Bovine Leukemia Virus

Beef Cattle Short Course
5/10/19
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This is the Beef Cattle Short Course.

Bovine Leukemia Virus

Lymphoma

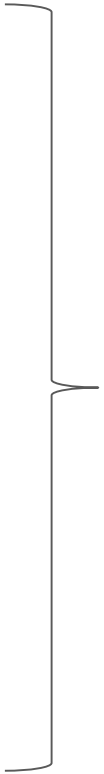
Malignant lymphoma

Lymphosarcoma

BLV

Enzootic Bovine Leukosis

Cow cancer



Disease of Dairy Cattle?

Retroviruses

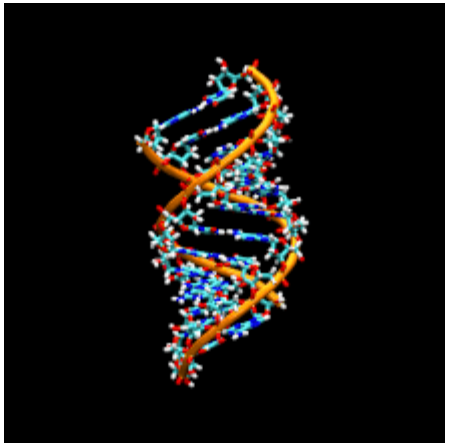
Human Immunodeficiency Virus (HIV)

Human T-cell leukemia virus

Equine Infectious Anemia Virus (EIA) -Coggins test

Feline Leukemia Virus

Feline Immunodeficiency Virus




Kansas State
Veterinary
Health Center

What are the odds?

Beef:

1999 = 10.3%

2017 = >70% beef slaughterhouse 33.6% Ab +

2018 = 38% herds +

Dairy:

1960s = 10%

2018 = 46.5% cows; 94.2% herds +

Prevalence in our beef herds = 15-30%??

Infected ⟶ 30% develop persistent lymphocytosis (circulating the virus) ⟶ 2-5% will develop lymphosarcoma

NAHMS, 1999, Bauermann, 2017, LaDronka, 2018.

Reasons why we care:

1. Persistent infection - ↑ mortality, ↓ production & overall longevity of herd, ↓ immune system function, ↑ risk of other infections

2. Cost strain on beef industry

a. Producer

b. Packer

Condemnation

$380-460 lost/case

BLV is #1 cause of carcass condemna

Criteria

3. The Divide

U.S. population ↑

1000 people move to Florida every day

Land mass ↓ = Stocking densities ↑

Stocking densities ↑ = Disease transmission ↑

4. Exportation

No regulation or control programs for BLV in U.S.

Eradication: Australia, New Zealand, most European Union including the UK

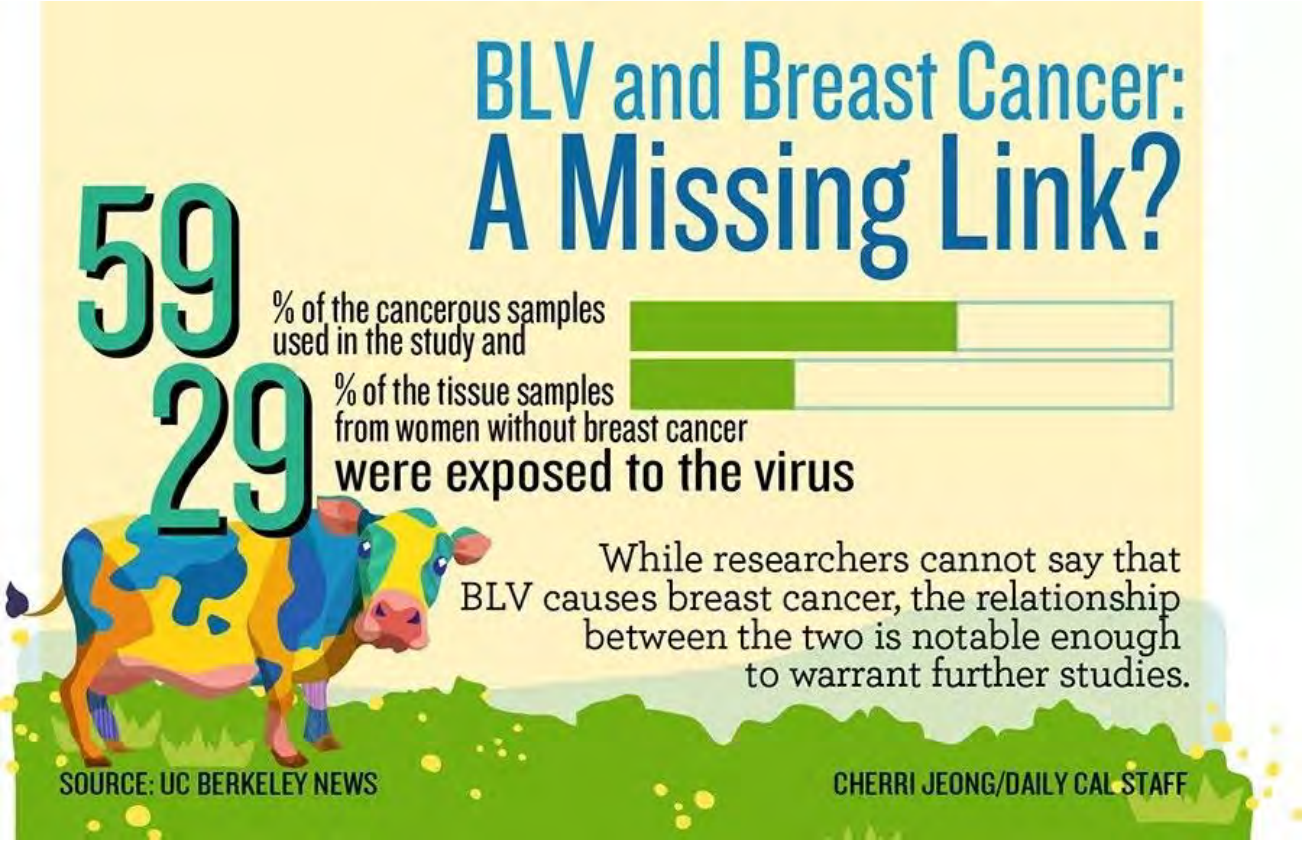
Live animals

Semen

Embryos

Biologics

5. Zoonotic potential?



Buehring et al.

Transmission

Infected: **blood**, saliva, semen, milk

Vectors/Control

- Used needles
- Re-using palpation sleeves
- Dehorners, tattoo guns, implant guns, ear marking knife
- Biting flies

>12.5% prevalence = Basic control pays $$

Questions?

Resources:

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