Pulmonary arteriovenous malformations (PAVMs) are large plexiform masses of dilated vascular channels or dilated and tortuous direct communications between the pulmonary artery and vein. The vast majority are simple PAVMs and are perfused by a single subsegmental artery. Complex PAVMs have more than one subsegmental feeder.

At least 80% of patients with PAVMs have hereditary hemorrhagic telangiectasia (HHT, also known as Osler-Weber-Rendu syndrome). HHT is an autosomal dominant disorder with a prevalence of between 1:5000 and 1:8000. While the clinical manifestations are varied, the most common are epistaxis, gastrointestinal bleeding, anemia, and mucocutaneous telangiectasia.

The Curacao diagnostic criteria are based on four findings: spontaneous and recurrent epistaxis, multiple mucocutaneous telangiectasias, visceral AVMs, and a first degree relative with HHT. When at least three of these criteria are met, a definite diagnosis of HHT is made.

Radiography and CT scanning allow sensitive detection and evaluation of PAVMs with modern CT techniques approaching 100% sensitivity. Multidetector CT is at least as sensitive and specific as pulmonary angiography and may be considered the gold standard for PAVM detection.

International guidelines for the management of HHT recommend treatment of PAVMs with feeding vessels 2 or 3 mm or larger. PAVMs showing progressive enlargement, paradoxical embolization, or symptomatic hypoxemia should also be treated. Excellent technical and clinical success is achieved with embolization. For focal PAVMs, technical success is above 95%.
• A variety of embolic agents can be used though coils and vascular plugs are most commonly used.

• Complications are rare with the most common being pleuritic chest pain in up to 13% of patients. It usually occurs in the immediate post procedure period and is self-limited though onset weeks later has been described.

• Treatment with NSAIDs can be considered if the patient has significant discomfort. While the incidence of transient air embolization has been reported in up to 5% of cases, stroke and TIA occur in <1%.

• Coil embolization and migration is very rare and most can be retrieved with a snare.

• Even after successful treatment, recanalization can occur in up to 10% of cases.

• Lifelong follow up CT is then advocated though the frequency is debatable with anywhere between yearly and every 5 year follow up being described.

• More frequent assessment can be considered prior to pregnancy and during adolescence.