

“Congenital porto-systemic shunts (CPSS) are rare malformations increasingly being detected with the improvement in ultrasound technology and its widespread use,” said Professor Thompson. “Portal venous blood from the intestines, pancreas, and spleen is partially or completely shunted away from the liver into the central circulation. In some cases the hepatic artery, which contains blood with higher oxygen saturation, takes on the role of the main nutrient supply to the liver (normally the portal vein). These anatomic differences result in a change in the microenvironment of the liver sinusoids. Although the mechanisms are unclear, there appears to be a markedly increased risk of developing both benign and importantly, malignant liver tumours.

“At Kings we have one of the largest clinical series of patients with CPSS in the western world and have a unique opportunity to not only describe their clinical outcomes but to perform a comprehensive, retrospective histological and molecular analysis on resected tumours and liver biopsies acquired and stored from this series. This would enable accurate risk stratification of tumours in these patients, and give us a better understanding of when invasive treatments such as surgery are indicated.

“This not only gives us the potential to improve patients’ clinical outcomes but findings from the molecular analysis of these tumours will contribute to the body of knowledge in the pathogenesis of related liver tumours.”