In vivo investigations of vascular density and local mitochondrial metabolism after irradiation.

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It is obvious that irradiation increases local oxygen uptake. Because the oxygen supply is not altered, a decrease in local oxygen partial pressure may develop. This state may be called relative hypoxia. If the metabolism is altered for a period of at least 24 hrs an increase in angiogenic mitogens, inducing angiogenesis will occur. Presumably this is the mechanism underlying the therapeutic effect of radiotherapy in benign disease.

PMID: 9500036 [PubMed - indexed for MEDLINE]