Intercollegiate Committee for Basic Surgical Examinations

Guide to the intercollegiate MRCS examination

August 2021

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The Intercollegiate Committee for Basic Surgical Examinations (ICBSE) has produced this guide to the intercollegiate MRCS examination. It contains the following sections.

ICBSE gratefully acknowledges the contribution of the following to the production of this guide: the Intercollegiate Surgical Curriculum Programme contributors, the MCQ paper panel, the Question Quality group, the OSCE subgroup, the MRCS Syllabus group and the MRCS examination departments of the surgical Royal Colleges.

Note that this guide is a living document that will change over time. Please check the intercollegiate MRCS website for updates:

http://www.intercollegiatemrcsexams.org.uk

Section 1 – Background

Background

The complete MRCS syllabus is contained within the General Medical Council (GMC)-approved curriculum for the Early Years of Surgical Training in the United Kingdom and reflects the Core Surgical Training Syllabus of the Intercollegiate Surgical Curriculum Programme (http://www.iscp.ac.uk). The curriculum is competence based, requiring the trainee to demonstrate both applied and theoretical knowledge and practical skills, together with the professional behaviours described in the Good Medical Practice document of the General Medical Council of the United Kingdom (http://www.gmc-uk.org/).

The MRCS examination is an integral part of this Early Years training programme and is a requirement for progression to higher surgical training in the United Kingdom together with a satisfactory progression of training evaluated using the workplace-based assessments in the trainee's Annual Review of Competency Progression (ARCP).

A central aim of the MRCS examination is to test aspiring surgeons over a broad range of surgical conditions and not just the area of surgery they hope to train in. ICBSE believes that many aspects of the different surgical specialties require the same core areas of applied basic knowledge and skills and that these are essential both for successful higher training and to achieve a surgeon's full clinical and academic potential.

This guide has been produced in order to indicate to candidates and their tutors the extent and level of knowledge that is required to pass the MRCS examination. Each examination will contain a range of questions that cover a representative sample of the syllabus but not every topic will be tested on each occasion.

Section 2 – Recommended textbooks and other resources

Basic science textbooks

Anatomy

Agur AMR, Dailey AF. *Grant's Atlas of Anatomy*, 12e. Lippincott, Williams & Wilkins, 2008.

Netter FH. *Atlas of Human Anatomy*, 5th edn. Saunders, 2010.

Sinnatamby CS. *Last's Anatomy: Regional and Applied*, 12th edn. Churchill Livingstone, 2011.

Physiology

Barrett KE, Barman SM, Boitano S, Brooks HL. *Ganong's Review of Medical Physiology*, 23rd edn. McGraw-Hill, 2009.

Pathology

Kumar V, Abbas AK, Fausto N, Mitchell R. *Robbins Basic Pathology*, 8th edn. Saunders, 2007.

Clinical textbooks

Garden OJ, Bradbury AW, Forsythe JLR, Parks RW. *Principles and Practice of Surgery*, 5th edn. Elsevier, 2007.

Williams NS, Bulstrode CJK, O'Connell PR, eds. *Bailey and Love's Short Practice of Surgery*, 25th edn. Hodder Arnold, 2008.

Courses and websites

ATLS course
CCrISP course
Intercollegiate basic surgical skills course

General Medical Council. *Good Medical Practice.* http://www.gmc-uk.org/guidance/good_medical_practice.asp

The knowledge required for the MRCS examination

As a guide, the level of knowledge required to pass the MRCS examination can be obtained by studying the recommended texts listed above. Trainees should have mastery of the subjects outlined in the syllabus to the depth covered within these texts and should be able to make use of that knowledge in the context of surgical practice.

The curriculum and MRCS examination require a professional approach from surgical trainees. It is expected that trainees will read beyond these recommended texts and, where appropriate, make critical use of original papers and review articles in the related scientific and clinical literature, so that they may aspire to achieve an excellent standard in their surgical practice.

The recommended texts provide a clear guide to the extent and depth of knowledge required but alternative text books and online publications may suffice. Over time, changes in the curriculum and syllabus will inevitably occur, and it is anticipated that those who manage this process will provide an up-to-date list of relevant recommended texts.

Regional anatomical knowledge is considered an essential part of the knowledge base required for safe surgery. Lack of such knowledge can have serious consequences for patient safety. It provides the important spatial foundation for understanding pathological processes; for performing clinical examinations; for interpreting radiological and other investigations and for performing all operative procedures, whether investigative or therapeutic.

The anatomical knowledge required to pass the MRCS examination encompasses both the basic regional anatomy of the whole body, typically learnt at undergraduate level, and the general surgical anatomy of the whole body. Examples of the latter include the surgical anatomy of varicose veins or of conditions affecting the thyroid gland.

Specialist surgical anatomy, such as the detailed anatomy of the temporal bone or the spatial anatomy of the knee joint relevant to arthroscopy, will be required later, during Higher Surgical Training. With the evolution of surgical techniques, the development of new imaging modalities, and the determination of new surgical pathologies, it will thus be necessary for trainees to keep developing their spatial anatomy knowledge both during specialty training and throughout their subsequent professional careers.

Clinical practice is constantly developing. The most recent UK/Ireland national guidelines and ATLS teaching will be the accepted standards in the MRCS exam.

Section 3 – Topics and skills that may be examined in the MRCS

The topics and skills that may be examined in the MRCS are drawn from the ISCP Core Surgical Training Common Content Modules. These can be found at:

https://www.iscp.ac.uk/curriculum/surgical/specialty_year_syllabus.aspx?enc=1Rp/Wn+WmqFMyMh5EOjmRn55TXTPBnmf5YzBoOjGBlQ=

Section 4 – The intercollegiate MRCS examination

The four surgical Royal Colleges of Edinburgh, England, Glasgow and in Ireland have worked together to produce the intercollegiate MRCS examination, which consists of two parts. Part A is a written paper using multiple choice questions (MCQs) and Part B is an objective structured clinical examination (OSCE).

Although it is divided into two parts the MRCS is a single examination and passing Part A alone does not carry any diploma status.

The Part A examination uses single best answer MCQs designed to test knowledge of both applied basic science and principles of surgery in general to a level that a surgical trainee should have achieved two to three years after qualification.

The Part B OSCE tests:

- Anatomy and surgical pathology
- Applied surgical science and critical care
- Clinical and procedural skills
- communication skills.

Topics within the syllabus modules may be examined in either Part A or Part B or both parts of the examination.

Entry requirements

To meet the entry requirements for the Part A examination, candidates must hold a recognised medical qualification. Further details of entry requirements for both parts of the examination are given in the Regulations (see http://www.intercollegiatemrcsexams.org.uk/new/regulations_html).

Section 5 – Part A information and sample questions

Part A of the MRCS is a five hour MCQ examination consisting of a three hour paper (Applied Basic Science) followed by a two hour paper (Principles of Surgery in General), still taken on the same day. The Applied Basic Science paper will consist of 180 questions and the Principles of Surgery in General will consist of 120 questions. There will still be a break between the two papers.

The papers cover generic surgical sciences and applied knowledge, including the core knowledge required in all 10 specialties, as follows:

1. Paper 1 Applied Basic Science

2. Paper 2 Principles of Surgery in General

To achieve a pass in Part A the candidate will be required to demonstrate a minimum level of competence in each of the two papers, in addition to achieving or exceeding the pass mark set for the combined total mark for Part A. The mark for each paper will be combined to give a total mark for Part A. Both papers must be taken on the same day. The pass mark for a particular paper is determined by the process of standard setting.

Each paper will still be constructed to test across the syllabus but the information below is a guide to the numbers of questions covering each topic:

Paper 1 – Applied Basic Sciences (180 Questions)

1. **Applied Surgical Anatomy**

75 Questions in total

<u>Regional Anatomy</u> **63 questions,** of which**:**	
Thorax	**6**
Abdomen of which: Abdominal wall & cavity Abdominal viscera Abdominal vessels	**15** 6 6 3
Pelvis	**4**
Perineum	**2**
Limbs of which: Upper limb & breast Lower limb	**15** 8 7
Spine	**3**

Head & neck of which: Head Neck	**10** 5 5
Brain	**6**
Autonomic nervous system	**2**

Surgically related embryology and development	
8 questions, of which:	
Thorax	**at least 1**
Perineum	**at least 1**
Head & neck	**at least 1**

Surface and imaging anatomy	
4 questions, of which:	
Head & neck	**at least 1**

2. Applied Surgical Physiology

45 questions in total

General physiological principles	**15**

The physiology of specific organ systems relevant to surgical practice	
Cardiovascular system	**5**
Respiratory system	**5**
Gastrointestinal system	**5**
Urinary system	**5**
Endocrine system	**5**
Neurological system	**5**

3. Applied Surgical Pathology

37 questions in total

General pathological principles	**9** (from across the 7 sub categories)

Surgical immunology	**2**
Surgical haematology	**2**
Surgical clinical chemistry	**2**
Principles of neoplasia & oncology	**2**

The pathology of specific organ systems relevant to surgical care, including congenital anomalies	
Cardiovascular system	**2**
Respiratory system	**2**
Digestive system	**2**
Genitourinary system	**2**
Central and peripheral neurological systems	**2**
Skin cancer	**2**
Lymphoreticular system	**2**
Musculoskeletal system	**2**
Pathology of the breast	**2**
Pathology of the endocrine glands	**2**

4. **Pharmacology as applied to surgical practice**

8 questions (from any combination of sub-categories as will produce 8 items)

5. **Microbiology as applied to surgical practice**

7 questions (from across the sub-categories)

6. **Imaging**

5 questions (from across the sub-categories)

7. **Data interpretation and audit**

3 questions (from across the sub-categories)

Paper 2 - Principles of Surgery in General (120 Questions)

1. **Common congenital and acquired surgical conditions**

45 questions in total

Gastrointestinal disease	**7**
Breast disease	**3**
Vascular disease	**4**
Cardiovascular & pulmonary disease	**4**
Genitourinary disease	**4**
Orthopaedic conditions	**7**
Diseases of the skin, head & neck	**4**
Neurology and neurosurgery	**2**
Endocrine disease	**4**
The lymphoreticular system	**2**
Principles of cancer therapy and palliative care	**2**
Acute emergencies	**2**

2. **Perioperative management**

35 questions in total

Preoperative assessment & management	**7**
Intraoperative care	**5**
Perioperative care	**2**
Postoperative care	**8**
Nutritional management	**2**
Haemostasis & blood products	**3**
Coagulation, deep vein thrombosis & embolism	**3**
Metabolic & endocrine disorders	**5**

3. **Assessment and management of patients with trauma (including the multiply injured patient)**

30 questions in total

General	**4**
Shock	**2**
Wounds & soft tissue injuries	**4**
Burns	**2**
Fractures & dislocations	**8**
Organ-specific trauma	**10**

4. **Surgical care of children**

7 questions from across the sub-categories

5. **Medico-legal aspects of surgical practice**

3 questions from across the sub-categories

Quality of the examination

Each newly written multiple choice question is assessed for accuracy, clarity and relevance.

Each question used in an examination paper is analysed for its ability to discriminate high-performing from low-performing candidates and statistical coefficients are derived for every question allowing an analysis of the reliability of the examination.

Statistics relating to various groupings of candidates are analysed by an internal quality assurance group to ensure that the overall fairness and quality of the examination is maintained.

Guidance to Candidates

- There are equal marks for each question.
- Marks will not be deducted for a wrong answer. However, you will not gain a mark if you mark more than one box for the same item or question.
- The answer sheets are scanned by machine. If you do not enter your answer to each question correctly and clearly on the answer sheet the machine which scores your paper may reject it.
- Only answers that are clearly struck horizontally across the correct response will guarantee a mark. Faint marking may be misread, resulting in no mark for that question.
- Many candidates find it easier to mark their answers on the question booklet first and transfer them to the answer sheet later. If you do this, you should allow time to

transfer your answers to the answer sheet before the end of the examination. No extra time will be given for the transfer of answers.
- You should check that each page of your question booklet has been correctly printed and that the coloured flash on the top of the front page of your question booklet and answer sheet match.
- Images may be included in the Applied Basic Science and Principles of Surgery in General sections of the exam.

Instructions to Candidates

- Do not make any marks on your answer sheet other than inserting your candidate number and indicating your answer with a bold horizontal line in the boxes provided.
- Use only the pencil provided. Do not use pen or ballpoint.
- If you need to change an answer, you should make sure that you rub it out completely so that the computer can accept your final answer.
- Do not fold or crease the sheet.

Candidate Feedback for MRCS Part A examination

Feedback will be provided to all candidates regardless of their result. The feedback format has been designed to provide candidates with an indication of their performance in the Part A examination as a whole and of their performance in the Applied Basic Science paper and the Principles of Surgery in General paper.

In addition to their overall performance, candidates are provided with an indication of their performance in the main content areas in relation to other candidate's in their cohort. Candidates should note that no feedback has been provided on the content areas of imaging, data interpretation and audit, medico-legal aspects of surgical practice and surgical care of children as the relatively low number of questions in these areas make it difficult to provide meaningful feedback. Therefore, the total maximum marks available in both the ABS and PoSG papers will not be equal to the combined total of the maximum marks in the content areas. In addition, as we are not feeding back on the smaller content areas your combined total of the content areas will not match your overall raw score in both the ABS and PoSG papers.

The feedback provides a comparison against the group of candidates who sat the examination as outlined below:

Exam Paper		Max. possible score	Your score	Average of all candidates' scores
ABS paper	Overall (entire ABS paper)			
	Content Area			
	Anatomy			
	Physiology + Pharmacology			
	Pathology + Microbiology			
PoSG paper	Overall (entire PoSG paper)			
	Content Area			
	Common surgical conditions			
	Perioperative management			
	Trauma			

Intercollegiate MRCS Part A: Sample Questions

Single best answer (SBA) format

Paper 1 Applied Basic Science
- This three-hour paper will consist of 180 single best answer questions.

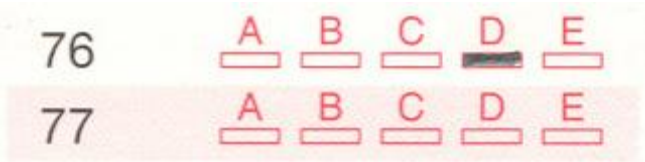
Paper 2 Principle of Surgery in General
- This two-hour paper will consist of 120 single best answer questions

- Each question contains five possible answers of which there is only one single best answer.
- You should decide which option from the list is the single best answer.
- When you are satisfied with your decision, record your answer on the answer sheet.
- In the example below, the answer is D; you would record your answer by making a heavy black mark, in pencil, in the box labelled D on line 76 (as shown).

Example single best answer question
This example question is included to show you how your answer should be entered on the answer sheet.

76. A 67-year-old woman is brought to the Emergency department having fallen on her left arm. There is an obvious clinical deformity and X-ray demonstrates a mid-shaft fracture of the humerus. She has lost the ability to extend the left wrist joint. Which nerve has most likely been damaged with the fracture?

A Axillary nerve
B Median nerve
C Musculocutaneous nerve
D Radial nerve
E Ulnar nerve



Further examples of single best answer questions
These example questions are included for you to practise on.

1. A 67-year-old man is admitted to hospital for investigation of an irregular heartbeat. The 'conducting system' of the heart includes which one of the following anatomical structures?

A Atrioventricular node
B Chordae tendineae
C Fibrous skeleton of the heart
D Interatrial septum
E Phrenic nerve

2. A 75-year-old woman who has a carcinoma of the distal rectum undergoes an anterior resection. The blood supply of the tumour arises from which of the following?

A Coeliac artery
B Ileocolic artery
C Inferior mesenteric artery
D Internal iliac artery
E Superior mesenteric artery

3. A 63-year-old woman presents to her General Practitioner with a three-week history of back pain. She has lost 8 cm in height over the last four years. Investigations reveal:

	Result	Normal
Adjusted (corrected) calcium	2.05 mmol/L	2.15-2.55
Phosphate	0.89 mmol/L	0.6-1.25
Estimated glomerular filtration rate (eGFR)	92 ml/minute	>90
Parathyroid hormone (PTH)	9.8 pmol/L	1.0-6.5

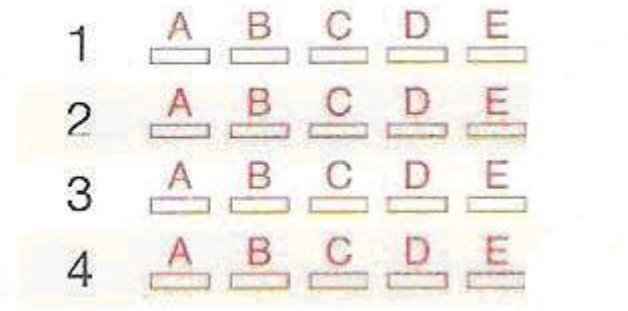
Which of the following is the most likely cause?

A Hypoparathyroidism
B Primary hyperparathyroidism
C Pseudohypoparathyroidism
D Secondary hyperparathyroidism
E Tertiary hyperparathyroidism

4. A 50-year-old woman presents with a swelling in the left side of the neck that is shown to be of thyroid origin. Hemithyroidectomy shows Hashimoto's thyroiditis complicated by a lymphoma. What is the most likely cell type of the lymphoma?

A B cell
B Macrophage
C NK cell
D Plasma cell
E T cell

Example Answer Sheet



Section 6 – Part B information and sample questions

The MRCS Part B examination takes the form of an objective structured clinical examination (OSCE). A major advantage of the OSCE is that it allows wide sampling of the knowledge and skills identified in the curriculum that are relevant to the learning outcomes (knowledge and competencies) at this level of surgical training (CT/ST2). Furthermore, all trainees undergo a similar examination; this increases reliability and therefore trainees generally feel that these examinations are fair.

It is important to recognise that an OSCE is not a rigidly defined method of assessment but represents a structure or framework that is used to develop a systematic assessment of skills and relevant knowledge. OSCEs are valuable in the direct observation of clinical skills and for the assessment of knowledge which is not readily assessed in written exams (such as anatomy). OSCEs are therefore combined with written examinations such as the MRCS Part A multiple choice examination to test factual knowledge. An appropriate balance is achieved between the assessment of clinical skills and the underlying knowledge on which clinical practice is based.

How is the OSCE constructed?

OSCEs comprise a series of stations in a circuit around which the candidates rotate. At each station the candidate is required to undertake a clearly defined task. In the MRCS OSCE these may include taking a focused history or clinical examination, interpreting an X-ray or performing a practical procedure in simulation. One minute is allowed between stations for circulation from one station to the next. This also allows the examiners to complete the mark sheet for each candidate and for the patient or simulated patient to prepare for the next candidate. At each station there are clearly defined instructions for the candidate, which briefly outline the scenario and describe the task that the candidate is required to undertake.

For instance:

Instructions to Candidate

At this station you are required to take a focused history from a patient who presents to the Emergency Department with severe abdominal pain.

You have up to 6 minutes to complete the task, at which stage the examiners will stop you and ask you to summarise your findings and answer some questions.

It is important that candidates follow the instructions precisely as marks will only be awarded in relation to the task required at that station. For instance at a physical examination station with the following instructions, the task clearly relates to performing a physical examination of the knee only. Candidates should not take a history or undertake a general examination.

Instructions to Candidate

At this station you will meet a patient who presents with pain in the right knee. You are required to undertake the appropriate examination. You have up to 6 minutes for this task, at which stage the examiners will stop you and ask you to summarise your findings and answer some questions.

However, at all stations candidates will be expected to introduce themselves, outline the purpose of the task, confirm the patient's identity and check that they consent to the required task. Candidates should always clean their hands before and after patient contact with the alcohol-based hand gel provided.

Some stations will clarify whether the candidate should describe what they are doing as they proceed with physical examination but typically a dialogue with the examiner is not required as the purpose of the examination of these stations is for the examiner to observe the candidate perform the task and for the candidate to report their findings at the appropriate time.

For more complex tasks such as stations requiring the candidate to communicate more complex issues with the patient, a preparation station may precede the station where the candidate is examined. Again it is essential that candidates read the information carefully and comply closely with the instructions.

A major advantage of OSCEs is their flexibility in allowing a wide range of tasks to be assessed. This is greatly extended by the use of simulated patients (actors or volunteers) who are trained to perform a specific role at any station. This increases the number of areas of the syllabus that can be included in terms of both history taking and physical examination. The use of mannequins and simulators extends the range of scenarios even further to include a range of practical skills. Real patients with positive clinical signs are still included in the OSCE in the same manner as they were in previous short-case examinations but with the advantage of the interaction being observed and the task structured. In addition, the MRCS OSCE includes stations focusing on anatomy, pathology and critical care scenarios, which permit the use of prosections and in-depth testing of the candidate's knowledge and decision-making.

The structure of the MRCS OSCE

The MRCS OSCE comprises 17 examined stations. At the beginning of each station 1 minute is given to the candidate to read the instructions and the station is completed after 9 minutes, allowing sufficient time for the candidate to rotate to the next station. All the stations in the examination (apart from preparation stations) are manned. Most have a single examiner but some stations (e.g. stations assessing communication skills) are double manned. Normally each examiner in a double-manned station will be assessing different aspects of the candidate's performance (e.g. communication and clinical skill).

The individual stations are grouped into two broad content areas. These are:

- **Knowledge** (8 stations)
    - 3 surgical anatomy stations
    - 2 surgical pathology stations

- 3 applied surgical science and critical care stations

– 1 generic critical care

– 1 generic interpretation of written data

– 1 generic interpretation of visual information

- **Skills** (9 stations)
  - 4 communication skills stations

    – 2 generic history taking

    – 1 generic giving information to a patient/relative

    – 1 generic giving information to another health professional

  - 5 clinical and procedural skills stations

    – 3 physical examination

    – 2 generic skills

The major emphasis of the MRCS is on the basic generic components of knowledge and skills required for all surgical trainees.

For the purposes of designing the stations domains are used to help construct questions ensuring that the important areas as identified by the GMC's "Good Medical Practice" are adequately covered by the examination.

These domains are:

- clinical knowledge and its application
- clinical and technical skill
- professionalism including decision-making, problem solving, situational awareness and judgement, organisation, planning and patient safety
- communication

Each station is marked out of a total of 20. Rather than an itemised check list approach the marking scheme allocates a proportion of the marks at each station to one or more of the above domains which can be evaluated within the context of each scenario.

The diagram below illustrates the assessment grid and marking matrix for the stations of the OSCE, illustrating broad content areas and the examined domains. The weighting of marks for each component is provided.

MRCS OSCE proposed assess-ment grid and matrix from October 2020	KNOWLEDGE BROAD CONTENT AREA								SKILLS BROAD CONTENT AREA										PILOT
	Anatomy and surgical pathology					Applied surgical science and critical care			Communication skills						Clinical and procedural skills					
									Giving and receiving information				History taking		Physical examination			Procedural skills		
	Anatomy 1	Anatomy 2	Anatomy 3	Surgical pathology 1	Surgical pathology and/or microbiology 2	Interpretation of data– visual and lab	Interpretation of clinical data	Critical care management	PREPARATION STATION	Talking with relatives and carers	PREPARATION STATION	Communicating with colleagues	History taking 1	History taking 2	Physical examination 1	Physical examination 2	Physical examination 3	Procedural skills – patient	Procedural skils - technical	Any station as required
Examiners required →	one	one	one	one	one	one	one	one	–	surgeon + lay	–	one	surgeon + lay	surgeon + lay	one	one	one	one + assistant	one + assistant	
Domains tested ↓																				
Clinical knowledge and its application	20	20	20	20	20	12	12	12		4		4	4	4	4	4	4	4	8	
Clinical and technical skill						4	4	4					8	8	8	8	8	8	12	
Communication										12		8	4	4	4	4	4	4		
Professionalism including:- Decision making Problem solving Situational awareness and judgement Organisation and planning Patient safety						4	4	4		4		8	4	4	4	4	4	4		
Total mark	20	20	20	20	20	20	20	20		20		20	20	20	20	20	20	20	20	

The OSCE structure and the distribution of marks for each station are shown above. This approach ensures an appropriate distribution of marks across the broad content areas.

Each individual station is assessed in two ways. Using a structured mark sheet a mark is awarded for each domain using generic descriptors to identify and guide examiners in allocation of the marks. In addition, an overall judgement is made on the candidate's performance at the station as a whole (Pass, Borderline or Fail). Thus for each station the candidates will have a mark out of 20 and an overall judgement of their performance. The marks and global ratings are then employed in order to construct the overall pass mark for each station using a recognised approach known as borderline regression methodology.

There is no overall pass mark for the OSCE as a whole. Candidates must pass each of the two sections of the OSCE – Knowledge and Skills – in a single sitting. Failing one of these sections does not mean that a candidate can 'bank' the section passed and only resit the failed section.

MRCS Standard Setting Process (from October 2014)

Since its inception, the MRCS Part B OSCE examination has used a single pass rule at each examination session, even though the form of the test (circuit) has not been identical on every day of that examination session. Parity of standards has been maintained through statistical methods and through the scrutiny by assessors.

To further enhance the standard setting process ICBSE in conjunction with the GMC have agreed that a different pass mark should be generated (using the current borderline regression methodology) by circuit, rather than for the examination as a whole. This means that, though the pass mark will be similar for different circuits, it is unlikely to be identical. This will reflect the variation in the relative difficulties of the scenarios that

make up any given circuit. The consequences of doing so have been modelled and found to yield a very similar overall pass rate.

This standard setting process for the MRCS Part B came in to effect as of the October 2014 examination.

MRCS Part B (OSCE)
Candidate Feedback Report: Guidance notes (January 2018)

Feedback is provided to enable you to reflect upon your strengths and areas for development and to inform your future training needs. You are encouraged to share it with your Assigned Educational Supervisor/Training Programme Director (or equivalent).

To pass the OSCE you must achieve: **The minimum pass mark in *BOTH Knowledge and Skills***

Table 1: Overall OSCE result
Your overall OSCE result is given as PASS or FAIL.

Table 2: OSCE mark
The 17 examined stations of the OSCE are grouped in to two Broad Content Areas, Knowledge and Skills. These are further broken down in to four content areas. Table 3 shows your mark for both Knowledge and Skills and the minimum mark required to pass both Knowledge and Skills. The standard setting method by which these minimum marks (also referred to as 'cut-scores' or 'pass-marks') are calculated is described below.

Table 3: Content Areas
The 17 examined stations of the OSCE are grouped into four content areas as follows:

- Anatomy and surgical pathology
- Communication skills
- Applied surgical science and critical care
- Clinical and procedural skills.

For each of the content areas Table 3 shows your mark, the maximum mark available and the mean mark for all candidates in your circuit. The row "mean mark all candidates" enables you to see how your performance compares across each domain compared to the other candidates in your circuit.

Table 4: Domains
Four domains have been identified which encompass the knowledge, skills, communication skills and professional characteristics that are assessed by the OSCE. The four domains are assessed via the 17 examined stations of the OSCE and the assessment matrix within the MRCS Content Guide provides an overview of the domains and where they are assessed (see page 34).

Feedback in Tables 3 & 4 do not provide an indication of either a pass or fail and is provided to enable you to reflect upon your strengths and areas for development. The two tables represent the same set of marks but are attributed in different ways to aid reflection.

Please note:

Information relating to the MRCS OSCE Assessment Matrix and content areas can be found in the MRCS Content Guide on the MRCS website at http://www.intercollegiatemrcsexam.org.uk. The MRCS Content Guide also includes information relating to the standard setting process employed and a summary is included below.

No further feedback will be provided.

Standard Setting for UK/Ireland Examinations

The standard setting process for each diet of the MRCS Part B OSCE takes place at a meeting after each exam. Each standard setting meeting analyses the performance of the exam circuits, including a review of the candidate, examiner and assessor feedback. This helps ensure each set of scenarios are fairly compared when considering candidate performance.

Each candidate's performance on each of the examined stations is assessed in two ways:

- a mark is awarded for each station and assessed domain
- an overall judgement is given using one of the categories: pass, borderline or fail.

The following information is therefore available for each candidate during the standard setting process:

- a total mark for each station;
- a category result for each station (i.e. pass, borderline, fail);
- a total mark for each of the 'Knowledge' and 'Skills' Broad Content Areas.

The Borderline Regression Method of standard setting is used to determine the contribution of each station to the pass mark. The contribution for each station in the two Broad Content Areas of the OSCE are summed to give a pass mark for each of Knowledge and Skills for each circuit. Further information relating to Borderline Regression can be found on Page 11 of the Guidance for Standard Setting document published by the Academy of Medical Royal Colleges - https://www.aomrc.org.uk/wp-content/uploads/2016/05/Standard_setting_framework_postgrad_exams_1015.pdf.

Standard Setting for Examinations held in centres outside of the UK/Ireland

In order to ensure parity in the standards of the MRCS Part B (OSCE) examination the Surgical Royal Colleges use a set of scenarios that have previously been deployed at a UK/Ireland examination centre. Examinations held in centres outside of the UK/Ireland use the pass mark (or cut-score) for both Knowledge and Skills Broad Content Areas from the exam used in the UK/Ireland which has in turn been set using the Borderline Regression method outlined above.

Candidate Feedback for MRCS Part B examination

MRCS Part B (OSCE) Candidate Feedback Report. **PLEASE READ THE CANDIDATE GUIDANCE NOTES**

Candidate Examination Number: Date of Examination:

Table 1: Overall OSCE result: REMEMBER THAT YOU MUST PASS BOTH KNOWLEDGE AND SKILLS BROAD CONTENT AREAS

YOUR OSCE RESULT:

Table 2: OSCE mark

Your Mark for Knowledge out of 160		Mark out of 160 required to pass Knowledge	
Your mark for Skills out of 180		Mark out of 180 required to pass Skills	

Table 3: Broad Content Areas: YOU MUST ACHIEVE A PASS IN BOTH KNOWLEDGE AND SKILLS TO PASS THE OSCE

Broad content areas	**KNOWLEDGE**		**SKILLS**	
Content areas	Anatomy and surgical pathology	Applied surgical science and critical care	Communication skills	Clinical and procedural skills
Your mark				
Mean mark for all candidates in the four main content areas				
Maximum mark available	100	60	80	100

Table 4: Domains: THIS INFORMATION IS SUPPLIED TO ASSIST REFLECTION AND EDUCATIONAL DEVELOPMENT
THERE ARE NO PASS/FAIL MARKS IN DOMAINS

Domains	Clinical knowledge and its application	Clinical and technical skill	Communication	Professionalism
Your mark				
Mean mark all candidates				
Maximum mark available	176	72	44	48

Example Questions and Guidance Notes for Candidates

1. Anatomy and surgical pathology (5 stations)

These stations all follow a similar format. There will normally be a short clinical vignette given to read before commencing the bay. For instance:

Instructions to Candidate
A letter from a general practitioner has asked you to see a 57-year-old woman with a soft tissue mass in the posterior part of her right thigh. The letter also indicates that the patient has an abnormal gait but the cause is not clear. You consider possible explanations for these observations. First you think about the course of the sciatic nerve.

This will introduce the candidate to the area of the body that will form the core of the station. The examiner will then take the candidate through a series of questions. These will normally include looking at some or all of: prosections, live surface anatomy, bones, radiological images, specimen photographs and copies of pathology reports. In these bays all 20 marks are awarded for clinical knowledge. In all parts of the examination if the candidate gets a question wrong and this may affect their performance in subsequent questions then they will be given the correct answer.

2. Applied surgical science and critical care (3 stations)

A complete example of all the documentation for a typical OSCE station in this area is shown below. This example scenario involves interpretation of visual material: in this case, a chest X-ray, which shows a misplaced nasogastric tube, and an abdominal CT scan showing gallstone cholecystitis. Images will be displayed either on a computer screen or as a high-definition photograph. The questions and suggested suitable answers are shown on the examiner mark sheets below.

MRCS OSCE
Scenario summary sheet

Code	**SSC G V 03**
Title	**NG tube and gallstones**
Syllabus area	**to be defined**
Content area	**Applied knowledge**
Station type	**Applied surgical science and critical care**
	Interpretation of visual information
Domains assessed	**Clinical knowledge and its application 3 × 4 marks** **Clinical and technical skill 4 marks** **Professionalism 4 marks**

Source	**Rewriting meeting 26.3.10**
Last updated	**DCB revised 7.12.12**
Used	**May 2010**

Props and equipment
College

Props bank
Chest X-ray.
Abdominal CT scan.

Candidate instructions
Scenario 1

You are called to the high-dependency unit to review a chest X-ray shortly after starting your night shift. The nurse informs you that the patient was admitted from the intensive care unit 2 days ago. The patient underwent a laparotomy for a perforated sigmoid volvulus and had a 3-week stay on the intensive care unit. Nutrition has been difficult. Earlier today the patient's nasogastric tube 'fell out'. The F2 doctor who was covering HDU replaced it, but has now gone home. Look at the chest X-ray.

Scenario 2

A 47-year-old woman is admitted via her general practitioner with acute, right upper quadrant, abdominal pain. Her pulse is 100 beats/min and blood pressure 100/55 mmHg. She is pyrexial with a temperature of 38.5°C. The pain fails to settle and a decision is taken to image her abdomen. Look at the CT scan.

In this station you will be asked a series of questions in relation to these scenarios.

EXAMINER MARK SHEET	Candidate number:
	Examiner number:
	Date:
	Signature:
Scenario code and title	**SSC G V 03 NG tube and gallstones**

Scenario 1
You are called to the high-dependency unit to review a chest X-ray shortly after starting your night shift. The nurse informs you that the patient was admitted from the intensive care unit 2 days ago. The patient underwent a laparotomy for a perforated sigmoid volvulus and had a 3-week stay on the intensive care unit. Nutrition has been difficult. Earlier today the patient's nasogastric tube 'fell out'. The F2 doctor who was covering HDU replaced it, but has now gone home. Look at the chest X-ray.

Scenario 2
A 47-year-old woman is admitted via her general practitioner with acute, right upper quadrant, abdominal pain. Her pulse is 100 beats/min and blood pressure 100/55 mmHg. She is pyrexial with a temperature of 38.5°C. The pain fails to settle and a decision is taken to image her abdomen. Look at the CT scan.

Clinical knowledge domain 1 Possesses the clinical knowledge specified in the syllabus. Able to understand, synthesise and apply knowledge in a clinical context.		
1	**Describe the checks you would perform before assessing the clinical aspects of this film.** Name. Date of birth or hospital number (cannot rely on name alone), date of examination **(1 mark for all elements correct)**	
2	**Outline the system you use to assess the clinical aspects of the film.** Can describe any reasonable system. Bones/soft tissues, etc. ATLS ABC system. **(1 mark)**	
3	**How do you assess the projection?** Look at the label on the film (AP/PA) or check whether the scapulae are in or clear of the lung fields. **(1 mark)** This may have been mentioned in answer to Q2 and credit can be given	
4	**How do you assess whether the film is rotated?** Look at heads of the clavicles relative to the midline. **(1 mark)** This may have been mentioned in answer to Q2 and credit can be given	
Mark for clinical knowledge domain 1 (0–4)		**K1**

Clinical knowledge domain 2 Possesses the clinical knowledge specified in the syllabus. Able to understand, synthesise and apply knowledge in a clinical context.		
5	**Look at the chest X-ray. Where is the nasogastric tube? Be specific in your answer.** In the right bronchial tree (the tube passes through the trachea and right main bronchus into one of the lobar bronchi). ['right lung' is an acceptable answer.] **(1 mark)**	
6	**What clinical condition may develop as a result of feeding using this tube?** Aspiration pneumonia. **(1 mark)**	
7	**What else can you identify on this film?** ECG electrodes, tracheostomy tube, gas in colon and stomach. **(1 mark)**	
8	**What three immediate actions should you take regarding the tube?** Remove the tube; replace the tube; recheck its position. **(1 mark)**	
Mark for clinical knowledge domain 2 (0–4)		**K2**

Clinical knowledge domain 3 Possesses the clinical knowledge specified in the syllabus. Able to understand, synthesise and apply knowledge in a clinical context.		
9	**Look at the CT scan. What abnormality does it show?** Thick-walled gall bladder with multiple stones. **(1 mark)**	
10	**What blood investigations should be performed in addition to FBC, U&E, LFT, group and save and amylase?** Blood cultures, coagulation screen. **(1 mark)**	
11	**What treatment should be instituted on admission once bloods have been taken?** Analgesia, antibiotics, intravenous fluids. **(1 mark)**	
12	**What surgical intervention will this patient require?** Cholecystectomy. **(1 mark)**	
Mark for clinical knowledge domain 3 (0–4)		**K3**

Clinical skill domain Capable of applying sound clinical knowledge, skill and awareness to a full investigation of problems to reach a provisional diagnosis.		
13	**What are the options for the timing of surgical intervention?** 'Hot' i.e. 3-5 days or wait until inflammation settled after 6 weeks **(1 mark)**	
14	**What are the potential problems with each of the options for the timing of surgery?** Hot: not knowing when the attack started, increased risk of complications, logistics of organising theatre time Delayed: risk the tissues still inflamed and technically difficult, risk of further attacks/admissions in the interim **(2 marks)**	
15	**What are the intra-operative complications of cholecystectomy** Blood loss, damage to bowel or duodenum, common bile duct injury. **(1 mark)**	
Mark for clinical skill domain (0–4)		**S**

Professionalism domain Makes the best use of information and is able to think beyond the obvious. Anticipates and plans in advance. Aware of need to put patient safety first.	
Award a mark for the extent to which the candidate has: • been able to sift peripheral information to detect a root cause **(1 mark)** • been able to explain and justify decisions **(1 mark)** • been alert to symptoms and signs suggesting a condition may deteriorate **(1 mark)** • considered all the facts before reaching a decision **(1 mark)**	
Total mark for professionalism domain (0–4)	**P**

Examiner's overall assessment (circle one):		
Fail	**Borderline**	**Pass**

The second station in this broad content area covers interpretation of clinical data and the third comprises a critical care scenario, which is examined by a physiologist. Domain mark distributions are shown in the matrix above.

3. Communication skills (5 stations)

A full example of a typical history-taking station is shown.

MRCS OSCE
Scenario summary sheet

Code	**CSH T 03**	
Title	**Obstructive jaundice**	
Syllabus area		
Content area	**Clinical, communication and procedural skills**	
Station type	**History taking** **Double manned – surgeon and lay examiner**	
Domains assessed	**Clinical knowledge and its application** **Clinical skill** **Communication** **Professionalism**	**4 marks** **2 x 4 marks** **4 marks** **4 marks**

Source	
Last updated	
Used	

Props and equipment
Actor
Male, 50-70 Actor to receive full scenario in advance of diet.
College
Desk/table.
Pencil and paper for candidate's notes.
Chairs for candidate and two examiners.
Couch for actor

Candidate instructions

This patient has been referred as an emergency to the surgical assessment unit. The GP has said that the patient has jaundice.

You are to take an appropriate history in 6 minutes (you may make notes). If you complete your history within the 6 minutes you should indicate to the examiners that you are ready.
In the remaining 3 minutes the examiners will ask you to present a summary of the history. They may also ask you to discuss any particular physical signs you would look for on examination, the likely differential diagnosis, appropriate investigations and a management plan.

Information for the actor

Patient details
Name: Mr. Jack Rose **Age** 65
Sex: Male **Job:** Retired policeman **Hospital number:** A236572

Patient's address:	**GP address:**
13 Princes street	Dr PR Smith
Anytown	High Street Surgery
Anyshire	High Street
AY67 7GH	Anytown, AB12 3XY

Character: Patient **Age range for actor from** 50 **to** 70
Costume: Dressing gown
Personal props: Yellow make-up to simulate jaundice would be helpful.
Time and place This scenario takes place in the surgical assessment unit on a weekday morning

The scenario

You have seen your own GP who has arranged for you to come to the SAU with a view to emergency admission to the hospital. No special clothing or props are required but appropriate yellow make-up on your face to simulate jaundice would add some authenticity. The candidate will take a history from you and will not be required to do any physical examination. Apart from your presenting complaint do not volunteer other information until asked specifically by the candidate.

YOU DO NOT FEEL AT ALL WELL.

You are a 65-year-old retired policeman.

Presenting complaint

Not felt well for past month and for the last 3 days you have noted that your skin and eyes have become yellow and your skin itchy.

Associated history

Your appetite is poor and you have noticed your clothes are becoming loose (you haven't weighed yourself). You feel rather tired and run-down. You have been trying to eat but feel quickly full up and have had episodes of nausea. Having had a regular once per day bowel action you now have to open your bowels after most meals, passing loose stools. For 3 days they have been a white clay colour, very smelly and not the usual brown. You have not noted any blood in the stools but get occasional bright blood on the toilet paper when you wipe yourself which you think is due to piles. You have not had any significant pain in your abdomen, but have noted a dull ache in the middle of your lower back which you think is due to an old injury sustained when you were in the police.

Other systems

Respiratory: Smoker's cough.

Cardiac: No problems.

Urinary: Get up once per night, reasonable stream, noted urine very dark brown colour for 3 days. No pain/burning or stinging not aware of any blood.

Musculoskeletal: No problems.

Nervous system: No problems.

Past surgical history

Tonsillectomy as a child.

Appendicectomy age 15.

Haemorrhoids (piles) injected age 50.

Laparoscopic cholecystectomy (keyhole surgery to remove your gallbladder and gallstones) age 55.

Medical history

Hypertension from age 54.

Type 2 diabetes from age 58.

Three months ago episode of tender inflammation in varicose vein in left leg. GP diagnosed phlebitis and prescribed antibiotics.

Drug history (you may wish to note these on a piece of paper)

Metformin (500 mg, three times a day) and glicazide (100 mg once a day) for diabetes

Bendroflumethiazide (2.5 mg daily) for hypertension

Simvastatin (40 mg at night) – your GP put you on this 2 years ago 'to stop you having a heart attack'

You don't have any allergies.

Social history

You were a policeman for 35 years and retired at the age of 55 having been a sergeant for 15 years. You then worked for 5 years with a security company organising guards for factory premises. For the last 3 years you have been caring for your 68-year-old wife who is becoming increasingly disabled by motor-neurone disease. You know this can't be cured and her doctors have indicated that she will probably not survive more than a few years. You have one married daughter who lives in Australia.

You smoke 20 cigarettes a day and have done so since you were a teenager. You have always enjoyed drinking beer and whisky (not wine). When you were in the police you often indulged in heavy drinking sessions (when not on duty) and since retirement you have had 2–3 pints of beer and 2 whiskies most days. You eat a normal diet.

Family history

Your father was killed while serving in the army during the Korean war in 1952 and your mother died of a heart attack at the age of 73. You have a younger brother and sister who are well as far as you are aware. They live in Scotland and you have only occasional contact with them.

Anxieties

You are very worried by the symptoms that you have and are concerned about what will happen to your wife if you have to come into hospital for treatment. (You have a good next door neighbour who is helping.)

If asked about any other personal or social details rely on your own experience and make your answers consistent throughout the circuit.

Background
This patient's jaundice is due to a blockage of the bile duct which means that bile is dammed up and spills over into the bloodstream, making him yellow. The most likely cause of the jaundice is a tumour, but gallstones are also a possibility even though he has had his gallbladder removed.

Examiner instructions

In this scenario, the candidate has 6 minutes to take an appropriate, focused and relevant clinical history from a simulated patient. They will then have 3 minutes to produce a sensible summary of relevant positive and negative points from the history and a differential diagnosis. They should be able to suggest appropriate investigations and management.

Both examiners should listen to and observe the candidate (who may make notes) taking the history without interruption. If the candidate does not appear to be performing the required task properly, invite them to re-read the candidate instructions.

After 6 minutes (or sooner if the candidate is ready), Examiner 1 uses the remaining time to ask the candidate the following.

1. To summarise the history.
2. To give the differential diagnosis and explain how they would justify their answer.
3. To explain how the diagnosis would be confirmed (see below).
4. To specify what management they would recommend (see below).

Examiner 1 marks the domains *clinical skill* and *clinical knowledge*.

Examiner 2 marks the domains *communication* and *professionalism*.

The examiners should not swap roles between candidates during the circuit.

Both examiners will assess the overall performance of the candidate.

Examiner 1 looks at whether the candidate has gathered accurate information relevant to the specific scenario along with important systemic effects of the condition under consideration through the use of proper closed questions and systematic enquiry.

Examiner 2 assesses the candidate's general approach to the taking of the history as instructed on the mark sheet. They examine the candidate–patient interaction and check for shared understanding between candidate and patient. During the discussion with Examiner 1 after the history-taking, they should consider whether the information is being fed back with synthesis and prioritisation.

If the candidate finishes early they must remain in the bay and wait for the indication to move on.

Scenario-specific guidance

1. What are the essential points in the history?

1-month history of feeling unwell:

- anorexia
- weight loss (implied)
- nausea and vague backache
- increasing diarrhoea, loose smelly stools.

3 days of worsening jaundice, skin itching, dark urine and pale stools.

Past history of cholecystectomy for gallstones, type 2 diabetes, hypertension and recent episode of thrombophlebitis.

Lifelong smoker (risk factor for pancreatic cancer) and heavy alcohol intake (can cause chronic liver disease).

Disabled wife at home.

Concerns about diagnosis and care of wife.

2. Based on the history you have obtained what is the differential diagnosis of the most likely causes of this patient's symptoms? (You may need to prompt)

Obstructive jaundice due to:

- carcinoma of head of pancreas, ampulla or bile duct
- bile duct stricture
- bile duct stone (NB previous cholecystectomy)
- chronic pancreatitis
- liver cancer secondary or primary

- other rare pancreatic tumours.

3. Physical examination reveals a jaundiced patient with scratch marks on his arms, scars from previous surgery and evidence of recent weight loss. There are no other abnormal findings. What special investigations would you request from the SAU?

Full blood count, clotting studies, urea and electrolytes, liver function tests, amylase, possibly tumour markers (CA19-9), hepatitis screen.

Urine dip (may also request separate test for urobilinogen – not present in obstructive jaundice).

Urgent abdominal ultrasound and CT (if available).

4. What would you expect the liver function tests to show?

Raised bilirubin (conjugated), alkaline phosphatase and gamma GT, relatively normal other liver enzymes suggesting bile duct obstruction.).

Critical points

Realises patient is jaundiced.

Might be cancer but other differentials.

Initial investigations.

More complex later investigations.

Admit for investigations and possible ERCP.

Generic domain descriptors
Clinical knowledge
Possesses the clinical knowledge specified in the syllabus.
Able to understand, synthesise and apply knowledge in a clinical context.
Clinical skill
Capable of applying sound clinical knowledge, skill and awareness to a full investigation of problems to reach a provisional diagnosis.
Communication
Able to assimilate information, identify what is important and convey it to others clearly using a variety of methods.
Capable of adjusting behaviour and language as appropriate to needs of differing situations.
Actively and clearly engages patient/carer/colleague(s) in open dialogue.
Professionalism
Able to accommodate new or changing information and use it to manage a clinical problem.
Anticipates and plans in advance.
Prioritises conflicting demands and builds contingencies.
Demonstrates effective management of time and resources.

EXAMINER 1 (SURGEON) MARK SHEET	**Candidate number:**
	Examiner number:
	Date:
	Signature:
Scenario code and title	**CSH T 03 Obstructive jaundice**
Domains assessed	**Clinical skill** **2 x 4 marks** **Clinical knowledge and its application** **4 marks**

Domain	**Mark**
Clinical skill 1 Elicits necessary detail/information from patient/colleague. Accurately identifies key clinical symptoms. Accurately interprets key clinical symptoms. Has a systematic, complete and organised approach. General assessment of patient is satisfactory. Can take a detailed history from a poorly patient who is frightened about his diagnosis and the impact this will have on his family.	0–4
Clinical skill 2 Presents a well organised history. Accurately describes key clinical symptoms. Understands key clinical signs. Overall assessment of patient is satisfactory. Able to use history to suggest a sensible management plan. Aware of the seriousness of this history. Appreciates need to organise care for patient's wife.	0–4
Clinical knowledge Demonstrates knowledge in the essential areas tested. Demonstrates knowledge in the majority of areas examined. Knowledge of the likely differential diagnosis based on the patient's symptoms (listed in the patient's notes and examiner's guidance).	0–4

Examiner 1 overall assessment (circle one):

Fail **Borderline** **Pass**

Agreed joint overall assessment (circle one):

Fail **Borderline** **Pass**

This is required whether the examiners' individual overall assessments differ or not.

EXAMINER 2 (LAY) MARK SHEET	Candidate number:
	Examiner number:
	Date:
	Signature:
Scenario code and title	CSH T 03 Obstructive jaundice
Domains assessed	Communication 4 marks Professionalism 4 marks

Domain	Mark
Communication Uses appropriate opening/introductions and establishes purpose of the interview. Uses technical/non-technical language appropriately, accurately and with fluency. Confirms that there is common understanding. Establishes relationship of respect with others. Adapts language/behaviour as needed and adjusts style of questioning (open/closed) as appropriate. Establishes rapport with others. Uses appropriate body language and eye contact. Demonstrates clarity and focus in communication. Demonstrates active listening towards others. Demonstrates empathy and responds appropriately to patient's concerns and questions. Adequate closure of interview. Takes a comprehensive history from a patient who does not feel at all well. Does not alarm patient excessively with possible diagnosis at this stage – need to await results of investigations. Aware of issues surrounding the wife.	0–4
Professionalism Plans ahead, identifies requirements and prioritises accordingly. Demonstrates strategic and tactical planning ability. Able to recognise and manage complex and competing needs. Manages time and resources effectively. Appreciates need to involve other agencies for care of the wife. Aware that patient must be admitted for investigation and probable ERCP in the first instance. Does not criticise patient's smoking and drinking habits at this stage. Is sympathetic to this patient's considerable problems.	0–4

Examiner 2 overall assessment (circle one):		
Fail	**Borderline**	**Pass**

Note that the actor playing the simulated patient is given a detailed brief so that they can provide a full history when questioned. These histories normally go beyond the immediate problem and will often introduce other anxieties that the candidates should able to pick up. These scenarios have two examiners who examine different domains but will agree an overall global judgement.

The other stations within this area are:

- Talking with relatives and carers. For this the candidate will typically have a preparation bay which will involve extracting information from a set of hospital

notes and then having an interview with a patient, their relative or a carer. Two examiners are used for this assessment, one of which will be a fully trained lay examiner who will have been a patient and will be able to assess the non-scientific communication skill of the candidate.

- Communicating with colleagues. Again a preparation bay is used in which the candidate is asked to extract information from a set of case notes. They then have a telephone conversation with an examiner who will be playing the role of a colleague. Typical scenarios might involve any situation where a surgical trainee needs to discuss a patient with a senior colleague such as planning management of a deteriorating patient or organising a transfer to a regional centre. These stations are marked by a single examiner.

4. Clinical and Procedural Skills

Physical examination

The three physical examination stations each have a single examiner who will normally observe the candidate's interaction with the patient for up to 6 minutes and then ask the questions indicated. Wherever possible real patients are used but in some instances when an acute condition forms the basis of the scenario a fully briefed actor will be used to simulate the clinical signs.

A full example of a typical physical examination scenario is shown below,

MRCS OSCE
Scenario summary sheet

Code	**CPE T 04**
Title	**Breast mass**
Syllabus area	**to be defined**
Content area	**Clinical, communication and procedural skills**
Station type	**Physical examination**
Domains assessed	**Clinical and technical skill 8 marks** **Communication 4 marks** **Clinical knowledge and its application 4 marks** **Professionalism 4 marks**

Source	

Last updated	
Used	

Props and equipment
Patient
Female patient with breast lump/mass
College
Examination couch, table and chairs.
Hand gel and tissues.

Candidate instructions

You are a basic surgical trainee in the outpatient clinic and are asked to see a patient referred by her GP on account of a breast lump.

After 6 minutes (or sooner if you are ready) you will be asked to present your findings and have a discussion with the examiner. The examiner will not prompt you unless they feel the patient is being made uncomfortable or embarrassed.

This station tests physical examination skills and not history-taking. You should restrict communication with the patient to issues relevant to your physical examination.

Let the examiner know if you are ready to summarise your findings before 6 minutes.

Patient instructions

The examiner will explain what is required before the start of the circuit.

Examiner instructions

This station evaluates the candidate's ability to examine a patient with a breast lump. The candidate is not required to report their findings as they go along. Please do not interact with the candidate whilst they are performing the examination unless the patient is made to feel uncomfortable or embarrassed. If the candidate appears to have misunderstood the task invite them to re-read the instructions.

After 6 minutes, or sooner if the candidate indicates they are ready:

- invite them to summarise their findings
- ask if there are any other examinations they would wish to perform
- ask what they consider the possible underlying cause to be
- ask whether any special investigations may be required
- ask what the options for management are.

The role of the examiner is to ensure the candidate conducts a technically proficient and knowledgeable examination of the relevant part. They should do so sensitively and with all due consideration for the patient.

Generic domain descriptors
Clinical knowledge
Possesses the clinical knowledge specified in the syllabus.
Able to understand, synthesise and apply knowledge in a clinical context.
Clinical and technical skill
Capable of applying sound clinical knowledge, skill and awareness to a full investigation of problems to reach a provisional diagnosis.
Able to perform manual tasks related to surgery that demand manual dexterity, hand/eye coordination and visual/spatial awareness.
Communication

Able to assimilate information, identify what is important and convey it to others clearly using a variety of methods.
Capable of adjusting behaviour and language as appropriate to needs of differing situations.
Actively and clearly engages patient/carer/colleague in open dialogue.
Professionalism
Demonstrates effective judgment and decision-making skills
Considers all appropriate facts before reaching decision.
Makes the best use of information and is able to think beyond the obvious.
Alert to symptoms and signs suggesting conditions that might progress or destabilise
Aware of own strengths/limitations and knows when to ask for help
Able to accommodate new or changing information and use it to manage a clinical problem.
Anticipates and plans in advance
Prioritises conflicting demands and builds contingencies
Demonstrates effective management of time and resources
Aware of need to put patient safety first.

EXAMINER MARK SHEET	**Candidate number:**	
	Examiner number:	
	Date:	
	Signature:	
Scenario code and title	**CPE T 04 Breast mass**	
Domains assessed	**Clinical and technical skill**	**8 marks**
	Communication	**4 marks**
	Clinical knowledge and its application	**4 marks**
	Professionalism	**4 marks**

Domain and station-specific positive indicators for marking.	**Mark**
Clinical and technical skill (8 marks) • Elicits necessary detail/information from patient/colleague. • Accurately identifies and interprets key clinical signs. • System-specific inspection and palpation are satisfactory. • Has a systematic, complete and organised approach. • Handles the patient gently and with consideration and respect. • General assessment of patient is satisfactory. • Completes tasks in a timely manner. • Shows an organised approach to tasks. • Shows clear dexterity in completing tasks. • Shows good hand/eye coordination. • Able to conduct a technically proficient examination in an organised and timely fashion. The candidate should: • Confirm which breast the patient has noticed the lump in and check if tender/painful • Inspect lying down, sitting up and with hands raised above the head • Palpate the contralateral breast initially • Accurately define the size and location of the palpable abnormality • Check for skin involvement and muscle fixity • Examine the axillae.	0–8
Communication (4 marks) • Uses technical language appropriately and correctly. • Establishes relationship of respect with others without being patronising or domineering. • Demonstrates clarity and focus in communication. • Demonstrates active listening towards others. • Able to express ideas clearly to others. • Introduction and establishment of rapport with patient. • Responds appropriately to the patient if causing pain/distress.	0–4

• Observes eye contact, body language. • Summarises patient examination. • Discussion of possible management.	

Clinical knowledge (4 marks)
• Demonstrates knowledge in the essential areas tested.
• Demonstrates knowledge in the majority of areas examined.
• Demonstrates the ability to synthesise knowledge and apply it in a clinical context.
• Knowledge is well organised.
• Knows how to perform a competent well structured assessment of a patient with a breast lump.
• Differential diagnosis:
  • malignant lesion
  • fibroadenoma
  • breast cyst.
• Investigations:
FNA and core biopsy
  • mammography
  • ultrasound
	0–4

Professionalism (4 marks) • Considers all the facts before reaching a decision. • Responds flexibly, redirecting thinking when the situation demands. • Shows awareness of wider needs of situation. Attempts to think ‘around’ issue. • Able to explain and justify decisions. • Alert to symptoms and signs suggesting conditions that might progress or destabilise. • Able to accommodate new or changing information. • Demonstrates strategic and tactical planning ability. • Able to recognise and manage complex and competing needs. • Manages time and resources effectively. • Puts patient safety foremost when planning.	0–4

Examiner’s overall assessment (circle one):		
Fail	**Borderline**	**Pass**

Procedural skills

The two procedural skills stations will typically involve use of simulated patients with an appropriate prosthetic attachment in order to test basic surgical and resuscitation skills such as may be found within the CCrISP or Basic Surgical Skills courses. They may also include patient safety-related issues such as correct ordering of theatre lists or discussing the dangers of diathermy.