

## VACCINIA: Notes about the Disease

The term “vaccinia,” as a reportable disease in North Carolina, is meant to include the serious complications of smallpox vaccination, not the milder local and systemic reactions that many vaccinees experience.<sup>1</sup> It was the risk of these complications compared to the risk of smallpox disease for the average US citizen that, following assessment in the late 1960s by a group of CDC epidemiologists which resulted in the repeal of state laws by 1972 (including NC’s), required routine smallpox vaccination.<sup>2</sup>

Specifically, the complications required to be reported include autoinoculation with vaccinia virus, generalized vaccinia, eczema vaccinatum, progressive vaccinia, and post vaccination encephalitis.<sup>1</sup> Any public health worker responsible for administering smallpox vaccine needs to be familiar with these and the milder reactions to inoculation with vaccinia; several good on-line resources are available.<sup>3-5</sup>

However, before learning how to deal with smallpox vaccination complications, it is even more important to prevent them from occurring in the first place, insofar as possible. Bearing in mind that the risk of smallpox (variola) virus exposure should outweigh the risk of vaccinia vaccination for each individual, vaccinators must carefully screen potential vaccinees for contraindications before administering this vaccine. CDC currently recommends caution in vaccinating people with heart disease, but this issue is still under study.<sup>6</sup>

1. NC Administrative Code: 15A NCAC 19A .0208, [www.epi.state.nc.us/epi/gcdc/pdf/15ANCAC19A0100.pdf](http://www.epi.state.nc.us/epi/gcdc/pdf/15ANCAC19A0100.pdf).
2. JM Lane, et al., “Complications of Smallpox Vaccination, 1968” *N Eng J Med* 281 (1969): 1201-8.
3. Centers for Disease Control and Prevention. [Smallpox Vaccination and Adverse Reactions: Guidance for Clinicians]. *MMWR* 2003;52(RR04):[1-28], [www.cdc.gov/MMWR/preview/mmwrhtml/rr5204a1.htm](http://www.cdc.gov/MMWR/preview/mmwrhtml/rr5204a1.htm).
4. TA Poonawalla, et al., “Vaccinia,” *eMedicine*, 2006, [www.emedicine.com/med/topic2356.htm](http://www.emedicine.com/med/topic2356.htm).
5. “Medical Management of Smallpox (Vaccinia) Vaccine Adverse Reactions: Vaccinia Immune Globulin and Cidofovir,” *Centers for Disease Control and Prevention*, 2006, [www.bt.cdc.gov/agent/smallpox/vaccination/mgmt-adv-reactions.asp](http://www.bt.cdc.gov/agent/smallpox/vaccination/mgmt-adv-reactions.asp).
6. “Smallpox Vaccine: Adverse Events and Vaccine Safety,” *Centers for Disease Control and Prevention*, 2003, [www.bt.cdc.gov/agent/smallpox/vaccination/vaccination-program-ga.asp?type=cat&cat=Smallpox+Vaccine&subCat1=Adverse+Events+and+Vaccine+Safety](http://www.bt.cdc.gov/agent/smallpox/vaccination/vaccination-program-ga.asp?type=cat&cat=Smallpox+Vaccine&subCat1=Adverse+Events+and+Vaccine+Safety).