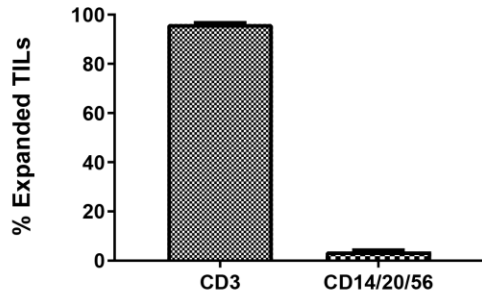
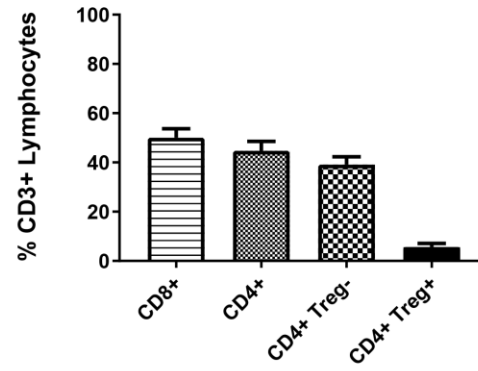


Supplementary data

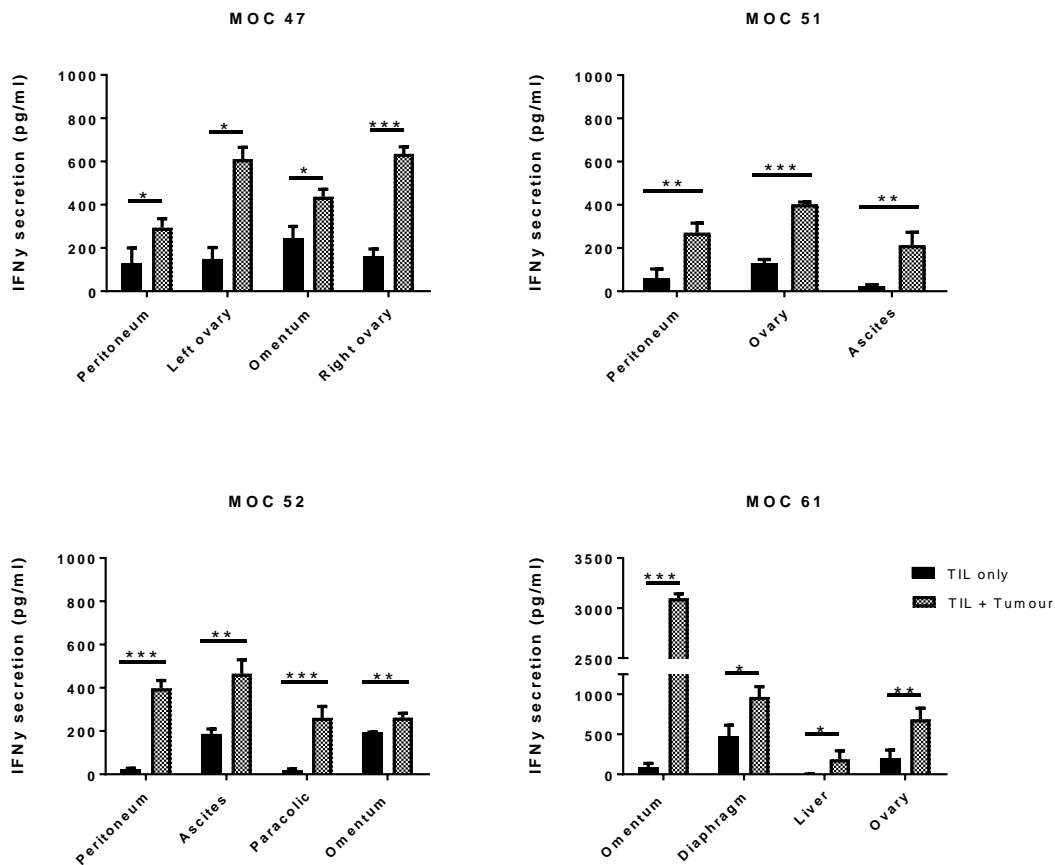
Supplementary Table 1. Flow cytometry antibodies

| Name | Fluorophore | Clone | Company | Panel used |
|--------------------------------------|-------------|----------|--------------------|--|
| Anti-CCR7 | APC | REA108 | Miltenyi, Germany | Differentiation |
| Anti-CD45RA | PE | HI100 | BD Biosciences, UK | |
| Anti-CD45RO | PE | UCHL1 | | |
| Anti-CD28 | PE | CD28.2 | | |
| Anti-CD27 | PE | M-T271 | | |
| Anti-CD25 | PE | M-A251 | | |
| Anti-CD8 | FITC | HIT8A | | |
| Anti-CD62L | Pe/Cy7 | DREG-56 | eBioscience, UK | Activation, Treg, Exhaustion & Functional Panels |
| Live/Dead | BV395 | N/A | Invitrogen | |
| Anti-CD4 | BV785 | OKT4 | Biolegend, UK | |
| Anti-CD14 | Pe-Cy7 | HCD14 | | |
| Anti-CD20 | Pe-Cy7 | 2H7 | | |
| Anti-CD56 | Pe-Cy7 | HCD56 | | |
| Anti-CD45 | BV510 | UCHL1 | | |
| Anti-CD3 | APC | UCHT1 | | |
| Anti-PD-1 | PE | EH12.2H7 | | |
| Anti-TIM3 | BV421 | F38-2E2 | | |
| Anti-CD69 | BV421 | FN50 | | |
| Anti-CD25 | BV711 | BC96 | | |
| Anti-OX40 | FITC | ACT35 | | |
| Anti-Foxp3* | PE | 206D | | |
| Anti-CD127 | BV421 | A019D5 | | |
| Anti- TNFα* | BV650 | MAb11 | | |
| Anti- IFNγ* | BV711 | 4S.B3 | | |
| GranzymeB | FITC | GB11 | | |
| Anti-ICOS | BV650 | Dx29 | BD Biosciences, UK | |
| Anti-CD8 | APC-H7 | SK1 | | |
| Anti-IL2* | BV421 | 5344.111 | | |
| Anti-LAG3 | FITC | 17B4 | Enzo Lifesciences | |

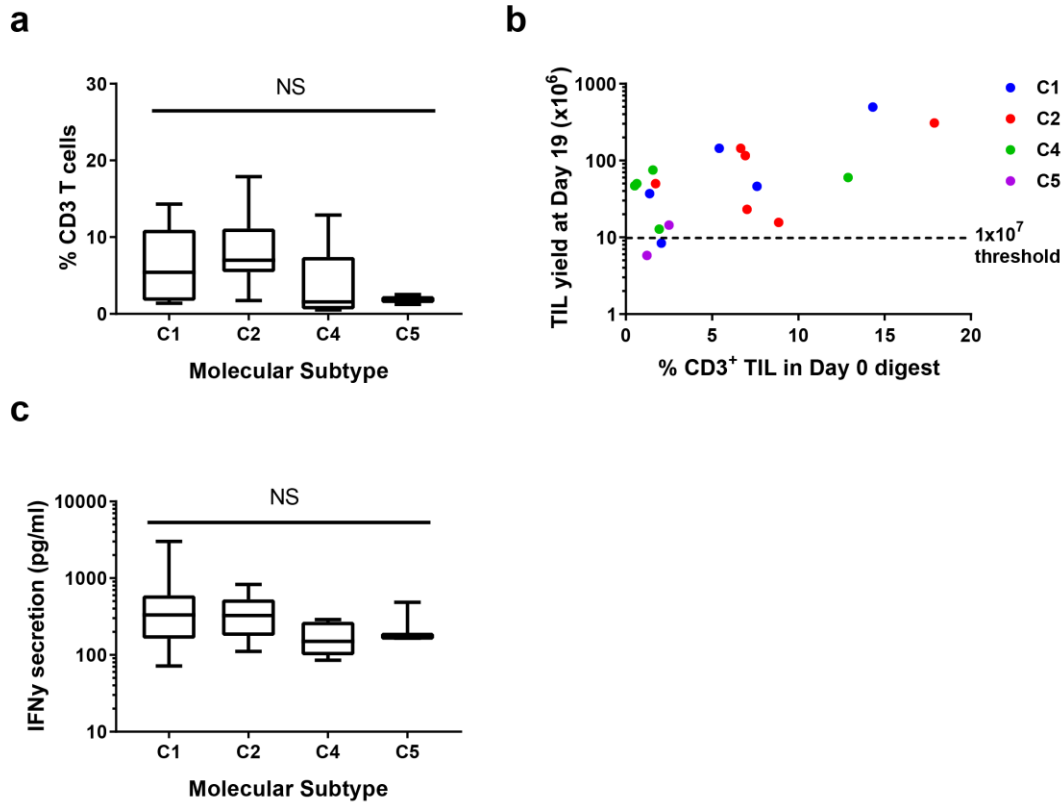
*Denotes intracellular antigens

a**b**

Supplementary Figure 1. Phenotype of expanded ovarian TILs. (a) Frequency of CD3⁺ T cells and other lineages (CD14⁺/CD20⁺/CD56⁺) in the expanded TIL cultures. (b) Percentage CD8⁺, CD4⁺ and Treg cells in the expanded TILs cultures. Data are reported as mean % ± SEM.



Supplementary Figure 2. Comparison of functional activity of TILs expanded from different anatomical sites. In four patients, TILs were successfully expanded from a minimum of three different anatomical sites. Expanded TILs were co-cultured against autologous tumour from cognate sites, to determine whether expanded TILs retained functional activity. TILs were considered to show functional activity if significantly higher levels of IFN γ were produced by the co-culture compared to TILs alone. Mean and SD of three replicates are shown. *P<0.05, **P<0.01, ***P<0.001, paired student T-test.



Supplementary Figure 3. Comparison of CD3 T cell infiltration, expansion and IFN γ secretion by the different molecular subtypes of ovarian cancer. (a) Percentage of CD3⁺ T cells in the tumour digest was determined using flow cytometry and compared between molecular subtypes of ovarian cancer (C1/mesenchymal; C2/immune; C4/differentiated; C5/proliferative). (b) Final TIL yield at day 19 compared against percentage of CD3⁺ TIL in tumour digest. Dashed line illustrates 1×10^7 threshold for a positive TIL culture. (c) IFN γ produced by expanded TILs in response to autologous tumour cells was compared between molecular subtypes. Data represents the median, upper and lower quartiles and range. Kruskal-Wallis test; $P < 0.05$, NS, not significant.