Dirofilaria immitis

Life cycle & pathology
INTERMEDIATE HOST

MOSQUITOES

> 30 Species

Aedes
Culex
Anopheles
Mansonina
BEGIN CYCLE

INFECTED DOG

MICROFILARIA
Food Channel of Proboscis
Time: 0
Size: 300 µ

Midgut
Time: 12 hrs
Size: 300 µ

Malpighian Tubules
Worm shortens and thickens
Time: 36 hrs
Size: 170-210 µ
INTRACELLULAR MOLT

TIME • 1 week

L^2
MOSQUITO TO DOG
L³ DOG

PENETRATES SKIN PUNCTURE

HEMOLYMPH POOL

MOLTS AFTER 10 DAYS
Moderate Infestation
Right ventricle and pulmonary artery becoming crowded with adult worms, decreasing blood flow, oxygen and organ function. Toxic substances from worms begin to thicken walls of pulmonary artery.
Advanced Infestation

Disintegrating adult worms plug pulmonary artery and branches. Lung exhibits large emboli, thrombi, and pneumonia. Right heart is enlarged and worm-filled. Pulmonary artery is greatly dilated, its wall thickened. Thoracic with rugose foldings.
Ischemia
Microfilariae in bloodstream plug vital capillary beds in heart, lung, liver, kidney and brain, prevent nourishment.

Liver Failure Syndrome
Masses of worms cause vena cava enlargement which leads to congestion, necrosis and ascites.