Supplementary Figure Legends:

**Supplemental Figure 1**

A)-D Individual cell tracking using Imaris software was used to measure movement parameters of monocytes: (A) Persistence (B) Track length (C) Speed (D) Straightness, on Day 1 and Day 2 imaging. Data are pooled from three separate experiments. Statistical analysis was performed using 1-way ANOVA. With *P*-values ≤ 0.05 (\**P* < 0.05, \*\**P* < 0.01, \*\*\**P* < 0.001, \*\*\*\**P* < 0.0001). (E) OVCAR3 were stably transfected with a gRNA plasmid encoding 4 separate gRNA as detailed in materials and methods. After puromycin selection 12 subclones were grown to confluency and tested for protein expression by western blot. Western blot of OVCAR3 with Caspase-8) was used to select protein negative cells for further study.

**Supplemental Figure 2**

(A). Monocytes were transfected with siScramble or siTRAIL as in material methods. To verify knockdown monocyte cultures were split for functional assay and western blot of TRAIL. Blots were also probed for the IFN inducible protein IFIT3 and HSP90 for loading control. (B-C) OVCAR3 were stably transfected with a gRNA plasmid encoding 4 separate gRNA as detailed in materials and methods. After puromycin selection 12 subclones were grown to confluency and tested for protein expression by western blot. Western blot of OVCAR3 with DR4 deletion was used to select protein negative cells for further study (B). Western blot for DR5 was performed to show that DR4 deletion did not disrupt DR5 expression (C). (D-E) OVCAR3 DR4-/- cells (Clone E) were used for siRNA mediated knockdown of DR5. DR4 knockout was confirmed by a DR4 specific western blot (D). To confirm DR5 knockdown the same lysates from D were probed for DR5 expression (E).

**Supplemental Figure 3.**

(A-B). Presence of anti-interferon autoantibodies was interrogated by high-throughput particle-based assay, as described in the methods. Plasma was collected before treatment (Baseline) and after the last cycle of treatment received (After treatment), diluted 1:100 and compared to control plasma from healthy volunteers as a negative control and plasma from known autoantibody-positive patients as a positive control. No anti-IFNa (A) or anti-IFNg (B) autoantibodies were detected in the treated patients.

**Supplemental Figure 4.**

Number of monocytes in peripheral blood over time, quantified by manual differential, in the four long-term responders.