

Supplement 1: Guideline characteristics

Guideline (Year)	Author/Organisation	Healthcare Professionals Involved in Guideline Development	Evidence Grading System	Summary of Guideline Creation Procedure
	Country/Region		Recommendation Grading System	
ACC/AHA Practice Guidelines for the Management of Patients With Peripheral Arterial Disease (Lower Extremity, Renal, Mesenteric, and Abdominal Aortic) (2005)	American College of Cardiology (ACC) /American Heart Association (AHA)	Vascular surgeons Interventional radiologists Vascular physicians Cardiologists Nurses	System developed and approved by ACC/AHA	The Committee to Develop Guidelines for Peripheral Arterial Disease conducted a literature search. Using evidence-based methodologies developed by the ACC/AHA Task Force on Practice Guidelines, the committee wrote the guideline text and recommendations. All guideline recommendations were formally voted on via a confidential ballot. The guidelines were then peer-reviewed and approved for publication by the governing bodies of the American College of Cardiology (ACC) and the AHA and endorsed by collaborating organizations.
	USA		System developed and approved by ACC/AHA	
Guidelines for Surgery of Aortic Diseases from Brazilian Society of Cardiovascular Surgery (2007)	Brazilian Society of Cardiovascular Surgery	Cardiovascular surgeons Cardiothoracic surgeons	System developed and approved by ACC/AHA	The authors met periodically to elaborate the text and review the relevant bibliographic citations provided by the official committee members designated by the Brazilian Society of Cardiovascular Surgery Board of Directors. The members, divided into working groups, supplemented their contribution, corrections and recommendations accepted based on a consensus. The guideline is the original version of this consensus.
	Brazil		System developed and approved by ACC/AHA	
Clinical Practice Guidelines for Endovascular Abdominal Aortic	Society of Interventional Radiology (SIR)	Interventional radiologists	Not outlined in guideline	The Standards of Practice Committee members performed a literature

<p>Aneurysm Repair: Written by the Standards of Practice Committee for the Society of Interventional Radiology and Endorsed by the Cardiovascular and Interventional Radiological Society of Europe and the Canadian Interventional Radiology Association (2010)</p>	<p>International</p>		<p>Not outlined in guideline</p>	<p>search. Then, a critical review of retrieved articles was performed. The qualitative weight of these articles was assembled into an evidence table. When the evidence of literature was weak, conflicting, or contradictory, consensus for the parameter was reached using a Modified Delphi Consensus Method. The draft document was critically reviewed by the Standards of Practice Committee members and a finalized draft sent out to the SIR membership for further input/criticism during a 30-day comment period. These comments were discussed by the Committee, and appropriate revisions made to create the finished standards document. Prior to its publication the document was endorsed by the SIR Executive Council and collaborating organisations.</p>
<p>ESC Guidelines on the diagnosis and treatment of aortic diseases (2014)</p>	<p>European society of Cardiology (ESC) Europe</p>	<p>Vascular surgeons Radiologists Cardiothoracic surgeons Cardiologists Geneticists</p>	<p>System developed and approved by ESC System developed and approved by ESC</p>	<p>A task force of experts in the field was selected by the ESC Committee for Practice Guidelines (CPG). They undertook a literature search of the published evidence for the management of aortic diseases. Then, they performed a critical evaluation of the literature retrieved. The level of evidence and the strength of recommendation of management options were weighed and graded according to predefined scales. The resulting guidelines underwent extensive review by the CPG and</p>

				external experts. After appropriate revisions, it was approved by all the experts involved in the Task Force. The finalized document was approved by the CPG for publication in the European Heart Journal.
The Society for Vascular Surgery practice guidelines on the care of patients with an abdominal aortic aneurysm (2017)	The Society for Vascular Surgery (SVS)	Vascular surgeons	GRADE system	A review of the available clinical evidence in the literature was conducted to generate a concise set of recommendations. The strength of any given recommendation and the quality of evidence were graded on the basis of the GRADE approach. Committees used consensus building and voting procedures to reach their final decisions on recommendations.
	USA		GRADE system	
European Society for Vascular Surgery (ESVS) Clinical Practice Guidelines on the Management of Abdominal Aorto-iliac Artery Aneurysms (2019)	European Society for Vascular Surgery (ESVS)	Vascular surgeons Academics	System developed and approved by ESC	The Guideline Writing Committee (GWC) were selected by the European Society for Vascular Surgery (ESVS). At a meeting in Hamburg in 2016 the tasks in creating the guideline were evaluated and distributed among the committee members. Members of the committee performed a systematic literature search. To define the current guidelines, members of the GWC reviewed and summarised the selected literature using the ESC grading system. Following preparation of the first draft, GWC members participated in a second meeting in Uppsala in 2017 to review the wording/grading of each recommendation. If there was no unanimous agreement,
	Europe		System developed and approved by ESC	

				discussions were held to decide how to reach a consensus. If this failed, then the wording, grade, and level of evidence was secured via a majority vote of the GWC members. The final version of the guideline was submitted in June 2018.
NICE guideline Abdominal aortic aneurysm: diagnosis and management (2020)	National Institute for Health and Care Excellence (NICE)	Vascular surgeons Interventional radiologists Interventional radiographers Nurses Emergency physicians Vascular scientists General practitioners Paramedics	GRADE system	Multiple reviews of the available clinical evidence in the literature were conducted by the guideline committee. Retrieved publications were critically appraised using the GRADE system and where possible incorporated into meta-analyses. Decisions on recommendations were reached through a process of informal consensus.
	UK		GRADE system	