



# Liver Diseases

## Liver function evaluation for efficient diagnosis of liver diseases

To efficiently diagnose a liver disease, evaluating the liver not only on its state (by biomarkers ALT, AST) but also its function is important.

Bile acid is one marker that can evaluate the liver's function. Unlike ammonia, another liver function test, the bile acid test is very stable, making it a better indicator of hepatic blood flow.

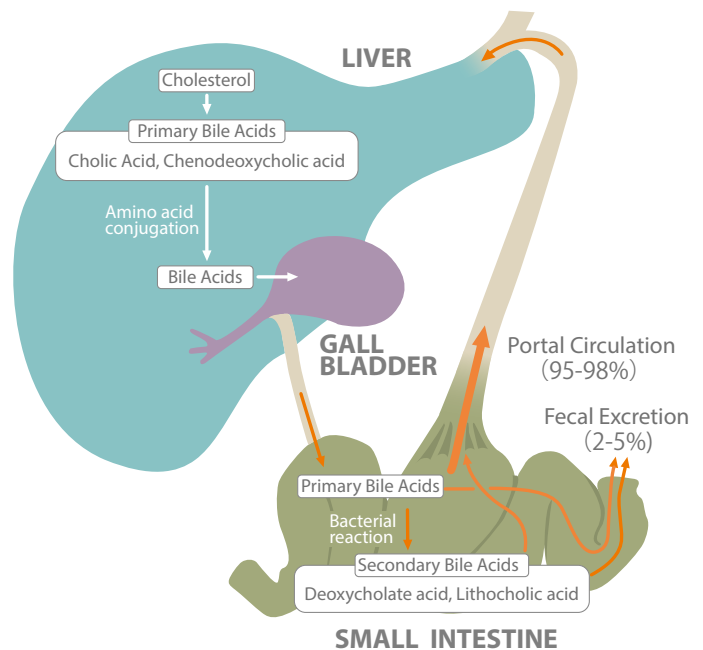
Bile acids are produced in the liver (primary bile acids: cholic acids, chenodeoxycholic acids) and small intestines (where secondary bile acids are formed from bacterial reaction). Its main function is digestion of dietary fats and oils by acting as a surfactant.

### Applications of bile acid test

- ✓ For screening liver diseases
- ✓ For diagnosing portosystemic shunt

### The bile acid test is performed twice.

1. FSBA (Fast Serum Bile Acid): BA test after 12 hours fasting.
2. PSBA (Postprandial Bile Acid): BA test after 2 hours feeding.

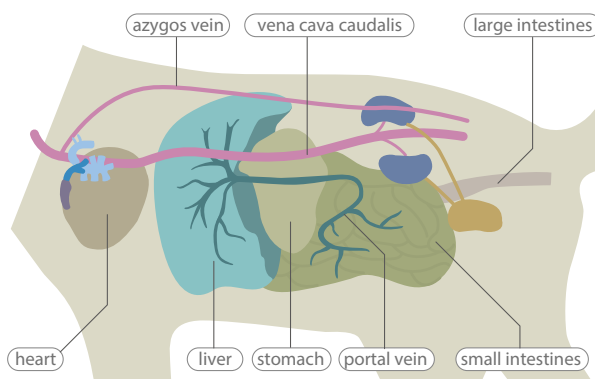


**Fig. 1 Production of bile acids in the liver and small intestine**

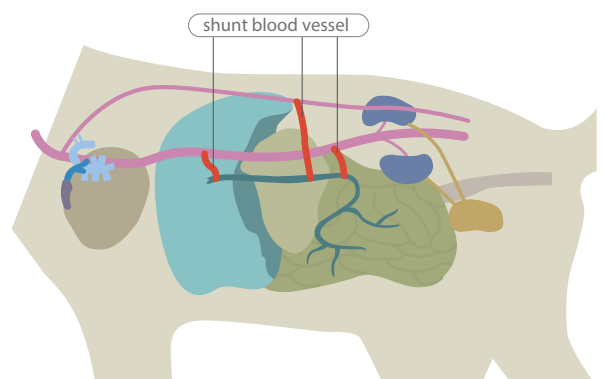
## What is portosystemic shunt?

Portosystemic shunt (PSS) is a condition where blood from the abdominal organs which should be drained by the portal vein into the liver is instead shunted to the systemic circulation.

Most cases are congenital where they are acquired at birth. Fig. 2A shows the normal blood circulation through the liver, while Fig. 2B shows abnormal blood circulation by PSS.



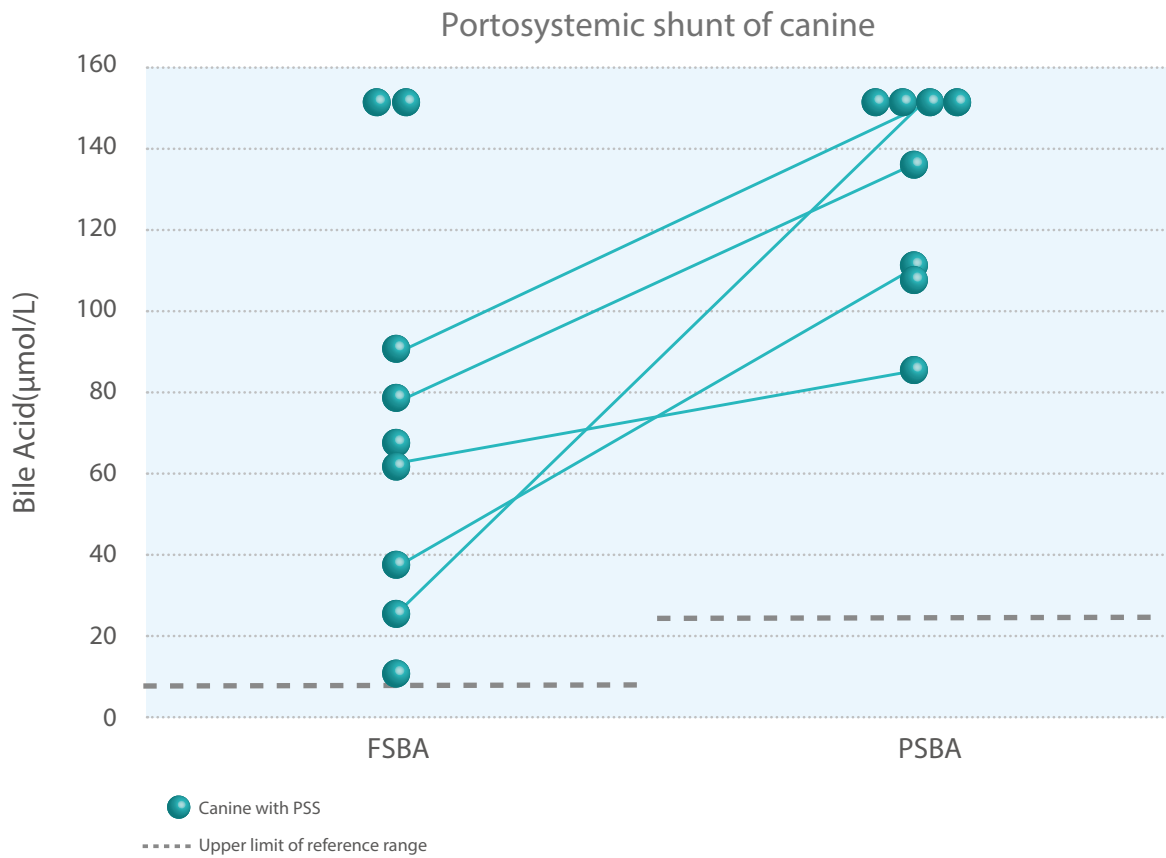
**Fig. 2A Normal**



**Fig. 2B Portosystemic shunt (PSS)**



## FUJI DRI-CHEM IMMUNO AU10V v-BA in PSS Diagnosis



Dogs diagnosed with PSS were tested for bile acid using FUJI DRI-CHEM IMMUNO AU10V v-BA. Bile acid values of dogs with PSS were high and above the reference ranges for both FSBA and PSBA. This shows that AU10V v-BA can provide reliable results for the diagnosis of canine portosystemic shunt (PSS).

## FUJI DRI-CHEM IMMUNO AU CARTRIDGE v-BA



v-BA

Product Name	FUJI DRI-CHEM IMMUNO AU CARTRIDGE v-BA
Measurement time	10 mins
Types of sample	Canine and Feline Plasma/Serum
Sample volume	100µL/test
Dynamic Range	2.0 - 150.0 µmol/L
Reagent Storage	2-8°C

**FUJIFILM**

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