It is important that the patient with severe aortic stenosis is assessed by an expert ‘Heart Team’, a multidisciplinary group including cardiologists, cardiothoracic surgeons and care of the elderly physicians. Careful case selection is the key to a successful outcome, when the treatment has been tailored to individual patients. Treatment is usually by open-heart surgical valve replacement (Figure 3). In those patients deemed high risk for conventional surgery or inoperable, it is now common practice to implant a stented valve replacement via the femoral artery using a catheter – trans-catheter aortic valve implantation or TAVI – with results (up to 5 years) equivalent to surgical valve replacement.

Figure 4. Transcatheter Aortic Valve Implantation by Transfemoral way
HOW COMMON IS HEART VALVE DISEASE?
Valve disease is much more common than most doctors think and overall awareness of its importance is low\(^1\). It is approximately as common as heart failure and about a third of patients with heart failure have valve disease\(^2\). The most common valve disorders are aortic stenosis and mitral regurgitation, both of which increase in prevalence with age.

The most common cause of aortic stenosis in the UK is calcific degeneration (Figure 1), which is linked to atherosclerotic risk factors with an incidence rising above the age of 65. Approximately 3% of those aged over 75 years have severe aortic stenosis\(^1\). A bicuspid aortic valve (the most common congenital heart lesion) occurs in 1% of the population and may cause stenosis or regurgitation one or two decades earlier than degenerative disease.

SYMPTOMS
Most patients with aortic stenosis are asymptomatic for years. Symptoms often begin insidiously with a reduction in exercise capacity before the development of overt exertional breathlessness or chest tightness. The prognosis is poor once symptoms develop and the onset of symptoms is an indication for valve replacement\(^3\). There is an approximately 10% mortality in the months after the onset of symptoms so valve replacement should not be delayed.

WHEN TO SUSPECT VALVE DISEASE
The echocardiogram (Figure 2) is the definitive test to define and assess valve disease but access to open access tests is variable in the UK. Auscultation is a necessary first step, but a survey\(^4\) suggests that, for many reasons, general practitioners in the UK rarely do, even in the elderly.

TREATMENT
There are no medical therapies to slow the rate of progression of aortic stenosis, although conventional medications with diuretics, ACE inhibitors and beta-blockers are used in patients at end-stage in heart failure when intervention is not feasible. Antibiotic prophylaxis before dental work is no longer recommended except in those who have previously had endocarditis who are therefore at high risk of recurrence.