



Tom Jones - VFWD

*Infected northern pike from Lake Champlain*

# Esocid Lymphosarcoma



Esocid Lymphosarcoma (Lymphosarcoma) is a disease of probable viral origin. The disease has been recognized for over 100 years and has been documented in many locations in North America and Europe. This disease is very specific to northern pike, muskellunge and has also been reported in cultured tiger muskellunge in the state of Colorado.

In Vermont, this disease was first documented in 2002 in Lake Champlain's northern pike. To date this is the only fish species and location documented with the disease.

## VERMONT FISH HEALTH FACT SHEET

### Physical Description

The disease starts as small tumors just below the skin surface (sides, fins, and head) and may develop into very large tumors up to the size of a small orange. The color of the tumor can vary and has been described as whitish-gray, red, or pink. The tumors are very soft and upon maturity can rupture and appear as dead tissue. In heavily infected fish the disease can spread to internal organs. Definitive diagnosis requires microscopic examination.

Lymphosarcoma can transfer from fish to fish through physical contact especially through spawning activity in the spring. Tumor occurrence

and development are believed to be water temperature related (highest in late winter/spring, and lowest during the summer months).



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### Threat to Fish

To date, there is not much information on the effect the disease is having on Lake

Champlain's pike population. Several technical reports suggest that the disease poses little mortality to northern pike and is more severe in muskellunge. There is no known treatment for infected fish.

Vermont biologists will continue to monitor the possible spread of the disease and strongly encourages anglers to report this condition as well as other unusual conditions to the department.

### Threat to Humans

This condition is not known to infect humans.

## VERMONT FISH & WILDLIFE DEPARTMENT

103 South Main Street, Waterbury VT 05671-0501 (802) 241-3700 [www.vtfishandwildlife.com](http://www.vtfishandwildlife.com)