Blood Supply Issues (CDC)

- No cases of Lyme disease have been linked to blood transfusion
- Scientists have found that Lyme bacteria can live in blood that is stored for donation.
- Individuals being treated for Lyme disease with an antibiotic should not donate blood.

http://www.cdc.gov/ncidod/dvbid/LYME/ld_transmission.htm

Blood Supply Safety (CDC)

- Centers for Disease Control and Prevention, Division of Vector-Borne Infectious Diseases, Bacterial Zoonoses Branch Fort Collins, Colorado
- Without antibiotic treatment, the Lyme-disease-causing bacterium, Borrelia burgdorferi can be cultured from the peripheral blood of human patients nearly 6 wk post-tick bite. To determine if Lyme disease spirochetes can be transmitted from a spirochetic donor mouse to a naive recipient during blood transfusion, blood taken from immunocompetent infected mice was transfused into either immunodeficient (SCID) mice, inbred immunocompetent animals (C3H/HeJ), or outbred mice. Nine of 19 (47.7%) immunodeficient mice, 7 of 15 (46.8%) inbred immunocompetent mice, and 6 of 10 (60.0%) outbred mice became infected with B. burgdorferi after transfusion. Our results indicate that it is possible to acquire B. burgdorferi infection via transfused blood in a mouse model of Lyme borreliosis. PMID: 16995409 [PubMed – in process]
FDA Blood Products Advisory Meeting - September 2008

➢ Workshop to consider approaches to reduce risk of transfusion-transmitted babesiosis in the US

➢ Emerging concerns of U.S. diseases spread by ticks like babesiosis and Lyme disease (taken from workshop notice)

➢ Food and Drug Administration, Department of Health and Human Services, Centers for Disease Control and American Red Cross

➢ U.S. Food and Drug Administration Blood Products Advisory Committee (BPAC) met with government institutions and top experts from academia and private industry on Safety of Donated Blood

➢ At the workshop, Jesse Goodman, Director, Center for Biologics Evaluation and Research (CBER) FDA stated:

“I will say I just finished a month of clinical attending at the naval hospital in the summer. And I was actually fairly shocked by the number of cases of disseminated Lyme disease that we were seeing. So I think the notion that we have control over tick-borne disease – and if you look at the CDC curves on Lyme disease, you know, there has been an increase over the last several years. Of course, these are – this is the worst kind of passive reporting, and we don’t really have a good hand on how many cases of primary infection there are. But providing that the reporting system hasn’t changed, we certainly don’t see a tapering off of case numbers of the major vector-borne disease spread by the same Ixodes ticks. So I think we need to take – continue to be prepared and take this threat seriously.”

http://www.fda.gov/cber/minutes/tbb091208t.pdf

➢ Facts from the meeting:

- 70 cases of babesiosis through blood supply
- Deaths through transfusions (babesiosis)
- No test for Babesia in blood product

Babesia MO1 Tetrad “Maltese Cross”
Photo by Ed Masters, MD

www.LymeDiseaseAssociation.org