#IVTEAM #Intravenous literature: “We describe a quantitative risk assessment to estimate residual, postdeferral TTvCJD risk in the United States.” Yang et al (2014).

Reference:


Abstract:

Background: Variant Creutzfeldt-Jakob disease (vCJD) is transmitted by blood transfusion. To mitigate the risk of transfusion-transmitted vCJD (TTvCJD), the US Food and Drug Administration has recommended deferral of potential at-risk blood donors, but some risk remains. We describe a quantitative risk assessment to estimate residual, postdeferral TTvCJD risk in the United States.

Study Design and Methods: We assumed that certain US donors may have acquired vCJD infection through dietary exposure to the agent of bovine spongiform encephalopathy during time spent in the United Kingdom, France, and other countries in Europe. Because of uncertainties regarding the prevalence of vCJD in the United Kingdom, we used both low and high UK prevalence estimates as model inputs. The model estimated the risk of infection from a transfusion in year 2011 and the cumulative risk from 1980 through 2011. The model was
validated by comparing the model predictions with reported cases of vCJD.

Results: Using the low UK prevalence estimate, the model predicted a mean risk of 1 in 134 million transfusions, zero TTvCJD infections acquired in the year 2011, and zero cumulative clinical TTvCJD cases for the period spanning 1980 to 2011. With the high UK prevalence estimate, the model predicted a mean risk of 1 in 480,000 transfusions, six infections for 2011, and nine cumulative clinical cases from 1980 to 2011.

Conclusions: Model validation exercises indicated that predictions based on the low prevalence estimate are more consistent with clinical cases actually observed to date, implying that the risk, while highly uncertain, is likely very small.

Other intravenous and vascular access resources that may be of interest (External links – IVTEAM has no responsibility for content).