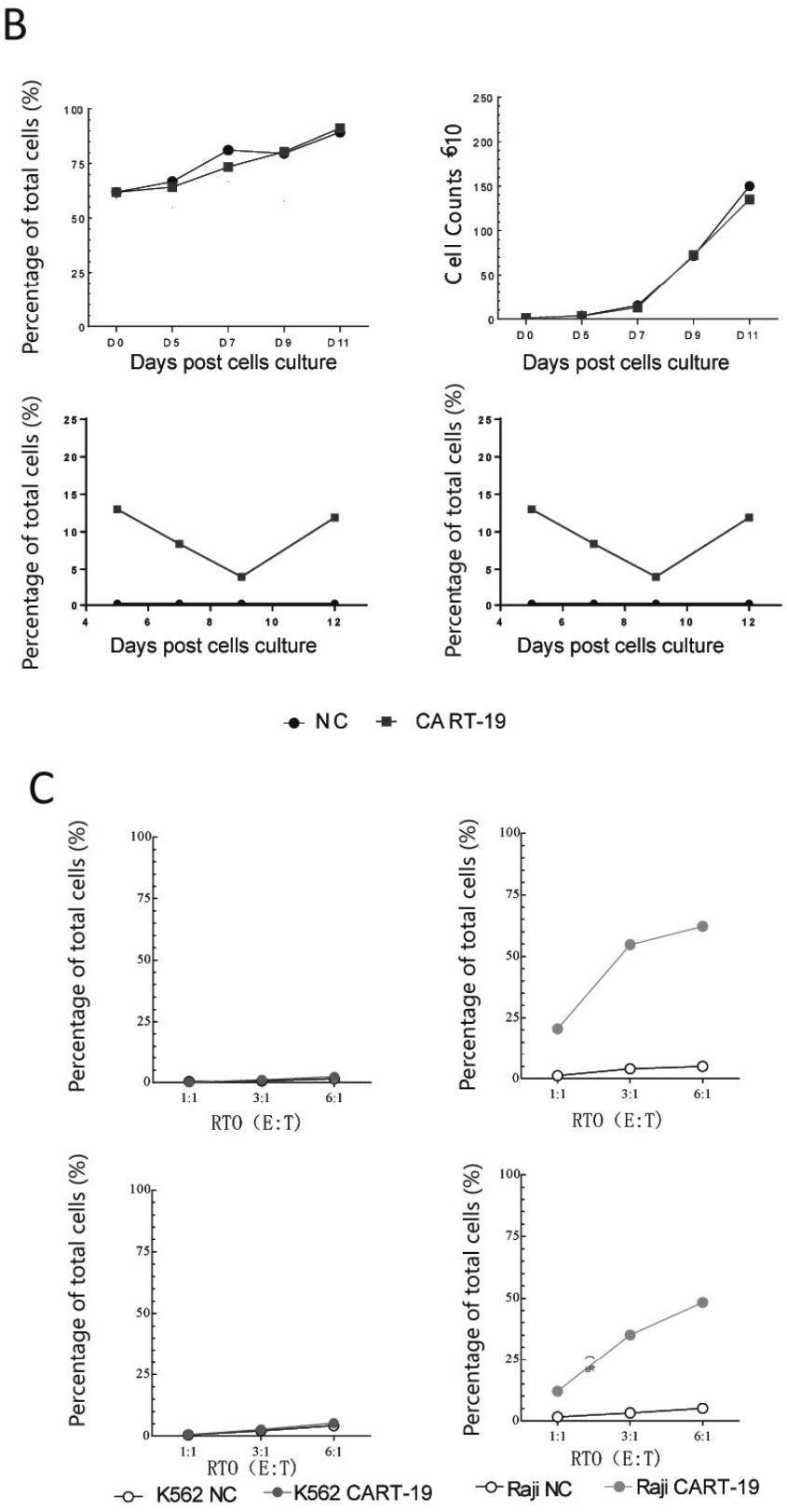


Figure 2(continued)

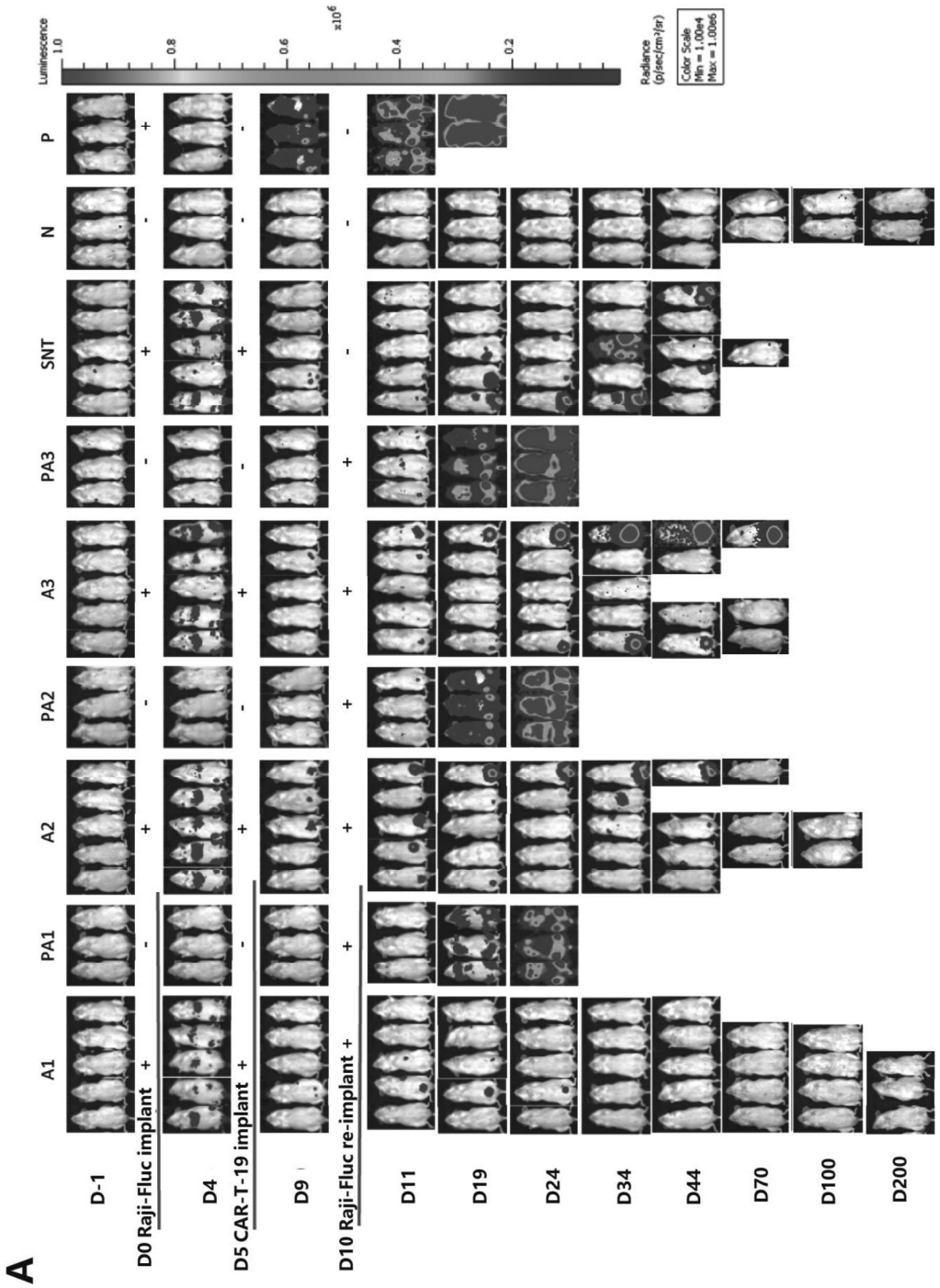
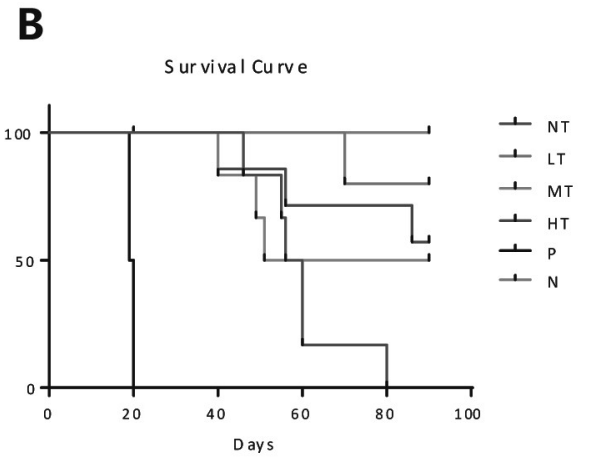
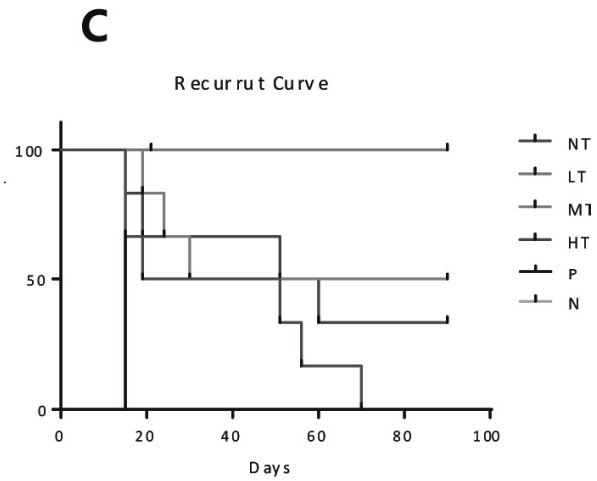

A
A1
PA1
A2
PA2
A3
PA3
SNT
N
P
D-1
D0 Raji-Fluc implant
D4
D5 CAR-T-19 implant
D9
D10 Raji-Fluc re-implant
D11
D19
D24
D34
D44
D70
D100
D200
Luminescence
Radiance (p/sec/cm²/sr)
Color Scale
Min = 1.00e4
Max = 1.00e6

Figure 3





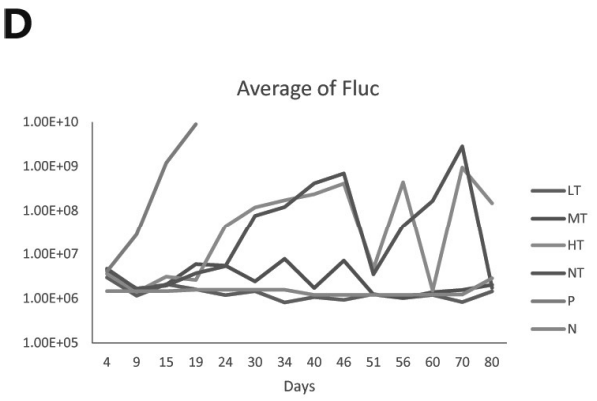


Figure 3(continued)

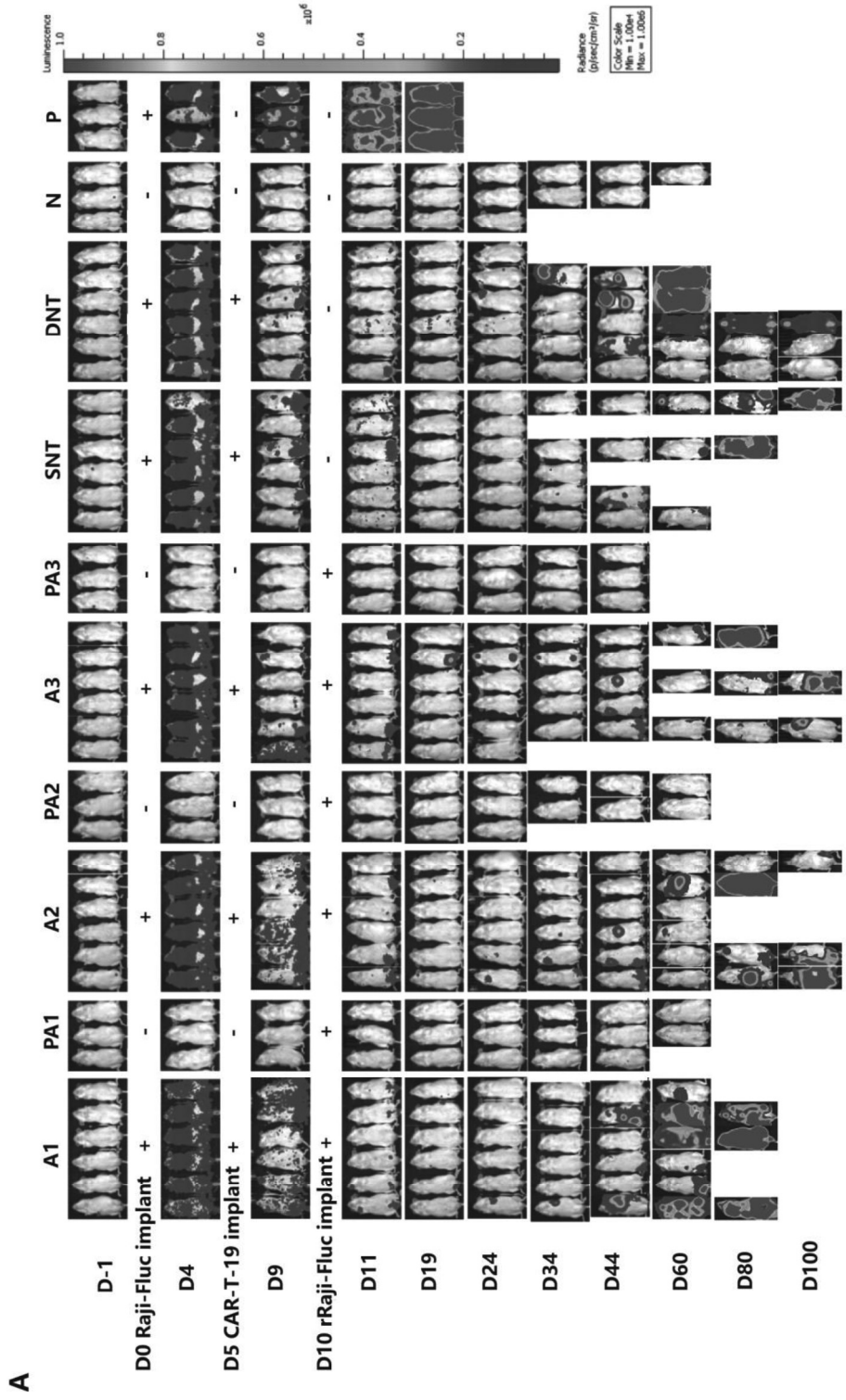
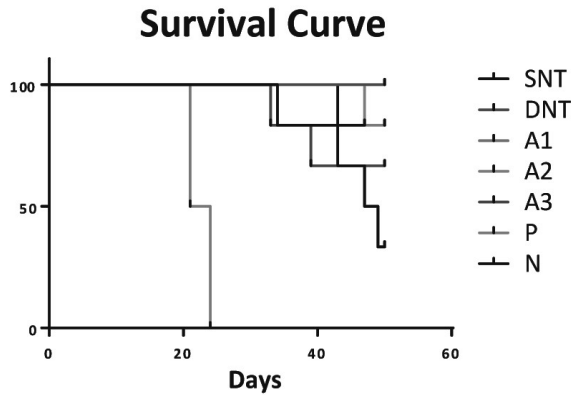
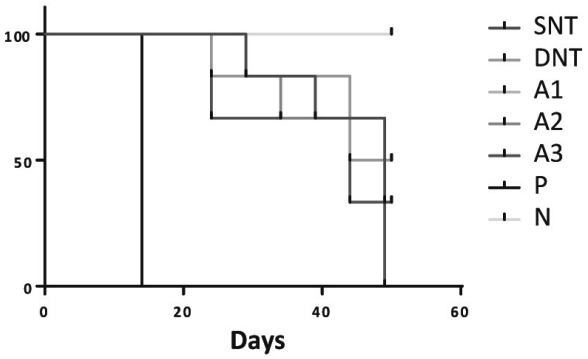

A
A1
PA1
A2
PA2
A3
PA3
SNT
DNT
N
P
D-1
D0 Raji-Fluc implant
D4
D5 CAR-T-19 implant
D9
D10 rRaji-Fluc implant
D11
D19
D24
D34
D44
D60
D80
D100
Luminescence
Radiance (p/sec/cm²/sr)
Color Scale
Min = 1.00e4
Max = 1.00e6

Figure 4

B



C



D

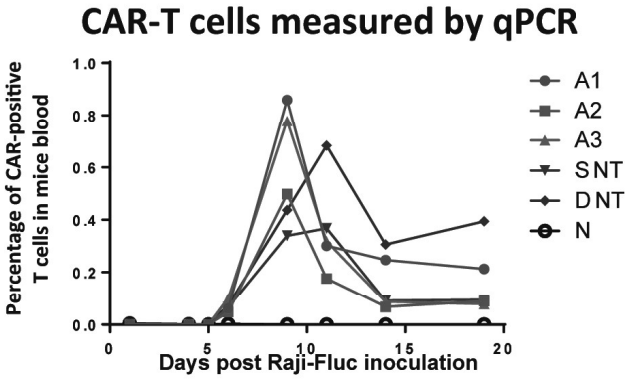


Figure 4(continued)

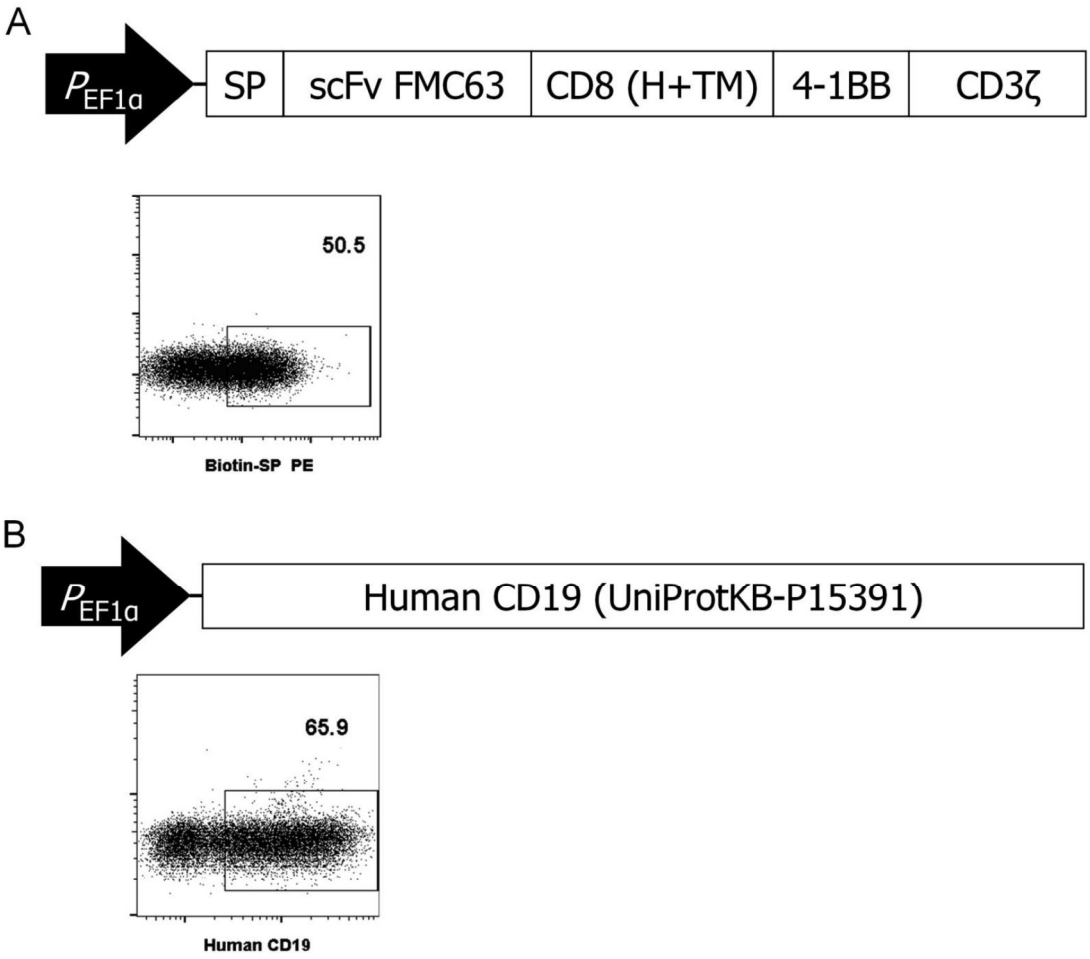
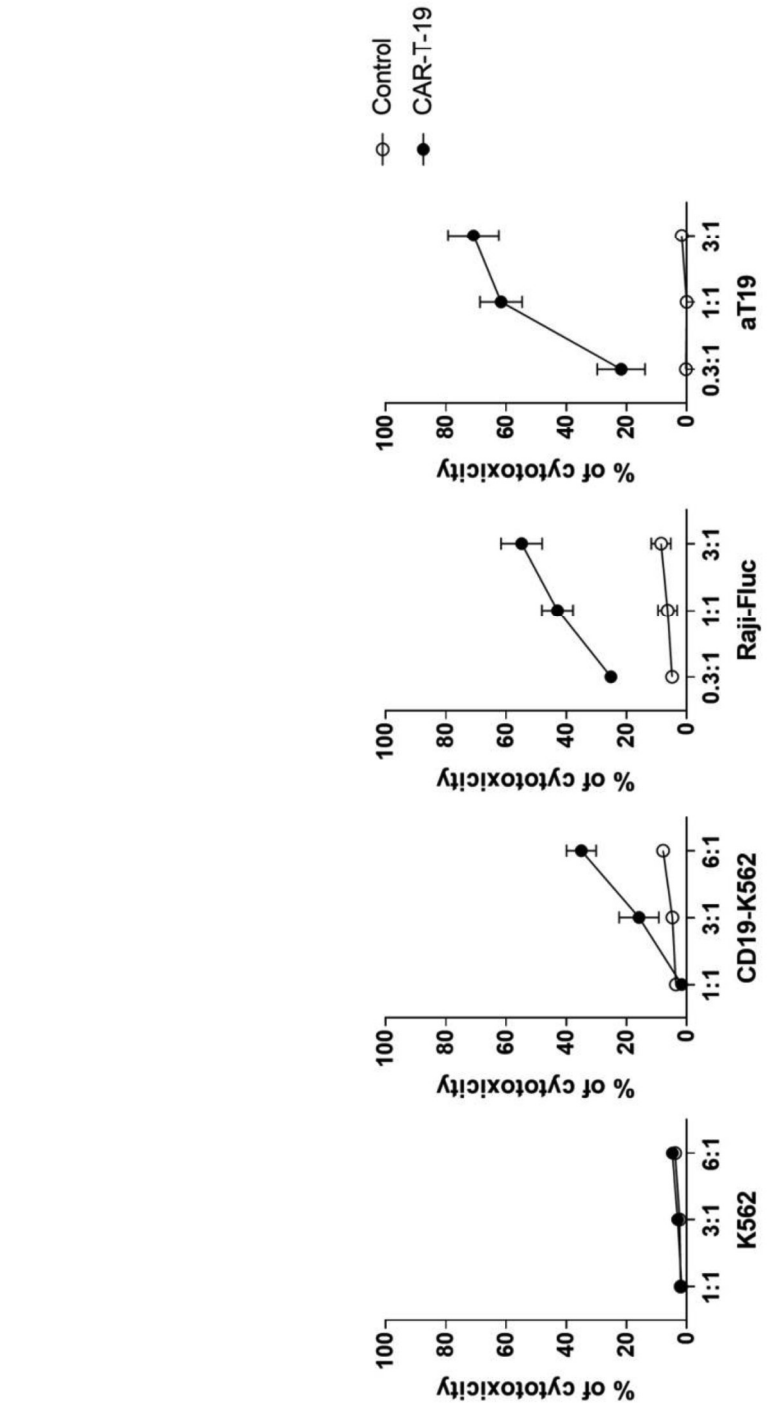

A
$P_{EF1\alpha}$
SP
scFv FMC63
CD8 (H+TM)
4-1BB
CD3ζ
50.5
Biotin-SP PE
B
$P_{EF1\alpha}$
Human CD19 (UniProtKB-P15391)
65.9
Human CD19

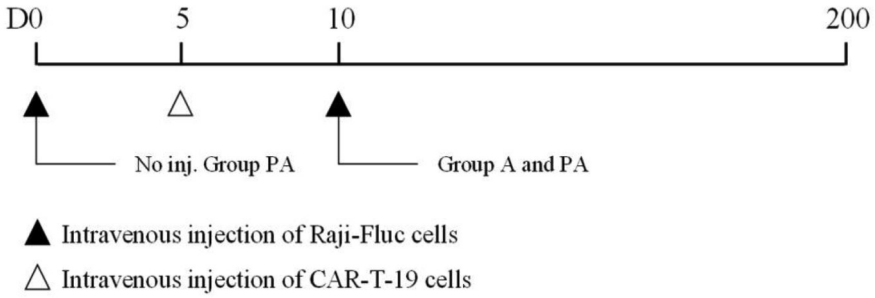
Figure 5



C

Figure 5(continued)

A


D0
5
10
200
No inj. Group PA
Group A and PA
Intravenous injection of Raji-Fluc cells
Intravenous injection of CAR-T-19 cells

B

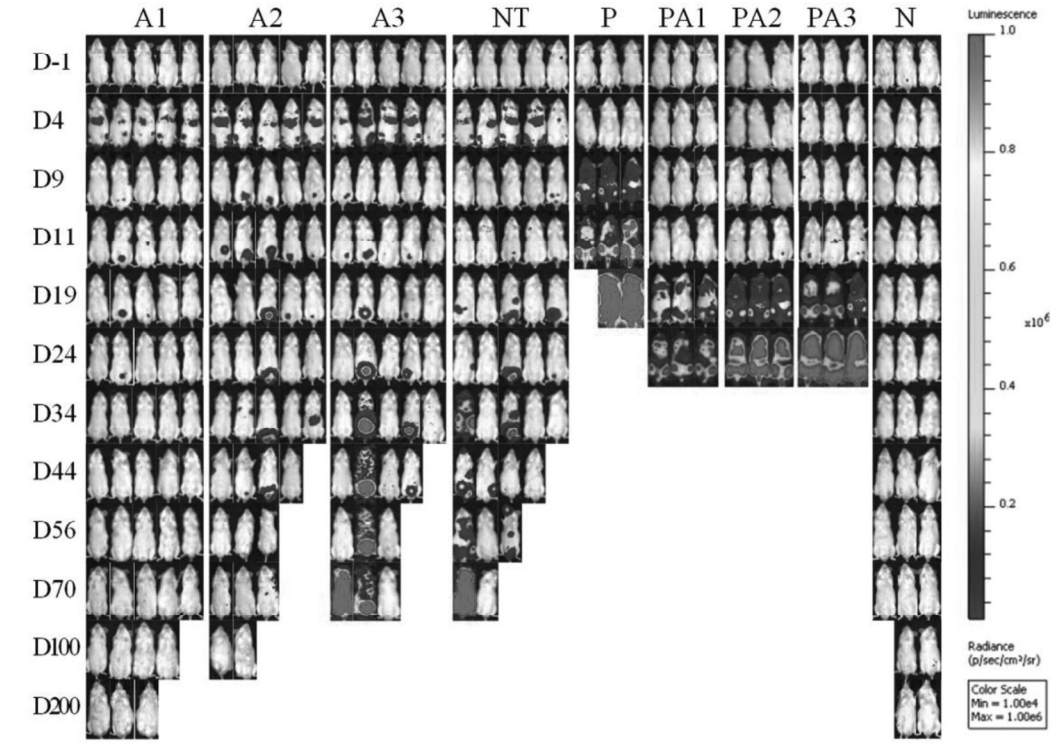

A1
A2
A3
NT
P
PA1
PA2
PA3
N
D-1
D4
D9
D11
D19
D24
D34
D44
D56
D70
D100
D200
Luminescence
1.0
0.8
0.6
0.4
0.2
x10^6
Radiance (p/sec/cm²/sr)
Color Scale
Min = 1.00e4
Max = 1.00e6

Figure 6

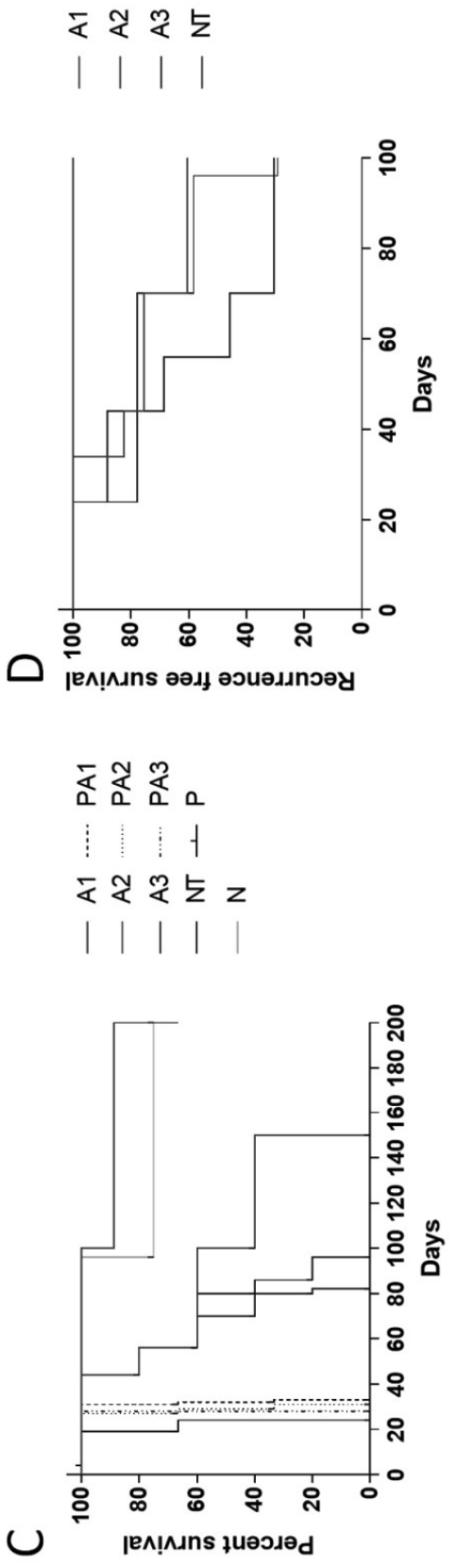
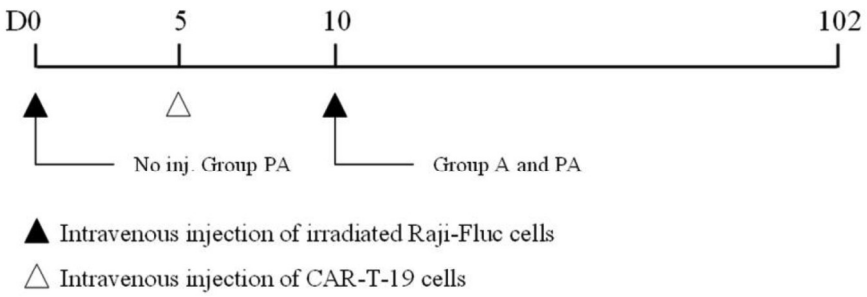


Figure 6(continued)

A


D0
5
10
102
No inj. Group PA
Group A and PA
Intravenous injection of irradiated Raji-Fluc cells
Intravenous injection of CAR-T-19 cells

B

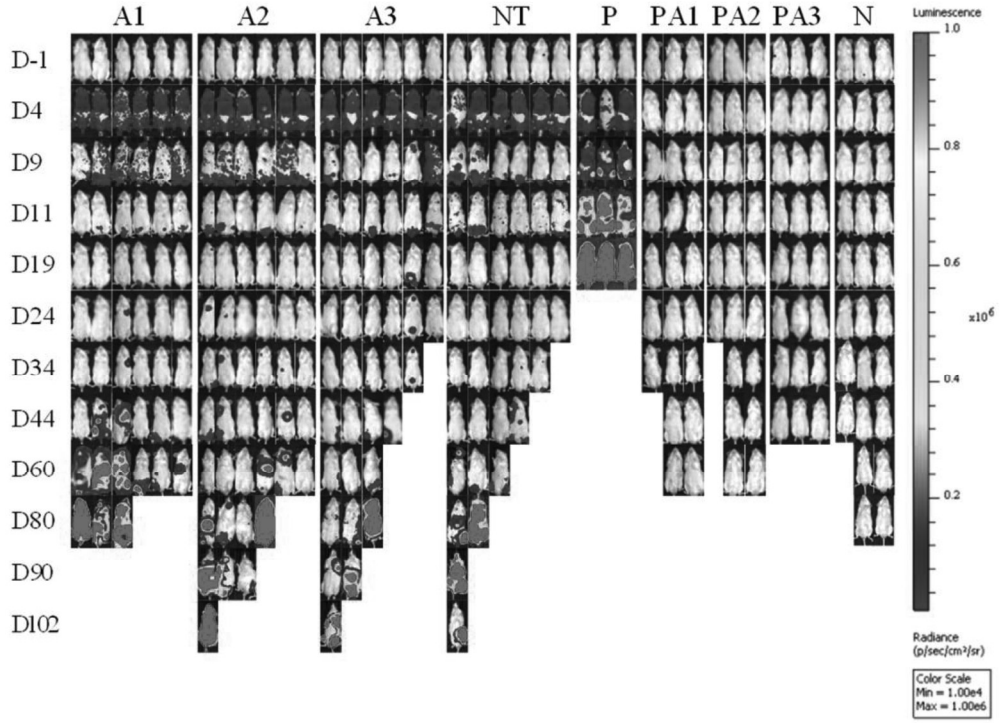

A1
A2
A3
NT
P
PA1
PA2
PA3
N
D-1
D4
D9
D11
D19
D24
D34
D44
D60
D80
D90
D102
Luminescence
1.0
0.8
0.6
0.4
0.2
x10^6
Radiance (p/sec/cm²/sr)
Color Scale
Min = 1.00e4
Max = 1.00e6

Figure 7

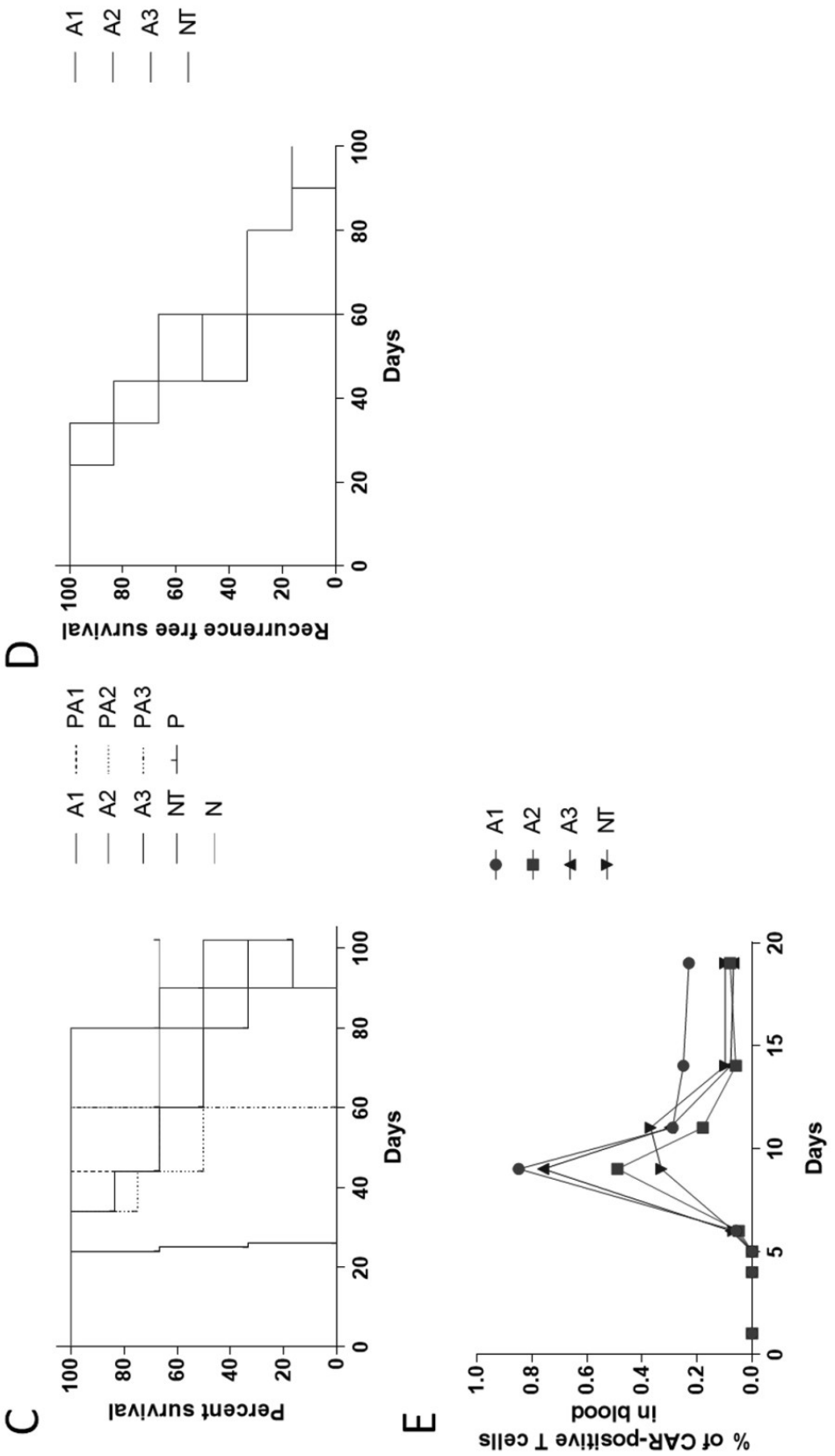
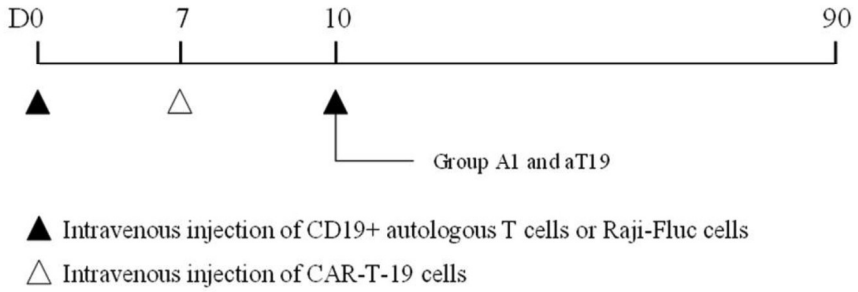


Figure 7(continued)

A


D0
7
10
90
Group A1 and aT19
Intravenous injection of CD19+ autologous T cells or Raji-Fluc cells
Intravenous injection of CAR-T-19 cells

B

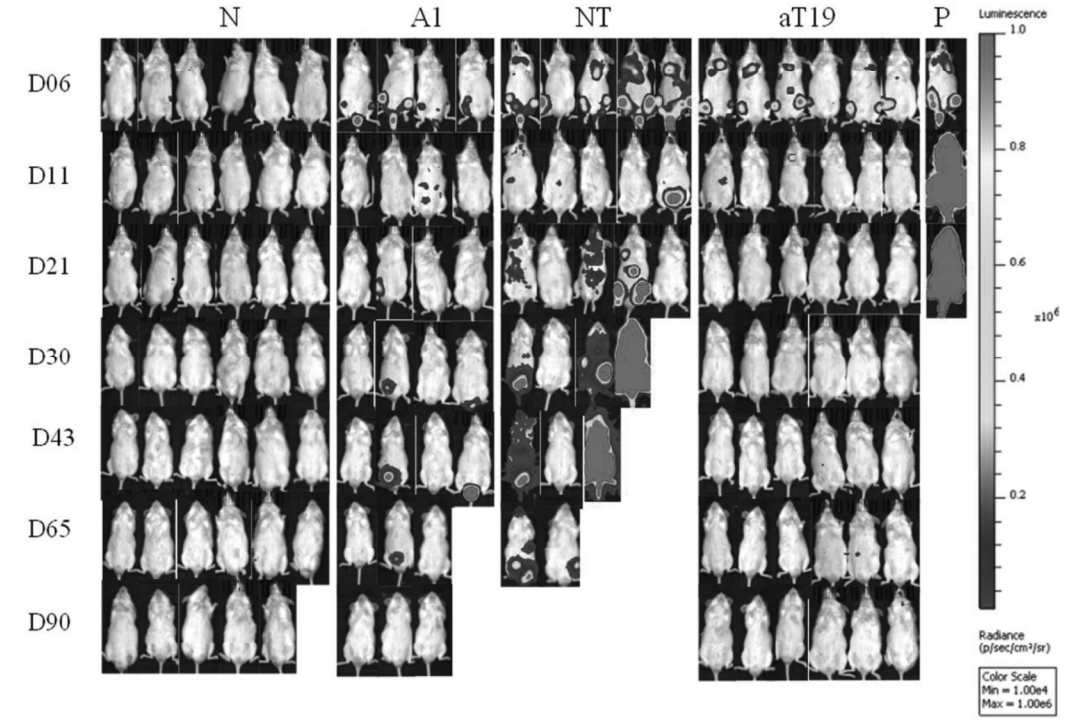

N
A1
NT
aT19
P
D06
D11
D21
D30
D43
D65
D90
Luminescence
1.0
0.8
0.6
0.4
0.2
x10^6
Radiance (p/sec/cm²/sr)
Color Scale
Min = 1.00e4
Max = 1.00e6

Figure 8

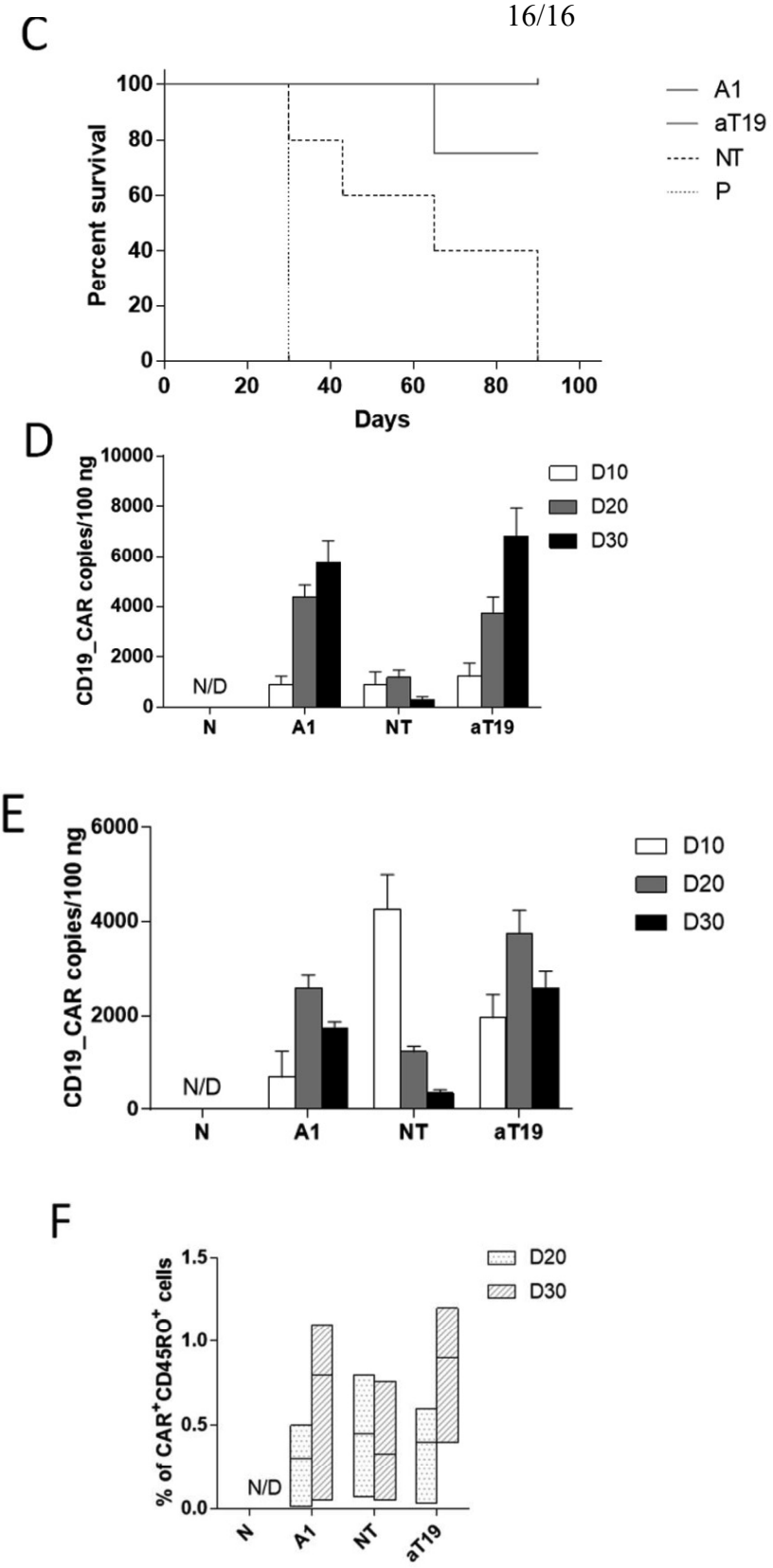


Figure 8(continued)