

Game Plan

Lecture

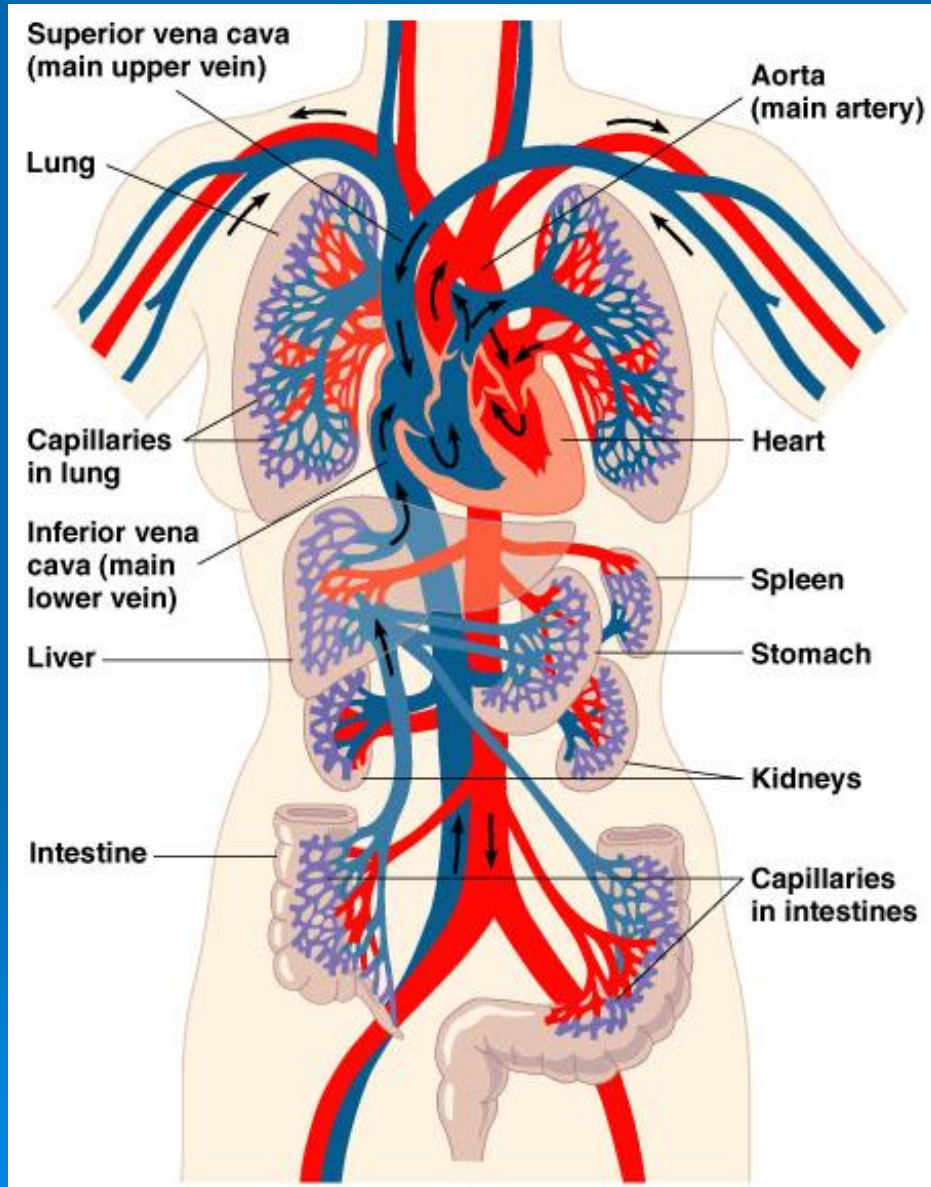
Cardio/ lymphatic systems
Bacterial diseases
Viral diseases
Protozoa diseases
Helminthic diseases

Lab

Major Unknown

Dental Microbiology

Circulatory system



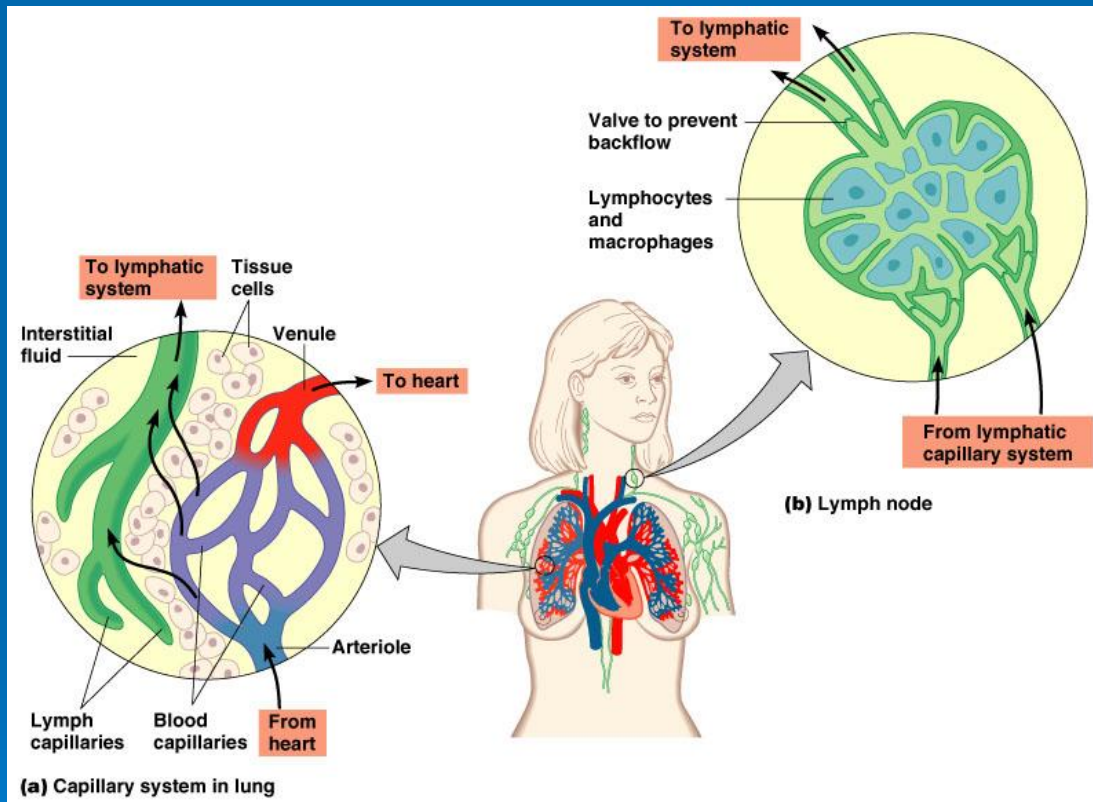
Components:

- Heart
- Blood vessels
 - Arteries
 - Veins
 - Capillaries
- Microbes and toxins persisting in blood=
septicemia
- Systemic inflammatory response syndrome=
sepsis

The lymphatic system

Components:

- Lymph capillaries
 - Collects plasma/ interstitial fluid/ microbes from tissues
- Lymphatics lead to lymph nodes
 - Macrophage, T and B cells reside here
- Swollen lymph nodes are buboes



Lymphangitis and septicemia/ sepsis



Figure 23-2 Microbiology, 6/e
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Infective endocarditis

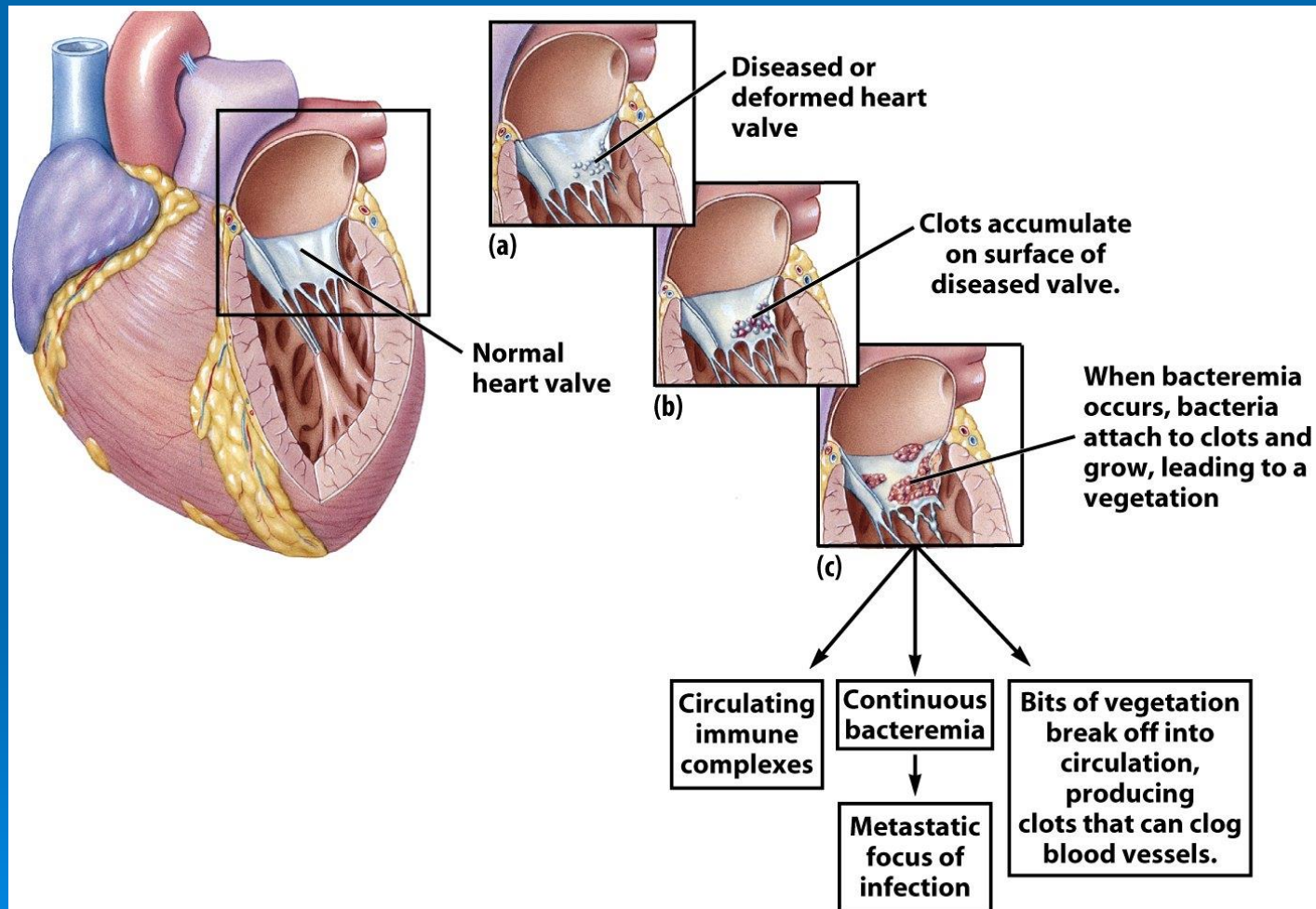
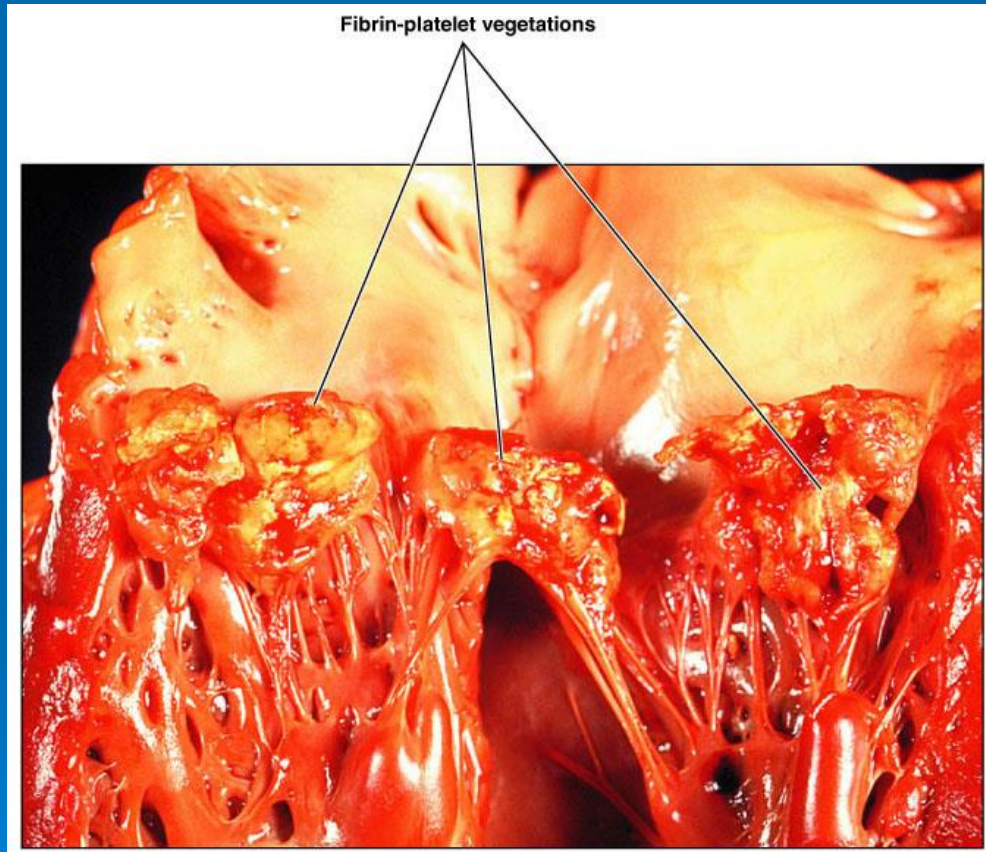


Figure 23-3 Microbiology, 6/e
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Infective subacute endocarditis



Symptoms

Fever
Heart murmur
Fibrin platelet vegetations

Bacillus anthracis- anthrax



Figure 23-7 Microbiology, 6/e
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Yersinia pestis- plague



Types

Bubonic plague

Septicemic plague

Pneumonic plague

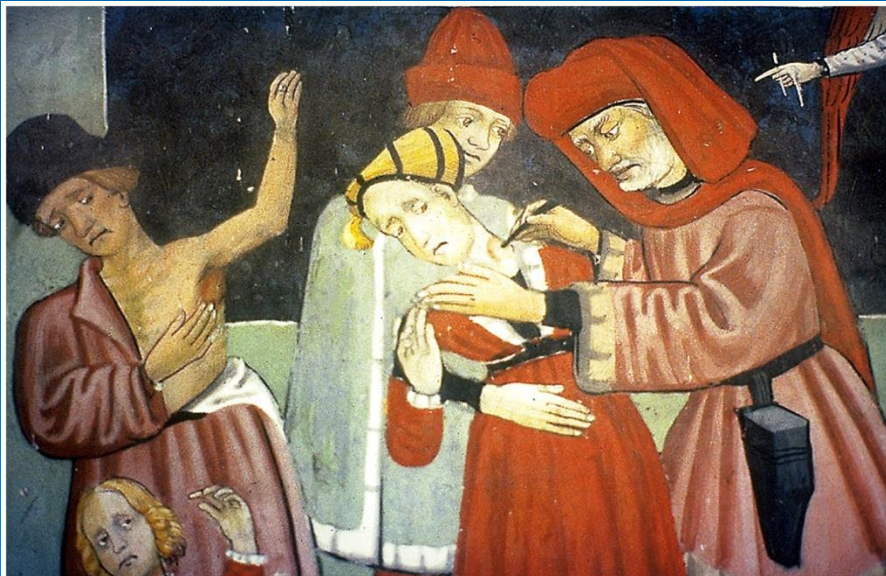
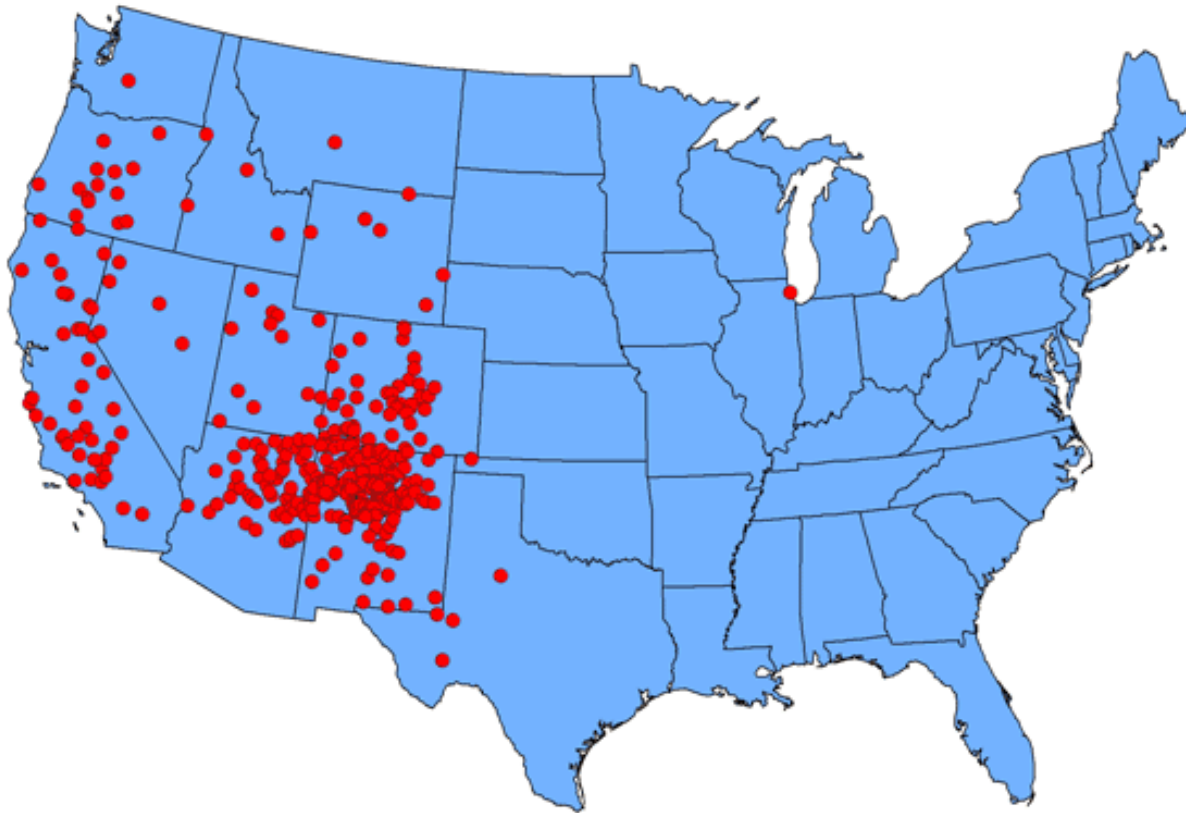


Figure 23-9 Microbiology, 6/e
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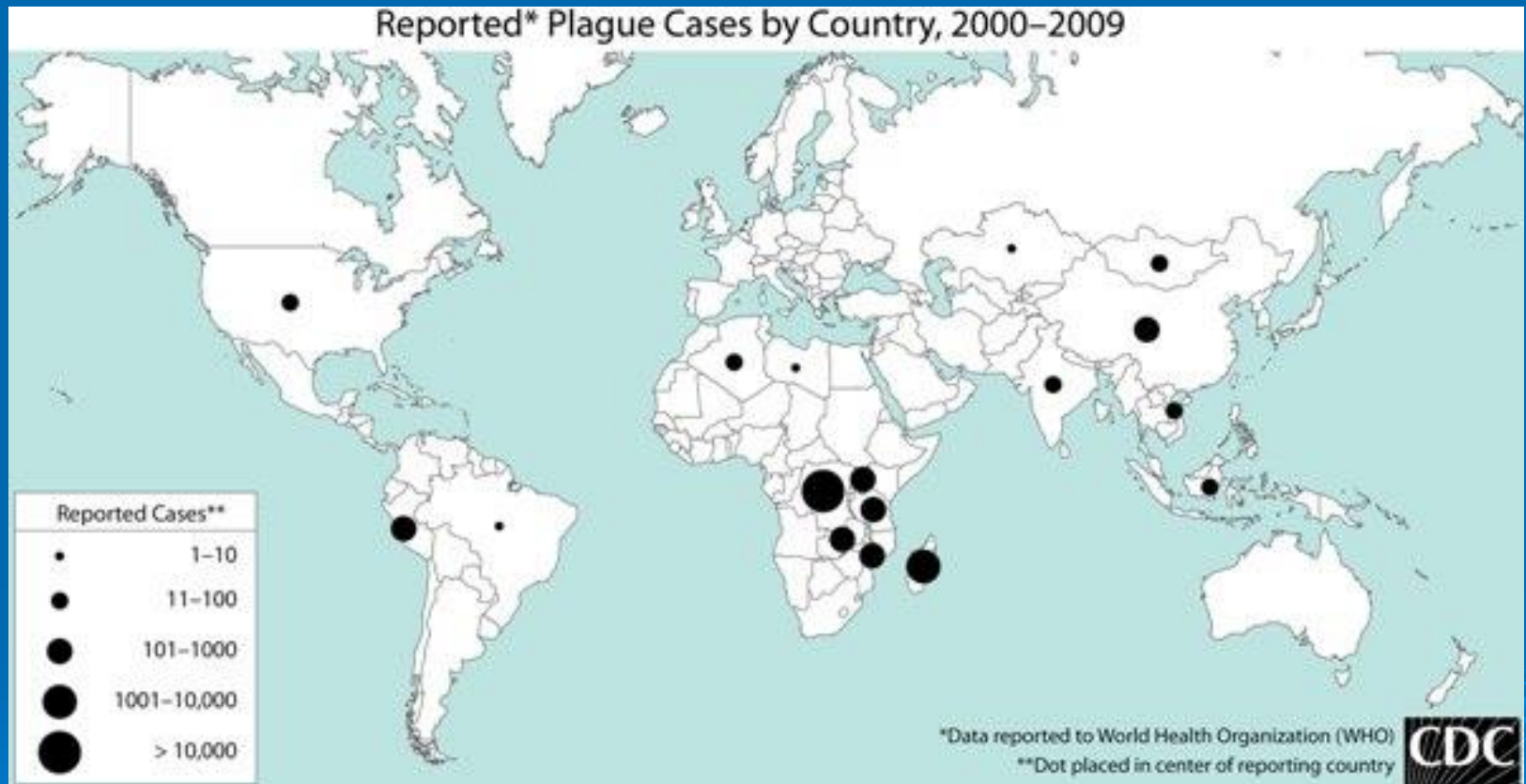
Human US Plague distribution

Reported cases of human plague--United States, 1970-2012



1 dot placed in county of exposure for each plague case

World-wide plague distribution



Rickettsia rickettsii- Rocky Mountain spotted fever



Symptoms

Typhus infects endothelial cells
of vascular system
Rash similar to measles, but
also on hands and feet
Fever and headache
Kidney and heart failure (3%)

Viral hemorrhagic fevers

<u>Classic</u>	<u>Virus</u>	<u>Vector</u>	<u>Reservoir</u>
Yellow fever	Flavivirus	<i>Aedes aegypti</i>	Monkeys
Dengue & DHF	Flavivirus	• <i>A. aegypti</i> • <i>A. albopictus</i>	No known reservoir
<u>Emerging</u>			
Marburg	Filovirus	• Monkeys (?)	
Ebola	Filovirus	• Monkeys (?)	
Lassa fever	Arenavirus	• Rodents	
Argentine hemorrhagic fever	Arenavirus	• Rodents	
Bolivian hemorrhagic fever	Arenavirus	• Rodents	
Hantavirus pulmonary syndrome	Hantavirus	• Rodents	

Epstein-Barr Virus (herpes virus 4)



EB Viral diseases

Burkitt's lymphoma

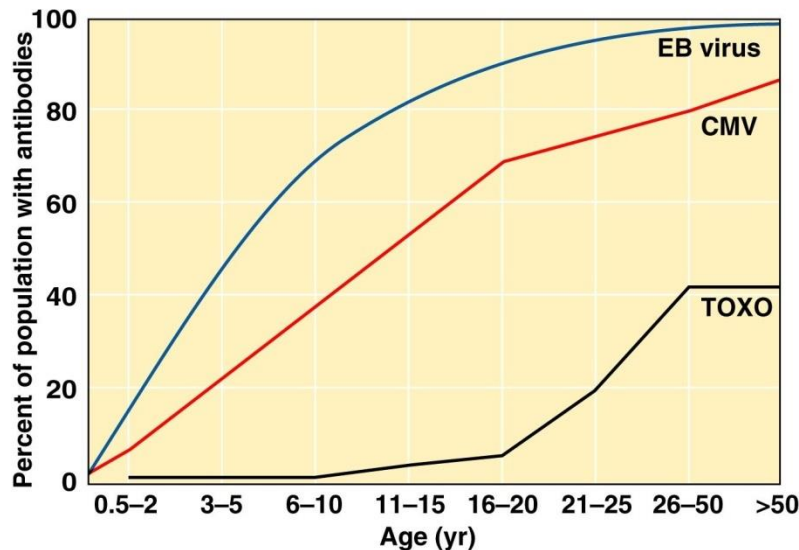
Infectious mononucleosis

Possibly:

MS

Hodgkin's disease

Nasopharyngeal cancer



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Leishmaniasis

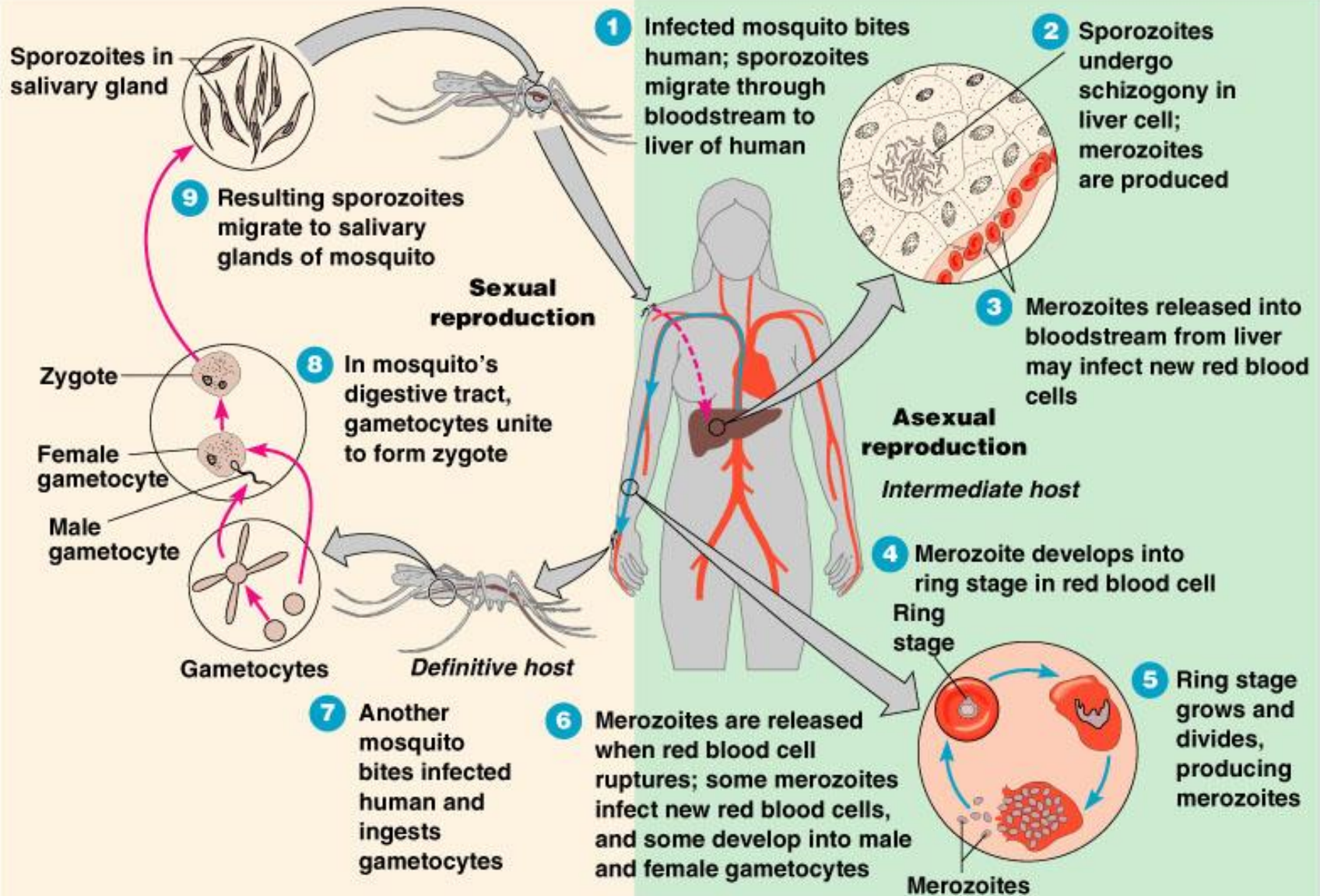


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Leishmaniasis

<u>Disease</u>	<u>Visceral leishmaniasis</u>	<u>Cutaneous leishmaniasis</u>	<u>Mucocutaneous leishmaniasis</u>
	Fatal if untreated	Papule that ulcerates and scars	Disfiguring
Causative agent	<i>Leishmania donovani</i>	<i>L. tropica</i>	<i>L. braziliensis</i>
Vector	Sandflies	Sandflies	Sandflies
Reservoir	Small mammals	Small mammals	Small mammals
Treatment	Amphotericin B or miltefosine	Amphotericin B or miltefosine	Amphotericin B or miltefosine
Geographic distribution	Asia, Africa, Southeast Asia	Asia, Africa, Mediterranean, Central America, South America	Rain forests of Yucatan, South America

Malaria



Wuchereria bancrofti- filariasis or elephantiasis

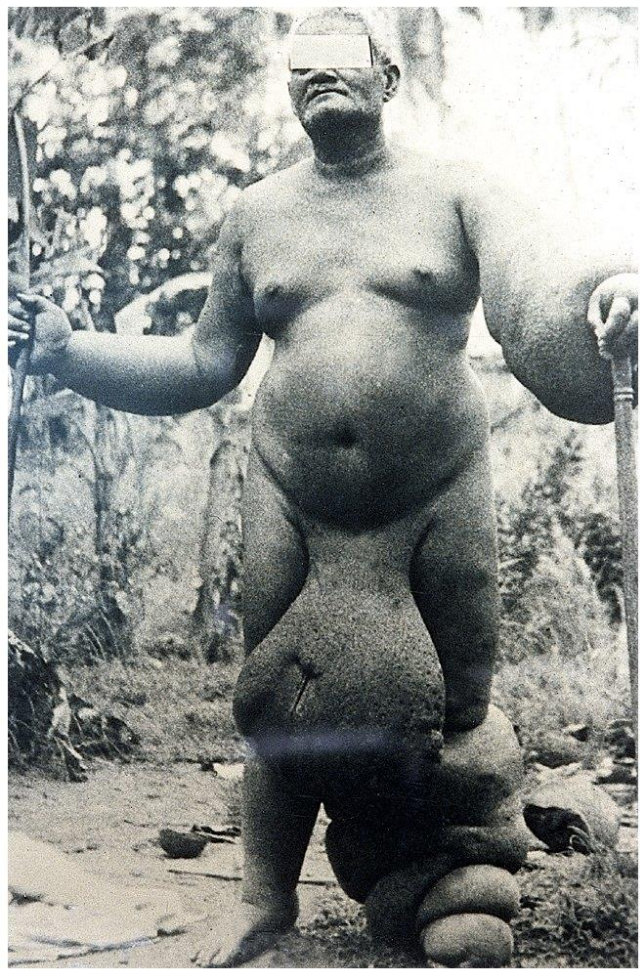


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Characteristics

Round worm transmitted by mosquito
Peripheral BV during night, deep vessels
during day
Blockage of lymph vessels leads to
elephantiasis



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HIV

