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1: [Anticancer Res.](#) 1998 Jan-Feb;18(1A):363-7.

The effect of hyperbaric oxygen on growth and chemosensitivity of metastatic prostate cancer.

[Kalns J](#), [Krock L](#), [Piepmeier E Jr](#).

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BACKGROUND: Currently, advanced prostate cancer (CaP) is not curable. In this report hyperbaric oxygen (HBO) is examined as an adjuvant to chemotherapy and as a stand-alone treatment. **MATERIALS AND METHODS:** CaP cell monolayers grown under normoxic conditions were exposed to cisplatin, taxol or doxorubicin for 90 minutes under HBO (3.0 atmospheres, 100% O₂) or normal pressure air. **RESULTS:** HBO reduced by 47% the concentration of doxorubicin required to produce a 20% reduction in cell numbers, but did not change the concentration required to produce a > 50% reduction. HBO increased the sensitivity of PC-3 cells to taxol at all concentrations, (mean 1.8%). Cisplatin chemosensitivity was not affected by HBO. HBO reduced the growth rate of DU-145 8.1% relative to control (p = 0.01), and PC-3 2.7% (p = 0.12). **CONCLUSIONS:** This study shows that HBO can decrease the rate of growth, and increase sensitivity to anticancer agents, however, the effects are cell line dependent.

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