

# Surgical Education and Assessment Modules (SEAM) - Acute Abdomen

## Module Overview

<b>Rationale</b>	<p>The general surgeon must have a very good grasp of the nuances of various pathological processes affecting the various abdominal organs.</p> <p>The aim of this module is to familiarise you with those pathological process and provide you with a "road map" that will help you throughout your professional career as a general surgeon.</p> <p>This module has been designed to introduce you to the fundamental aspects and diagnosis of non-traumatic acute abdomen. It builds on your baseline knowledge of abdominal anatomy and basic sciences.</p> <p>Assessing, diagnosing and managing the acute abdomen are integral and essential aspects of general surgical training.</p>	
<b>Learning Objectives</b>	<p>By the end of this module you should be able to:</p> <ol style="list-style-type: none"> <li>1. Describe the mechanisms of the different types of abdominal pain and associated clinical features</li> <li>2. Apply pathophysiological processes and relevant anatomy to the assessment and management principles of the acute abdomen</li> <li>3. Recognise common patterns in acute abdominal presentations</li> <li>4. Recognise acute life-threatening abdominal presentations</li> <li>5. Select the most appropriate investigations in the management of the acute abdomen</li> </ol>	
<b>Topics and keywords</b>	<b>Topic</b>	<b>Keywords</b>
	An analysis of abdominal pain	<i>visceral pain, parietal pain, referred pain, omentum, mesentery</i>
	Pathophysiological processes and pattern recognition	<i>luminal organs, solid organs, inflammation, obstruction, ischaemia, distension</i>
	Acute life-threatening abdominal presentations	<i>AAA, ectopic pregnancy, mesenteric ischaemia, acute myocardial infarction, perforated viscus</i>
	Investigations and treatment	<i>management, history, examination, diagnosis</i>
<b>Recommended Further Reading</b>	Educational material provided within this module is not intended to be complete, and is not a textbook. Trainees are expected to undertake further reading in order to complete the module successfully.	
	<b>Recommended Reading</b>	<b>Learning Objective</b>
	Bhangu A, Søreide K, Di Saverio S, Assarsson JH, & Drake FT. Acute appendicitis: Modern understanding of pathogenesis, diagnosis, and management. <i>The Lancet</i> 2015; 386: 1278–87	2, 3, 5
	Cox, M. R. Acute Abdominal Pain, in <i>Clinical Gastroenterology</i> . Talley, N. J. (Ed). 3rd edition: Elsevier Australia, 2011.	1, 3, 4, 5
	Evers, B. M., Beauchamp, R. D., Mattox, K. L., & Jr., C. M. T. <i>Sabiston textbook of surgery: The biological basis of modern surgical practice</i> . Chapters 45 & 54. Elsevier, 2016.	1, 2

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<b>Recommended Further Reading</b>	<b>Recommended Reading</b>	<b>Learning Objective</b>
	Jim, J, & Thompson, R. W. <i>Management of symptomatic (non-ruptured) and ruptured abdominal aortic aneurysm</i> . <a href="https://www.uptodate.com/contents/management-of-symptomatic-non-ruptured-and-ruptured-abdominal-aortic-aneurysm">https://www.uptodate.com/contents/management-of-symptomatic-non-ruptured-and-ruptured-abdominal-aortic-aneurysm</a> , 2018.	4
	Kumar, V., Aster, J. C., & Abbas, A. K. <i>Robbins &amp; Cotran pathologic basis of disease</i> , Chapter 17. 9th edition: Saunders, US, 2015.	2
	Paterson-Brown, S. <i>Core Topics in General &amp; Emergency Surgery E-Book: Companion to Specialist Surgical Practice</i> , Chapter 5. 5th edition: Saunders, Great Britain, 2014.	3, 5
	Royal Australasian College of Surgeons. <i>Tests, treatments and procedures clinicians and consumers should question</i> . <a href="http://www.choosingwisely.org.au/recommendations/racs">http://www.choosingwisely.org.au/recommendations/racs</a> , 2016	5
	Sinnatamby, C. S., & Last, R. J. <i>Last's anatomy: Regional and applied</i> ; Chapter 5. 12th edition: Churchill Livingstone, Great Britain, 2011.	2
	Williams, N., Bulstrode, C., & O'Connell, P. R. <i>Bailey &amp; love's short practice of surgery</i> , Chapters 59-73. 26th edition: CRC Press: London, 2013.	1, 2, 3, 5
<b>Prerequisites</b>	N/A	
<b>How this module will be assessed</b>	The e-learning module comprises learning activities and opportunities for Formative Assessment, with feedback. The Summative Assessment comprises twenty (20) Type A, Type X, and Type R multiple choice questions.	

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## Learning Activities & Formative Assessment

Cognitive level	Learning Objective	Module Topic	Learning Activity	Formative Assessment
<b>Apply</b>	Describe the mechanisms of the different types of abdominal pain and associated clinical features	An analysis of abdominal pain	<p>After reading about mechanisms of abdominal pain, learners will be presented with a case scenario where they will match descriptions of pain with possible pathology.</p> <p>Learners will be able to identify causes of shoulder tip pain, based on indicators learnt in the module.</p>	Learners will be able to identify which organs / structures cause epigastric pain, based on indicators learnt in the module.
<b>Apply</b>	Apply pathophysiological processes and relevant anatomy to the assessment and management principles of the acute abdomen	Pathophysiological processes and pattern recognition	<p>Learners will sort various organs into luminal or solid, and receive feedback.</p> <p>After reading about pathophysiological processes that typically result in abdominal pain, learners will work through common examples of pattern recognition.</p>	Learners will review the case of a patient with severe epigastric abdominal pain, and make clinical decisions based on assessment and management principles learnt in the module.
<b>Analyse</b>	Recognise common patterns in acute abdominal presentations		<p>Learners will be able to differentiate symptoms of perforated peptic ulcer from acute pancreatitis, based on pathophysiological processes and patterns learnt in the module.</p>	
<b>Analyse</b>	Recognise acute life-threatening abdominal presentations	Acute life-threatening abdominal presentations	<p>After reading about acute life-threatening abdominal presentations, learners will work through a case scenario in which a patient has presented with lower abdominal pain.</p> <p>Learners will be able to identify the most appropriate investigative and treatment options based on consideration of acute life-threatening abdominal presentations.</p>	Learners will diagnose patients with acute life-threatening abdominal presentations, based on indicators learnt in the module.
<b>Evaluate</b>	Select the most appropriate investigations in the management of the acute abdomen	Investigations and treatment	<p>Learners will undertake a matching exercise with investigations used to confirm or refute diagnoses.</p> <p>Learners also arrange investigations based on prioritisation of tests, and arrange second line investigations.</p> <p>Learners will triage patients into one of five groups, ranging from stable to unstable.</p>	Learners will identify appropriate assessment and treatment of the acute abdomen, based on indicators learnt in the module.

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## Learning Activities & Formative Assessment

Cognitive level	Learning Objective	Module Topic	Learning Activity	Formative Assessment
			<p>Learners will complete a progressive case scenario addressing appropriate management and investigations for a patient presenting with abdominal pain.</p> <p>Learners will be able to evaluate management and treatment options for appendicitis.</p>	