

VALVE DISEASE



RHEUMATIC HEART DISEASE

1950s Penicillin leads to a decline in acute rheumatic fever and subsequent rheumatic heart disease (RHD) cases in developed countries

1980s Percutaneous mitral balloon valvuloplasty provides a less invasive treatment option for mitral stenosis resulting from RHD



2012 The World Heart Federation releases guidelines for the echocardiographic diagnosis of RHD

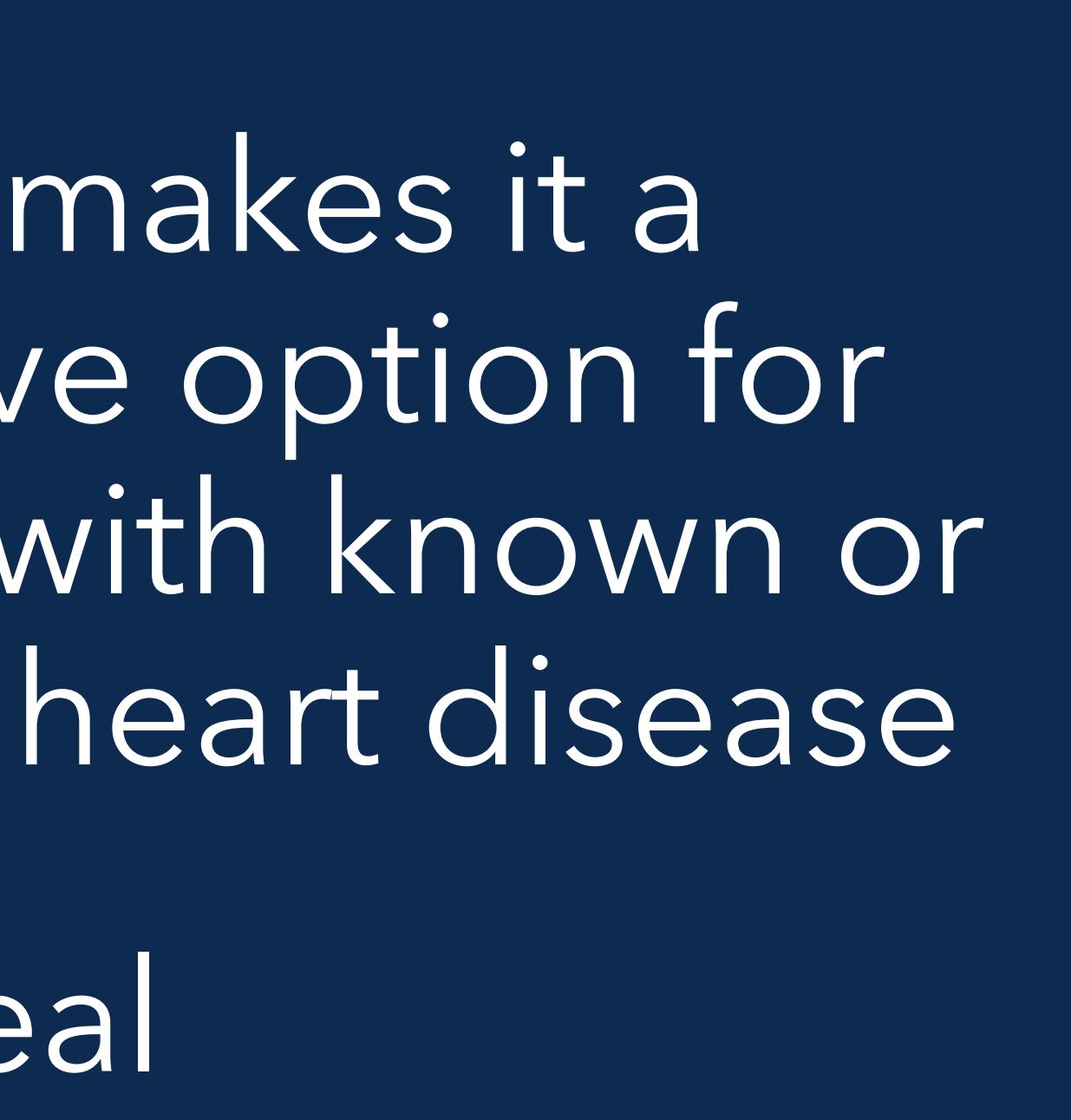


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ECHO AND VALVE DISEASE



1980s

Evolution of doppler echocardiography makes it a valuable noninvasive option for assessing patients with known or suspected valvular heart disease

Transrantesophageal echocardiography (TEE) becomes standard practice for the first time in cardiac operating rooms to facilitate surgical decision-making

2000s

Real-time 3D echocardiography makes its debut and begins to be adopted as part of routine clinical practice, proving superior to 2D and early 3D from the 1990s

Today

Artificial intelligence technologies offer new opportunities for echocardiography to produce accurate, automated and more consistent interpretations, while also increasing efficiency and workflow in labs

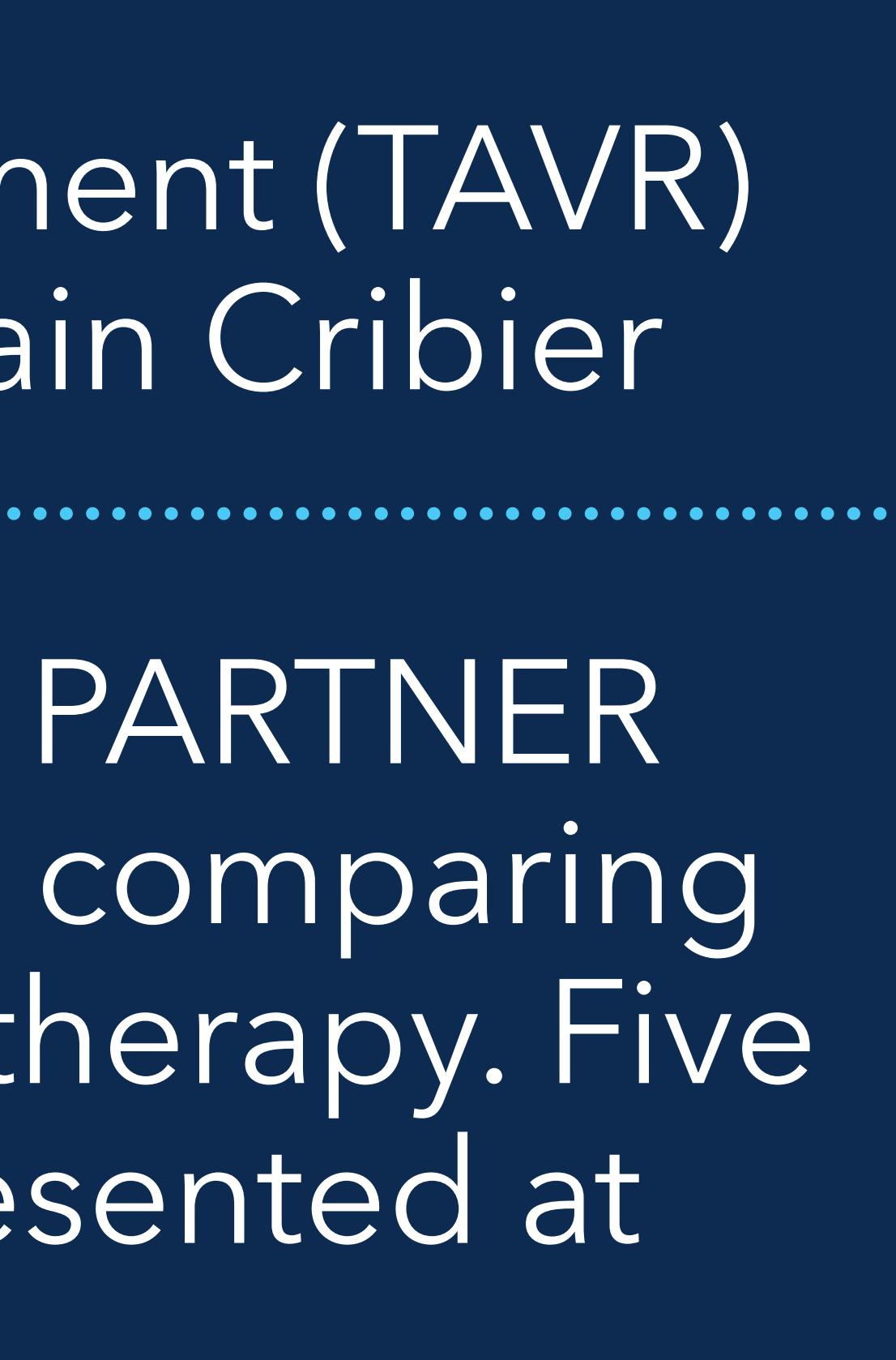


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TRANSCATHETER AORTIC VALVE REPLACEMENT



2002 First transcatheter aortic valve replacement (TAVR) performed by Dr. Alain Cribier

2010 First results from the PARTNER trial were published, comparing TAVR with standard therapy. Five year results were presented at ACC.15

2011 The Society of Thoracic Surgeons and ACC launch the STS/ACC TVT Registry

TAVR is approved by FDA for the treatment of patients with severe aortic stenosis. Since then, FDA indications have expanded to include a wider group of patients. The most recent expansion to include low-risk patients occurred in 2019



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TRANSCATHETER EDGE-TO-EDGE REPAIR

2003 First human clinical experience of mitral valve transcatheter edge-to-edge repair (M-TEER) takes place

2013 M-TEER receives first FDA approval for treating primary mitral regurgitation (MR). Approval for secondary MR occurs in 2019

2020 ACC/AHA Valvular Heart Disease Guideline recognizes M-TEER as an alternative to surgery

ROSS RENAISSANCE

2000s Renewed interest in the Ross Procedure, first performed in 1967, enables a patient's own pulmonary valve to be used to replace a diseased aortic valve



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