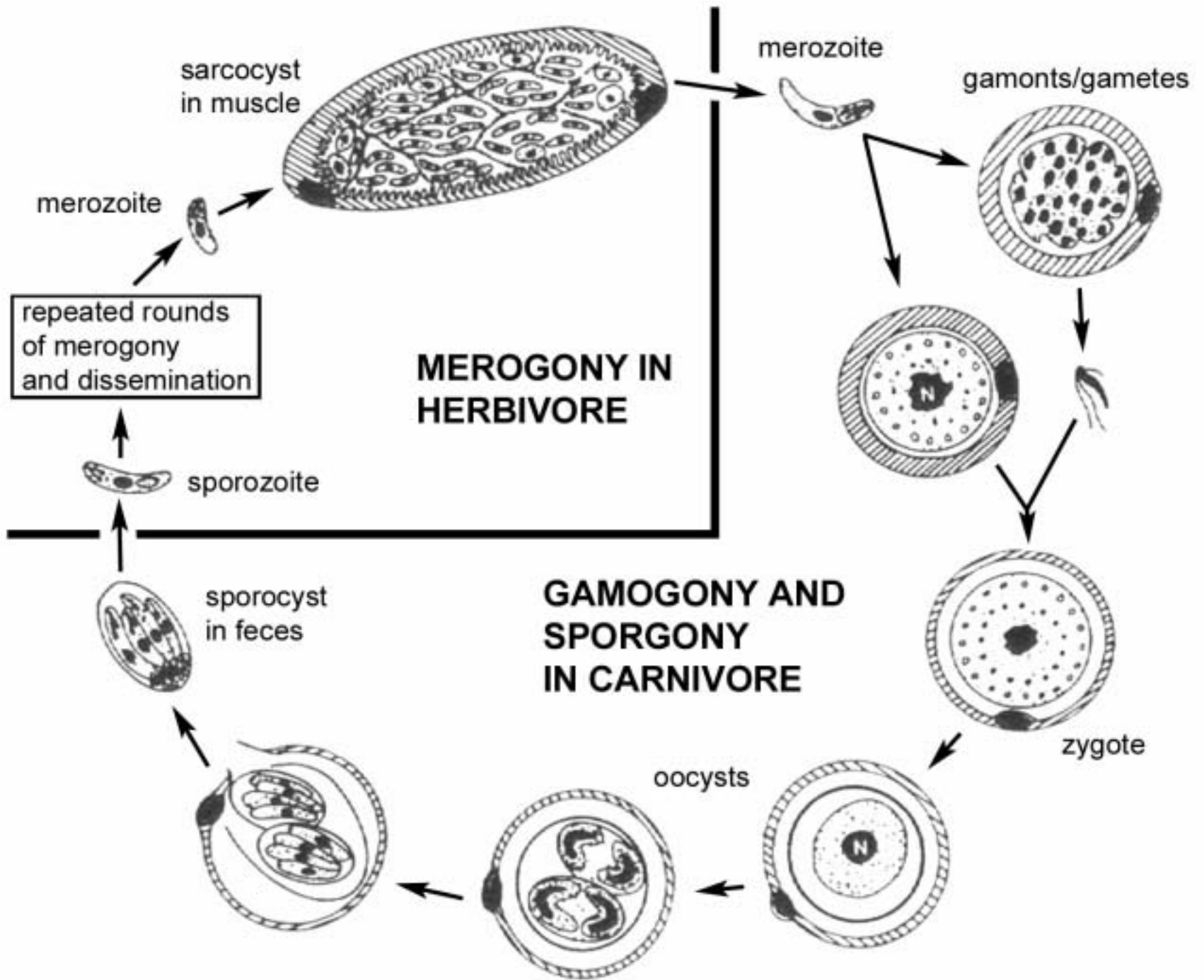


Sarcocystis

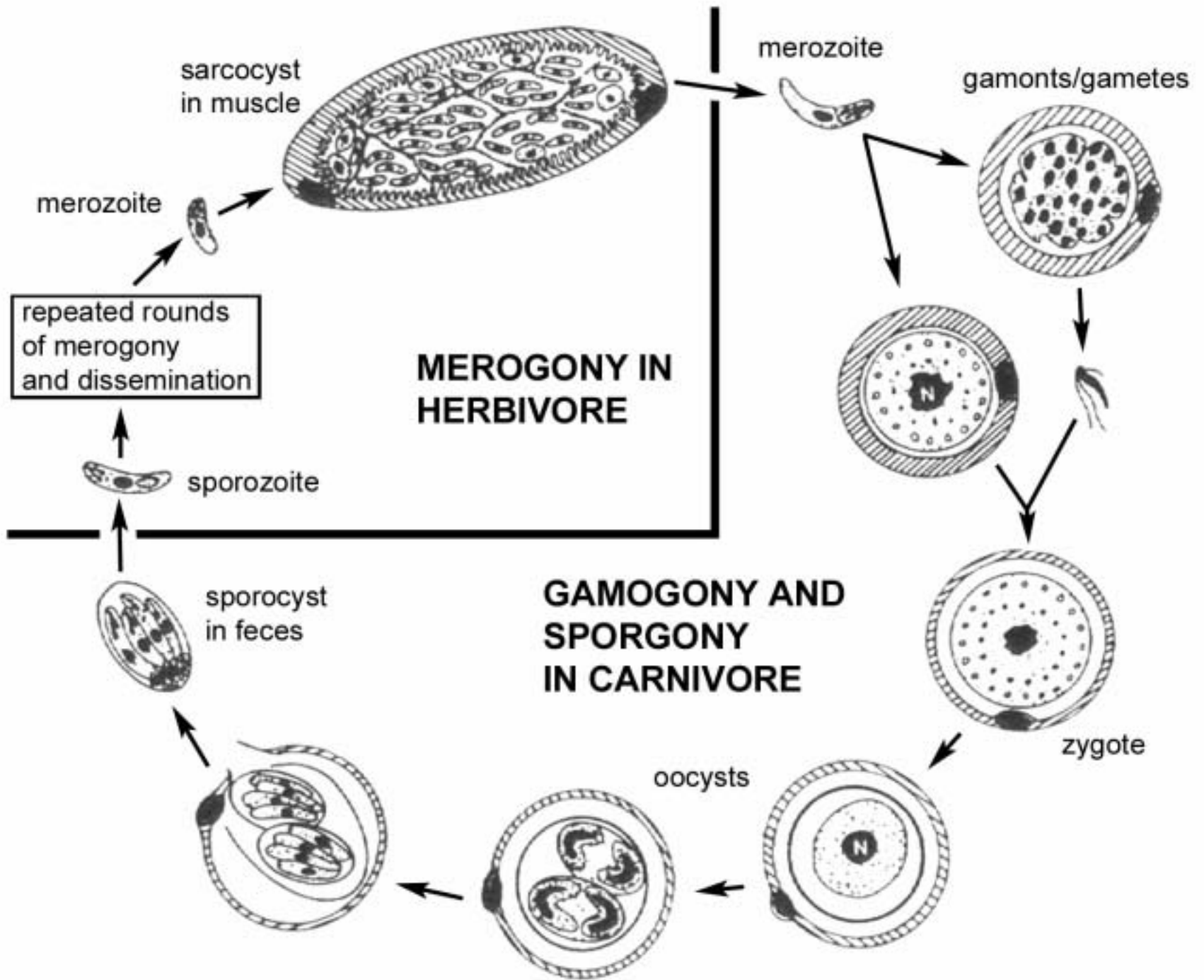
- rare human infection
- heteroxenous parasite
 - predator-prey life cycle
 - humans support both stages
- originally identified as 2 species
 - intestine ~ *Isospora*
 - tissue ~ *Sarcocystis*
- taxonomic confusion
 - generally named after host species
 - *Sarcocystis bovihominis*
 - *Sarcocystis sui hominis*

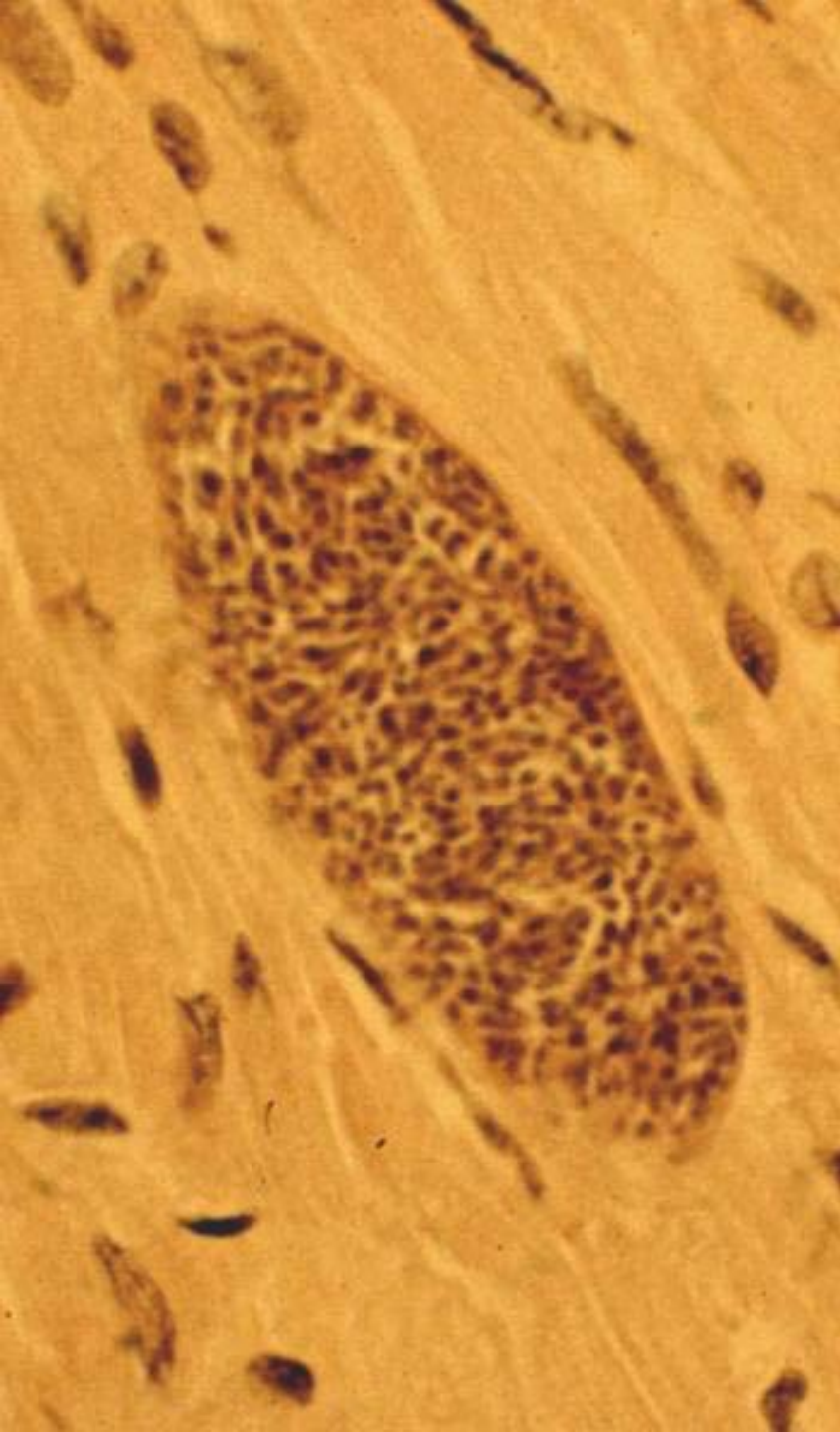


Intestinal Disease

- ingest undercooked meat
- transient mild to severe diarrhea
- excrete sporulated sporocysts
 - 13x10 μm
 - 4 sporozoites

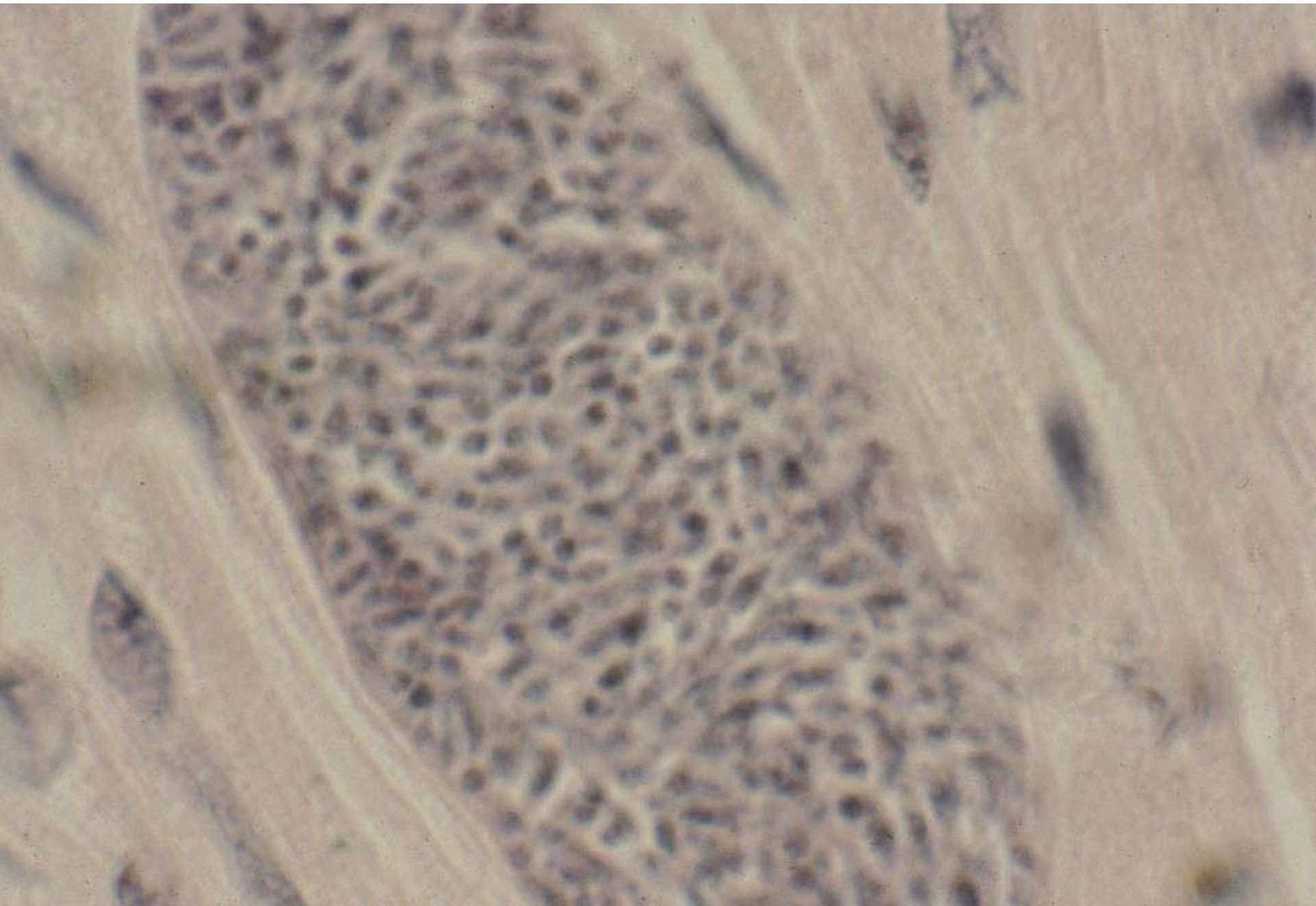
Sarcocystis canis

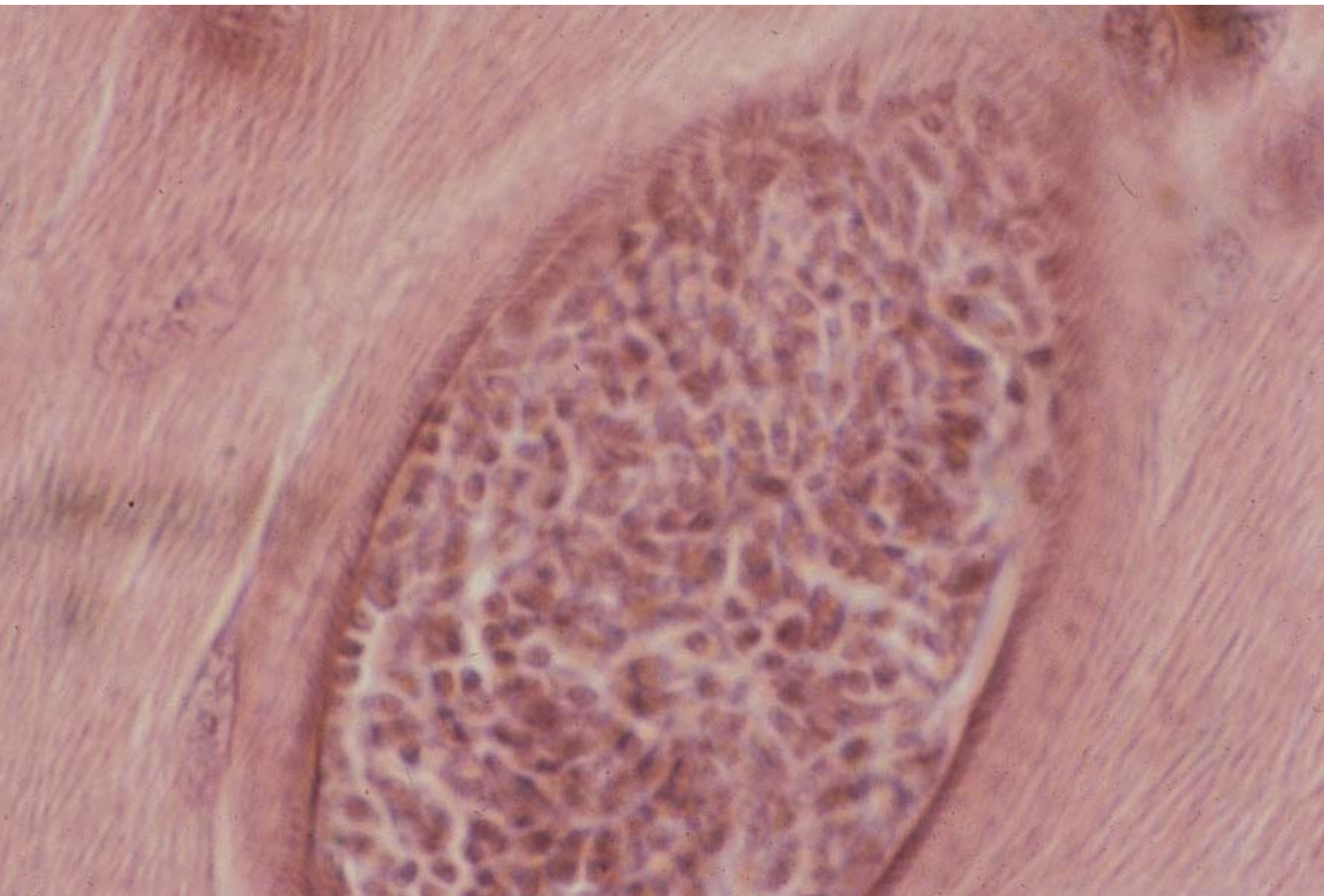




Muscle Disease

- ingest sporocysts (sporadic reports)
- develop sarcocysts
 - several 100 μm
 - compartments
 - sometimes thick striated wall
- muscle tenderness
- episodic inflammation





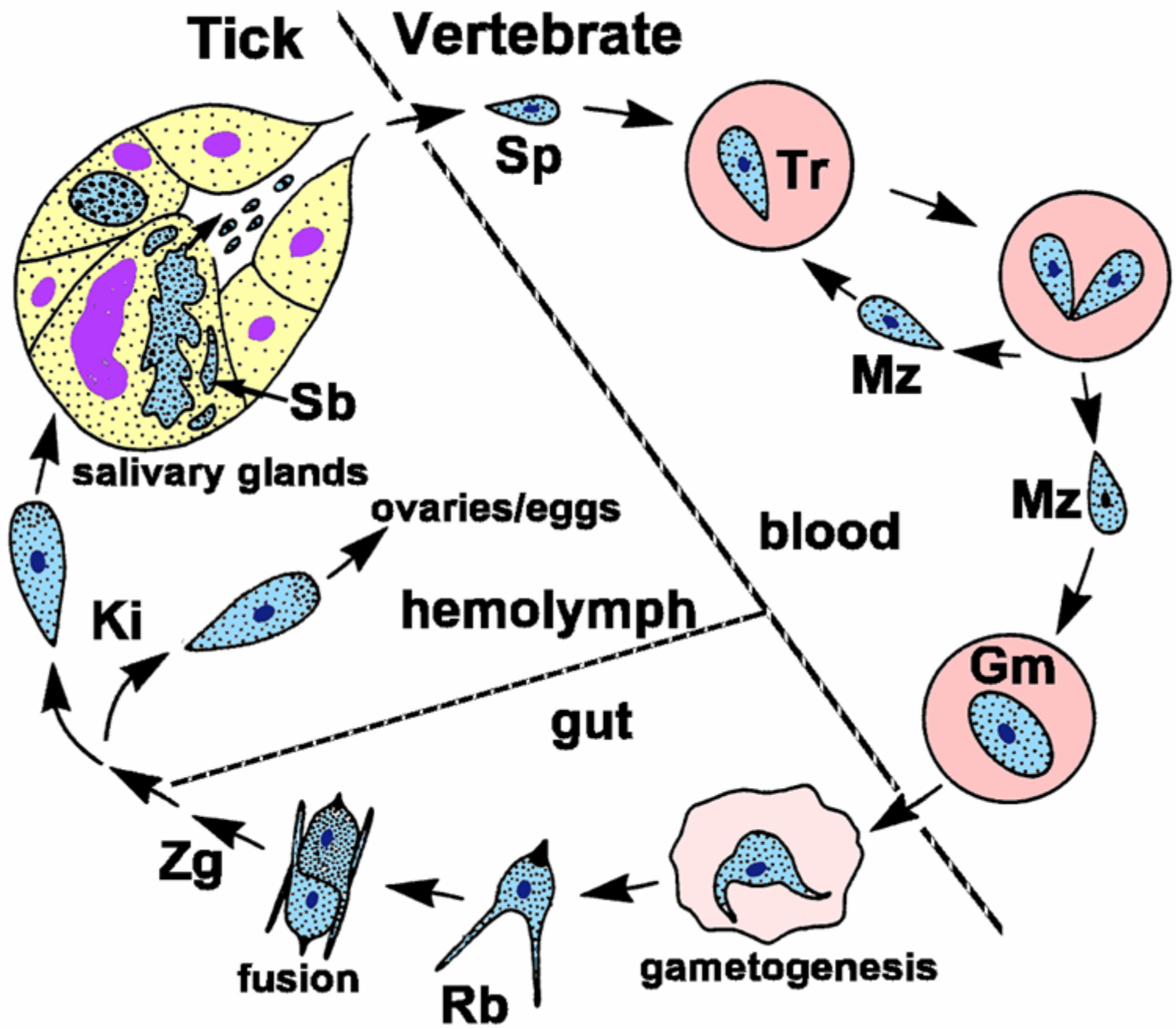
Babesia

- **common tick-borne parasite of domestic and wild animals**
- **rare zoonotic human infection**
- **clinical disease: asymptomatic to fatal**
 - **more severe in splenectomized persons or elderly**
- **symptoms**
 - **gradual onset of fever, chills, sweating, myalgia, fatigue**
 - **moderate to severe hemolytic anemia**

Human Babesiosis

- majority of cases associated with 2 species:
B. microti and *B. divergens*

	<u><i>B. microti</i></u>	<u><i>B. divergens</i></u>
Location	United States	Europe
Reservoir	field mice, voles	cattle, ruminants
Vector	<i>Ixodes dammiini</i>	<i>Ixodes ricinus</i>
Cases	~300	~30
Fatality	5%	50%



A microscopic image showing numerous red blood cells. Several cells contain small, dark, paired organisms, which are characteristic of Babesia microti. The organisms are typically found in the center of the cells and may appear as two small dots or a pair of dots. The background is a light, slightly greenish-tan color, likely due to the staining process.

Babesia microti

Babesiosis

Diagnosis

- parasite in thin or thick blood smear
 - no travel history
 - serology
 - lack of response to anti-malarials

Treatment

- no generally effective drugs
- clindamycin + quinine
- pentamidine has also been used
- blood transfusions for severe anemia

Control

- avoid tick bites