SUPPLEMENTARY FIGURES:

Figure S1. Reoxygenation and Repopulation at 48 hours in MCF-7 tumors treated with pimonidazole &: saline (control; black), doxorubicin (8 mg/kg; blue), TH- 302 (150 mg/kg; purple) or combination (orange). Panel A displays reoxygenation (percent of cells that were pimo+ and are now EF5-) of tumor tissue that has occurred 48 hours following treatment. Panel B depicts proliferation (Ki67 positive staining) in reoxygenated tissues & panel C displays the spatial distribution of Ki67 in relation to the nearest currently hypoxic area at 48 hours. Points indicate average of 8 mice per group; bars, SE. Differences amongst treatment groups are significant (p<0.05).

Figure S2. Reoxygenation and Repopulation at 72 hours in MCF-7 tumors treated with pimonidazole &: saline (control; black), doxorubicin (8 mg/kg; blue), TH- 302 (150 mg/kg; purple) or combination (orange). Panel A displays reoxygenation (percent of cells that were pimo+ and are now EF5-) of tumor tissue that has occurred 72 hours following treatment. Panel B depicts proliferation (Ki67 positive staining) in reoxygenated tissues & panel C displays the spatial distribution of Ki67 in relation to the nearest currently hypoxic area at 72 hours. Points indicate average of 8 mice per group; bars, SE. Differences amongst treatment groups are significant (p<0.05).

Figure S3. Reoxygenation and Repopulation at 96 hours in MCF-7 tumors treated with pimonidazole &: saline (control; black), doxorubicin (8 mg/kg; blue), TH- 302 (150 mg/kg; purple) or combination (orange). Panel A displays reoxygenation (percent of cells that were pimo+ and are now EF5-) of tumor tissue that has occurred 96 hours following treatment. Panel B depicts proliferation (Ki67 positive staining) in reoxygenated tissues & panel C displays the spatial distribution of Ki67 in relation to the nearest currently hypoxic area at 96 hours. Points indicate average of 8 mice per group; bars, SE. Differences amongst treatment groups are significant (p<0.05).

Figure S4. Reoxygenation and Repopulation at 120 hours in MCF-7 tumors treated with pimonidazole &: saline (control; black), doxorubicin (8 mg/kg; blue), TH- 302 (150 mg/kg; purple) or combination (orange). Panel A displays reoxygenation (percent of cells that were pimo+ and are now EF5-) of tumor tissue that has occurred 120 hours following treatment. Panel B depicts proliferation (Ki67 positive staining) in reoxygenated tissues & panel C displays the spatial distribution of Ki67 in relation to the nearest currently hypoxic area at 120 hours. Points indicate average of 8 mice per group; bars, SE. Differences amongst treatment groups are significant (p<0.05).

Figure S5. Reoxygenation and Repopulation at 48 hours in PC-3 tumors treated with pimonidazole &: saline (control; black), docetaxel (8 mg/kg; blue), TH- 302 (150 mg/kg; purple) or combination (orange). Panel A displays reoxygenation (percent of cells that were pimo+ and are now EF5-) of tumor tissue that has occurred 48 hours following treatment. Panel B depicts proliferation (Ki67 positive staining) in reoxygenated tissues & panel C displays the spatial distribution of Ki67 in relation to the nearest currently hypoxic area at 48 hours. Points indicate average of 8 mice per group; bars, SE. Differences amongst treatment groups are significant (p<0.05).

Figure S6. Reoxygenation and Repopulation at 72 hours in PC-3 tumors treated with pimonidazole &: saline (control; black), docetaxel (8 mg/kg; blue), TH- 302 (150 mg/kg; purple) or combination (orange). Panel A displays reoxygenation (percent of cells that were pimo+ and are now EF5-) of tumor tissue that has occurred 72 hours following treatment. Panel B depicts proliferation (Ki67 positive staining) in reoxygenated tissues & panel C displays the spatial distribution of Ki67 in relation to the nearest currently hypoxic area at 72 hours. Points indicate average of 8 mice per group; bars, SE. Differences amongst treatment groups are significant (p<0.05).

Figure S7. Reoxygenation and Repopulation at 96 hours in PC-3 tumors treated with pimonidazole &: saline (control; black), docetaxel (8 mg/kg; blue), TH- 302 (150 mg/kg; purple) or combination (orange). Panel A displays reoxygenation (percent of cells that were pimo+ and are now EF5-) of tumor tissue that has occurred 96 hours following treatment. Panel B depicts proliferation (Ki67 positive staining) in reoxygenated tissues & panel C displays the spatial distribution of Ki67 in relation to the nearest currently hypoxic area at 96 hours. Points indicate average of 8 mice per group; bars, SE. Differences amongst treatment groups are significant (p<0.05).

Figure S8. Reoxygenation and Repopulation at 120 hours in PC-3 tumors treated with pimonidazole &: saline (control; black), docetaxel (8 mg/kg; blue), TH- 302 (150 mg/kg; purple) or combination (orange). Panel A displays reoxygenation (percent of cells that were pimo+ and are now EF5-) of tumor tissue that has occurred 120 hours following treatment. Panel B depicts proliferation (Ki67 positive staining) in reoxygenated tissues & panel C displays the spatial distribution of Ki67 in relation to the nearest currently hypoxic area at 120 hours. Points indicate average of 8 mice per group; bars, SE. Differences amongst treatment groups are significant (p<0.05).