

Study: Electricity kills cancer cells

Scientists from Old Dominion University and Eastern Virginia Medical School say they've killed melanomas in mice using high-powered jolts of electricity.

Using extremely short, high-voltage doses of electricity, the researchers told the *Virginian-Pilot* they've never had a tumor that did not respond to the treatment.

Richard Nuccitelli, associate professor of electrical and computer engineering at Old Dominion, said the method might eventually turn into an effective cancer treatment.

The electric bursts often disrupted the blood flow to the tumor cells and shrunk their nuclei by 50 percent, Nuccitelli said. The tumors died after two or three weeks of treatments, each session involving hundreds of electrical pulses, each less than one-one millionth of a second and carrying 4,000 volts.

Nuccitelli told the *Virginian-Pilot* he and his colleagues believe the process works by severely damaging DNA in the cells. The treatment produced no scarring and did not harm adjacent cells. All of the research mice survived, with no ill effects.

The scientists said additional research will be needed before they can experiment on people.

The research is to appear online Wednesday in the journal *Biochemical and Biophysical Research Communications*.

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