**SUPPLEMENTARY MATERIALS**

Fig. S1. Clinical Trial Design

Fig. S2. Representative images of tumors from patients who received radiation treatment.

Fig. S3. Distinct drug induced phenotypes and apoptotic responses specific to drug mechanism of action are seen at sites of CIVO microinjection.

Fig. S4. Increased phosphorylation of PDGFR and downstream effectors in an undifferentiated pleomorphic sarcoma displaying a lack of apoptotic response to microdosed doxorubicin.

Fig. S5. Microinjection of olaratumab does not inhibit PDGFRα, ERK, or S6 phosphorylation.

Table S1. Table of microinjected drugs

Table S2. All adverse events reported on the study

Table S3. Device performance