

Online examinations

Candidate handbook – online proctoring

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Introduction

The Medical Radiation Technologists Board (the Board) may offer overseas-trained practitioners whose qualification has been assessed as being non-equivalent the opportunity to sit the online examination as a pathway to registration. In some instances, an online examination may be used as a return-to-work-pathway for registered practitioners who have not practised for an extensive period.

This handbook provides information for examination candidates on the purpose and process for online examinations to assist your preparation to sit the examination. Please note this handbook should be read in conjunction with the 'Board's [Policy and Guidelines: Online Examinations \(April 2021\)](#)



Please make sure you read this entire handbook **before** applying to sit an examination.

Why do I have to sit an examination?

The Board has a legislative responsibility under the Health Practitioners Competence Assurance Act 2003 (the Act) to ensure all practitioners registered as a medical imaging or radiation therapy practitioner have an appropriate qualification (inclusive of sufficient and relevant clinical experience) and meet the 'Board's fitness to practice requirements.

As an overseas-trained practitioner (or a practitioner with a qualification other than the prescribed qualification), you must provide details of your academic qualification along with a summary of your clinical experience. Your qualification is assessed to determine it is sufficiently aligned to the competence standards required of an entry-level practitioner in the scope of practice for which you are seeking registration.

If your qualification is assessed as being not equivalent, as it does not sufficiently cover all the competence standards required to enable you to practice that scope of practice in New Zealand, the Board may offer that you sit an Online examination.

Candidates will have medical imaging or radiation therapy clinical experience

An examination assumes that you will have acquired a sufficient level of base knowledge regarding the safe and competent practice of medical imaging and/or radiation therapy.

There is a parallel assumption that you will have had formal training (even though your qualification has been assessed as being not equivalent) in the relevant scope of practice with appropriate and adequate post-qualification clinical experience.

What does an examination test?

An online examination is used to assess your foundational knowledge in the scope of practice for which you are seeking registration. The examination is competence-based, focusing on applying your medical imaging/radiation therapy knowledge in a clinical environment.

Questions are asked from the point of view of how knowledge is used to practise rather than a direct recall of your knowledge.

Examinations are linked to New Zealand competence standards

Before sitting an examination, you will need to make sure you are familiar with the competence standards the Board has set for the medical imaging and radiation therapy profession to practise in New Zealand.

You can download a copy of the [Competence Standards](#) for Medical Imaging and Radiation Therapy Practitioners in Aotearoa New Zealand from the Board's website at www.mrtboard.org.nz

Examination structure

Language

All examinations are set in English. Translated versions of an examination into another language are not available.

Examination length

An examination must be completed within a maximum period of 3-hours (180 minutes).

But you must allow for an additional hour to complete the examination entry procedures and post examination activities. Therefore, **you must allow for a total of 4 hours on the day** of the examination.

Multi-choice questions

An examination is set in a multi-choice questions (MCQ) format where you are required to select the best possible answer from a selection of choices.

Question format

Exam questions are mostly set within two formats:

1. A single topic question
2. A vignette or clinical scenario.

Graphs and images may be used with some questions. All questions have four options: the correct answer and the other three incorrect answers (called *distractors*). There is only one correct answer for each question.

Question validity

Each question has been reviewed for content validity and statistical reliability before being included in an examination.

Examination questions content

150 questions in total –	
<ul style="list-style-type: none">- Approximately 75 questions in section 1- Approximately 75 questions in section 2	
Section 1: Generic competencies	
Questions that relate to competencies that are generic to all medical imaging and radiation therapy scopes of practice.	45% - 55% of questions will relate to the generic competencies.
Section 2: Scope specific competencies	
Questions that relate to a specific scope of practice: <ul style="list-style-type: none">- Medical imaging technologist- Radiation therapist- Nuclear medicine technologist- Sonographer- Magnetic resonance imaging (MRI) technologist.	45% - 55% of questions will relate to scope specific competencies.

Some 45% - 55% of examination questions will be related to the medical imaging/radiation therapy competence standards set out in Domains 1 to 5 of the Board's [Competence Standards for Medical Imaging and Radiation Therapy Practitioners in Aotearoa New Zealand](#)

The other 45% to 55% of examination questions will be related to the competence standards for the specific scope of practice for which you are seeking registration.

When selecting questions for an examination, the Examination Committee will ensure the number of questions per competence domain match up with the examination taxonomy as stated in the Board's Policy and Guidelines: [Online Examinations \(April 2021\)](#)

Examination scoring

An examination is scored as a *successful* or unsuccessful.

Each correct answer is awarded one point, and there is no deduction for wrong answers. Individual questions are not weighted and contribute equally to your examination score.

Successful / unsuccessful

75% minimum pass for questions related to competence domains 1-5

75% minimum pass for questions related to one of the scope-specific domains.

The pass score for an examination is set at a minimum of 75% in each of the two question sections – that is, 75% for questions relating to the generic competencies as set out in domains 1 to 5, and 75% for questions relating to one of the scope-specific domains (5A to 5E).

In the opinion of the Board, a 75% pass rate sets a level that indicates candidates are capable of safe and ethical practice.

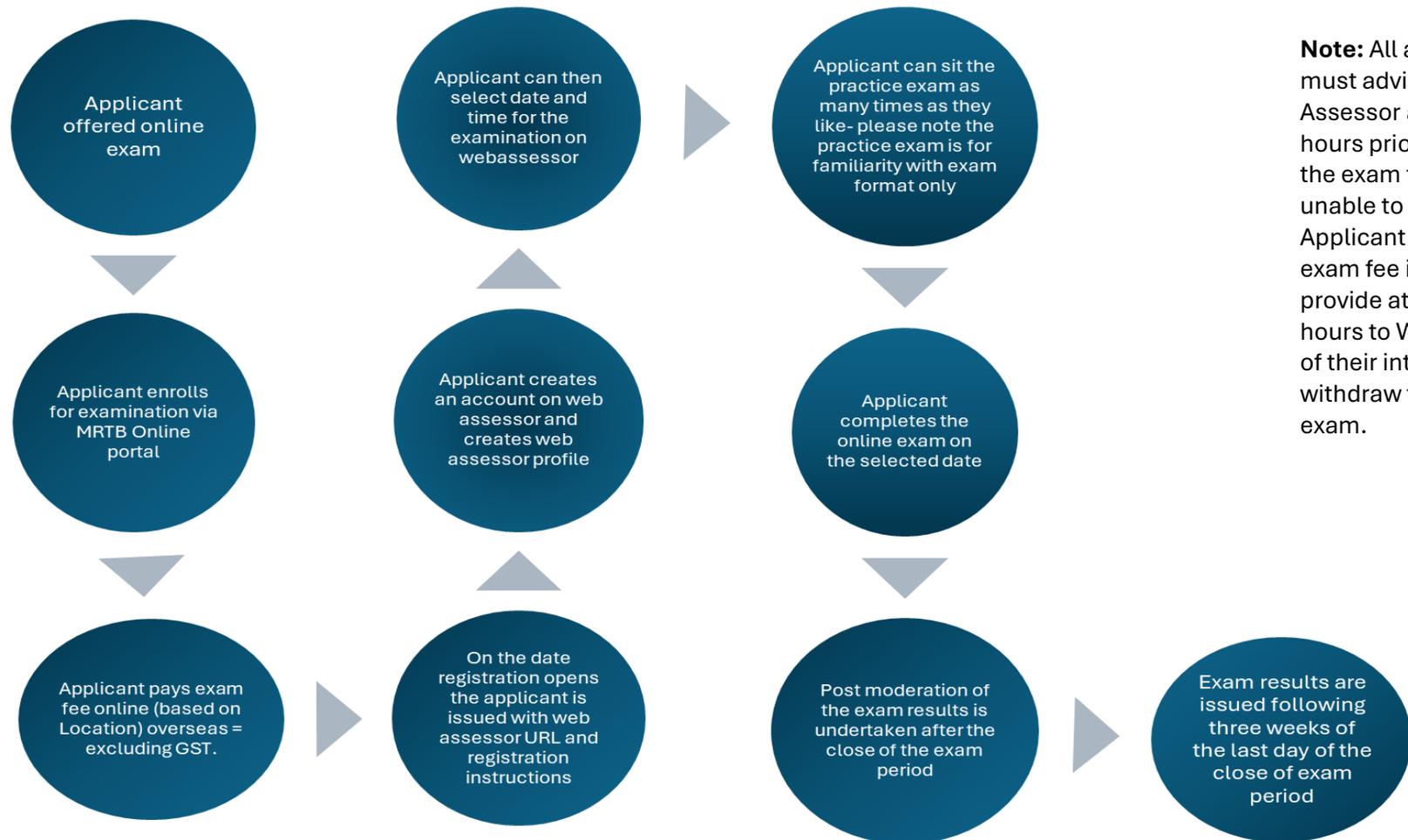
Moderation of examination scores

A score may be adjusted after an examination has closed and been sat by registered candidates. An example¹ is where a subsequent moderation of an examination identified a particular question, and its answer (and/or distractors) may have been impossible to select accurately.

That may have been due to the grammar or expression used and/or there is more than one reasonable answer to the question. In such circumstances, the questions may be removed from the examination and marks for all candidates adjusted accordingly.

¹ Please note this example is given as an illustration only.

Registering for an online examination: a graphic overview



Note: All applicants must advise Web Assessor at least 72 hours prior to sitting the exam that they are unable to sit the exam. Applicant forfeits exam fee if they do not provide at least 72 hours to Web Assessor of their intention to withdraw from the exam.

Registering for an examination

You must enrol for the exam via the online portal, read and sign the examination rules agreement, and pay the examination fee.

Upon selection of the exam, you are required to make fee payment online. Payment confirmation will be sent to you.

You will not be able to proceed any further with registering for an online examination without payment.

Examination fee

For information about the fee, refer to the [Fees Notice](#) on the website under Resources/Secondary legislation. Your examination fee invoice will advise if your payment is to be inclusive or exclusive of GST.

Once payment has been confirmed, when registration opens you will be provided with the URL to the online examination portal and a unique authorisation code.

Setting up your candidate account

Before you can register for the exam, you must create a candidate account on the online examination portal (Webassessor). You will need to enter your contact details and create your own username and password.

Choose an examination date and time

Once you have created your candidate account, you will be able to select a date and time to sit your online examination. You will be required to enter your unique authorisation code to complete your registration for the examination.

Online proctoring

You will need to complete your examination online. Online proctoring means that you log on through the internet to take your examination. You are monitored by a proctor employed by Kryterion Inc during your entire testing session in real-time. This monitoring involves your face, voice, desk and workspace being captured via a webcam. A recording is made of these images for examination security and the integrity of the examination process.

***Proctoring:** *being monitored.*

Preparing for your examination

You must take time to prepare for your online examination.

You can sit a practice examination

Sitting a practice exam can help you to become familiar with the structure and question style of a typical examination. Before you can access a practice examination, you must have completed your candidate account's set-up on the Webassessor website.

You can sit a practice exam as many times as you like, and there is no cost involved.

Please note some questions contained in a practice examination may be included in a real-time examination.

Examination reference texts

All examination questions are linked to reputable and contemporary medical imaging and/or radiation therapy reference resources.

A list of reading resources has been provided in Appendix 2. While this list provides a good cross section of academic and professional material used in developing examination questions, it is not exhaustive.

When searching for other reference and resource materials, you should ensure the material is relevant to current professional practice. You must also be aware there are specific legal and practice requirements in New Zealand. Please take care when using resources that reference overseas laws, regulatory requirements, or specific practice requirements as they may differ from practice in New Zealand.

If you have a disability, you can request additional supports for the day of the examination

If you have a disability, you can request support for appropriate assistance to sit the examination for the following special needs:

- **A visual impairment:** The examination can be delivered with larger fonts and higher contrasting colour and reader assistance.
- **A hearing impairment:** Support can be provided to ensure examination supervisors adequately communicate instructions.
- **Other physical or mental impairments** must be supported by appropriate documentation provided by the candidate and will be considered on a case-by-case basis.

You must make sure you email your special needs request to the Board at mrt@medsci.co.nz at least 30-days prior to your scheduled examination date.

What to do if you are unable to make your scheduled examination

You have up to 72-hours before your scheduled examination date and time to advise Webassessor and the Board that you are unable to sit your examination on that day. You will then be given instructions on re-applying to sit your examination on a different day, at no additional cost.

If you fail to advise Webassessor and the Board at least 72-hours before your scheduled examination date, you are unable to claim any refund for your pre-paid examination fee. You will need to make a new application to sit an online examination and pay another examination fee in full.

Special considerations

In some instances, you may ask for special consideration regarding being unable to sit or complete an examination due to circumstances beyond your control. You may be allowed to re-sit an examination at the next available date without incurring an additional examination fee.

Special considerations are not a means for circumventing the Board's usual examination process and are only accepted from eligible candidates. Special considerations are only considered upon receipt of adequate supporting evidence and will only be approved if the Board's Examinations Committee agrees there were exceptional circumstances beyond your control.

Special consideration will not lower the required pass mark, nor will it improve your overall score.

The only possible outcome of a special consideration is that you may be allowed to sit or re-sit an examination without incurring an additional examination fee.

Special consideration situations may include:

- acute illness such as hospital admission, sudden onset, or serious illness
- loss or bereavement such as the death of a close family member
- hardship or trauma – for example, being a victim of a crime, having a severe disruption to domestic life
- unforeseen call-up for service such as military service, court appearance, jury service
- extraordinary work commitments beyond your control. An official letter from your employer confirming the situation must be attached to your special consideration application
- an unresolved computer malfunction
- an emergency event necessitating an evacuation.

A request for special consideration based on the content of an examination will not be considered.

The day of your examination

You will undergo a security check

You will be monitored by a proctor employed by Kryterion Inc during your entire testing session in real time. This monitoring involves your face, voice, desk and workspace being captured via a webcam. A recording is made of these images for examination security and the integrity of the examination process.

The required testing environment

- The room is well lit, quiet, and free from distraction.
- The testing surface is clutter-free and contains only one computer, one monitor, one keyboard, and one mouse.
- Lanyards/badges, watches, bracelets, and necklaces are not permitted to be worn during testing. Please remove all items from your neck and wrists.
- Religious garb is subject to visual inspection for recording devices or unauthorised test aids before being permitted.
- Glasses are subject to visual inspection for recording devices before being permitted.
- Interaction with another individual during your test session is not permitted.
- You may not use dual monitors.
- You cannot take a break for any reason. If you leave the workstation during the exam. Kryterion will inform the MRTB.
- You may not lean out of the camera view during your test session. The proctor must be able to see you at all times.
- Cell Phones are not permitted in the testing area.
- Reading the exam aloud is prohibited.
- You will be recorded during the entire exam experience.

Materials not allowed during online proctoring

- Cellphones – not permitted in the testing area.
- Personal items - lanyards/badges, watches, bracelets, and necklaces are not permitted to be worn during testing.
- Dual monitors – you may not use dual monitors. The testing surface is clutter-free and contains only one computer, one monitor, one keyboard, and one mouse.
- You may not lean out of the camera view during your test session. The proctor must be able to see you at all times.
- Water is not permitted in the examination room.



Reporting problems

You **must** immediately advise Kryterion of any computer problems, noise disturbance, or other distractions that affect your ability to take the exam. Failure to do that will not usually be accepted as mitigating circumstances after the exam.

If the issue is not resolved and you believe it will affect your examination outcome, you must notify Kryterion and the MRTB Regulation Advisor Examinations immediately.

Examination results

You will be provided with your examination results approximately 3three weeks after you have sat the examination. Please do not expect to receive your results any sooner. This is the minimum amount of time needed to analyse the examination results for all candidates and conduct a post examination psychometric assessment to ensure all questions were fair, valid, and reliable.

Your examination results will be sent to your email address and reported as a *successful and unsuccessful result*.

Receiving an unsuccessful examination result

Should you be unsuccessful in an examination, you will receive limited feedback indicating the domain or domains where your examination performance suggests you should apply additional focus and preparation for any future attempts.

There are a limited number of times you can sit an examination

1✓

2✓

3✓

4✗

You can take an examination up to a maximum of three attempts – that is, the first examination and then up to two more attempts. You are required to pay the full examination fee for each attempt.

You must sit your first examination within the 12 months from the date you were advised an examination was required. Any subsequent attempts must be taken within the 12 months after you sit your first examination. There must be a gap of at least three-months between each examination attempt.

If you are unsuccessful in the examination after three attempts, the Board is of the general view that you have demonstrated an inability to apply foundational knowledge and concepts to the minimum level required for the safe practice of medical imaging or radiation therapy in New Zealand. In this instance, you would be advised by the Board that they propose to decline your application for registration. In accordance with New Zealand legislation, you will be given an opportunity to be heard in respect of the proposal to decline your application.

Appendix 1: Reading resources

New Zealand Medical Radiation Technologists Board Competence Standards for Medical Imaging and Radiation Therapy Practice in New Zealand (July 2018)

New Zealand Medical Radiation Technologists Board Code of Ethics

Other registration standards, guidelines and policies of the Medical Radiation Technologists Board – www.mrtboard.org.nz

The Office of Radiation Safety. *Codes of safe practice for radiation use.*

<https://www.health.govt.nz/publication/code-practice-diagnostic-and-interventional-radiology>

Health and Disability Commissioner. (2014). Code of Health and Disability Services Consumer's rights. <http://www.hdc.org.nz/your-rights/about-the-code/code-of-health-and-disabilityservices-consumers-rights/>

<https://www.hdc.org.nz/your-rights/about-the-code/code-of-health-and-disability-servicesconsumers-rights/>

Health practitioners Competence Assurance Act 2003

<https://www.legislation.govt.nz/act/public/2003/0048/latest/DLM203312.html>

Privacy Act 2020 <https://www.legislation.govt.nz/act/public/2020/0031/latest/LMS23223.html>

Australasian Society for Ultrasound in Medicine. A.J.U.M. (23/02/2017). *Guidelines for reprocessing ultrasound transducers*

The Royal Australian and New Zealand College of Radiologists. (2017). *MRI safety guidelines.*

Bontrager, K. and Lampignano, J. (2014). <https://www.ranzcr.com/college/document-library/ranzcr-mri-safety-guidelines> *Textbook of Radiographic Positioning and Related Anatomy.* 8th ed. Missouri: Mosby Elsevier

Bushberg, J.T., Selbert, J.A., Leidholdt, E.M., and Boon, J.M. (2020). *The Essential Physics of Medical Imaging.* 4th ed. Philadelphia: Lippincott, Williams &Wilkins

Bushong, S.C. (2020). *Radiologic Science for Technologists: Physics, Biology and Protection.* 12th ed. Mosby

Carter, C. (2022). *Digital Radiography and PACS.* 4th ed. Mosby

Chan, O. (2007). *ABC of Emergency Radiology.* 2nd ed. Wiley Blackwell

Eisenberg, R Johnson, N.M. (2024) *Comprehensive Radiographic Pathology* 8th Edition. Mosby

- Rollin, J., Long, B. and Curtis, T. (2022). *Merill's Atlas of Radiographic Positioning and Procedures – 3-Volume Set*. 15th ed.
Missouri: Mosby Elsevier
- Linn-Watson, T. (2014). *Radiographic Pathology*. 2nd ed. Lippincott, Williams & Wilkins
- Martini, F.H., Nath, J.L. (2011). *Fundamentals of Anatomy and Physiology*. 9th ed. San Francisco: Person Education
- Moore, K.L., Dalley, A.F., and Augur, A.M.R. (2023). *Clinically Oriented Anatomy and Physiology*. 9th ed.
Lippincott, Williams & Wilkins
- McQuillen-Martensen, K. (2006) *Radiographic Image Analysis*. 6th ed. St Louis: Saunders
- Neri, E., Caramelia, D, and Bartolozzi, C. (2008). *Image Processing in Radiology: Current Applications*.
Springer Verlag
- Reiser, M.F., Becker, C.R., Nikolaou, K, Glazer, G. (2010). *Multislice CT*. 3rd ed. Springer.
- Seeram, E. (2022). *Computed Tomography: Physical Principles, Clinical Applications and Quality Control: 5th ed.*
- Statkiewicz, M., Visconti, P. and Ritenour, E. (2021). *Radiation Protection in Medical Radiography*.
9th ed. Missouri: Mosby Elsevier
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- Barrett, A., Dobbs, J., and Tom, R. (2009). Principles of radiotherapy planning. In *Practical Radiotherapy Planning* (4th ed., pp. 9–31). London, UK: CRC Press
- Khan, F. (2020). *The Physics of Radiation Therapy*. 6th ed. Lippincott, Williams & Wilkins
- Mundt, A.J., Roeske, J.C. (2010). *Image-Guided Radiation Therapy: A Clinical Perspective*.
PMPH USA Ltd Series
- Pawlicki, T., Dunscombe, P., Mundt, P., and Scalliet, P. (2011). *Quality and Safety in Radiation Therapy*.
CRC Press
- Shrieve, D.C., Anker, C.J., and others. (2012). *Radiation Oncology: Imaging and Treatment*. Lippincott, Williams & Wilkins
- Washington, C.C., Leaver, D. (2021). *Principles and Practice of Radiation Therapy*. 5th ed. Mosby Elsevier

Christian, P.E., and Waterstram-Rich, K.M. (2011). *Nuclear Medicine and PET/CT: Technology and Techniques*. 7th ed. Mosby

Khalil, M.M. (2011). *Basic Sciences of Nuclear Medicine*. Springer

Powsner, R.A., Palmer, M.R., and Powsner, E.R. (2021). *Essentials of Nuclear Medicine Physics and Instrumentation*. 4th ed. Wiley Blackwell

Waterstram-Rich, K., and Gilmore, D. (2017). *Nuclear Medicine and PET/CT Technology and Techniques*. 8th ed.
Missouri: Elsevier

Essentials of Nuclear Medicine and Molecular Imaging, Seventh Edition. 2019 By Fred AMettler, Jr. and Milton J. Guiberteau

Nuclear Medicine and Molecular Imaging: The Requisites, Fifth Edition 2021 By Janis P. O'Malley & Harvey A. Ziessman & James H. Thrall

[EANM Guidelines](#)

ANZSNM [Quality and Technical Standards Committee Documents](#)

[Procedure Standards | SNMMI](#)

Gill, R. (2015). *The Physics and Technology of Diagnostic Ultrasound*. Sydney: High Frequency Publishing

Hagen-Ansert, S. (2023). *Textbook of Diagnostic Sonography*. 9th ed. Missouri: Elsevier

Pausher, D. (2015). *Primer and Clinical Significance of Artifacts in Ultrasound*. University of Chicago Medicine and Biological Sciences

Rumack, C. (2023). *Diagnostic Ultrasound*. 6th ed. Philadelphia: Elsevier Mosby

Paltiel, H.J.; & Lee, E.Y. (2021) [Pediatric Ultrasound](#) Springer (available online)

Jacobson, J.A. (2018) [Fundamentals of musculoskeletal ultrasound](#). Philadelphia: Elsevier

Hogge, W., Wilkins, I., Hill, L. & Cohan, B. (Ed.'s) (2017). *Sanders structural fetal abnormalities: the total picture* (3rd ed.). New York: McGraw Hill Education.

National Screening Unit. (2015) *Antenatal Screening for Down's Syndrome and Other Conditions*. www.nsu.govt.nz

New Zealand Ultrasound Obstetric Guidelines:

<https://www.tewhaturora.govt.nz/for-health-professionals/health-workforce-development/maternity/new-zealand-obstetric-ultrasound-guidelines-online>

Artifacts in diagnostic medical ultrasound: Volume 1: Grayscale artifact

- by Martin Necas 2012 1st ed

Hashemi, R.H., Bradley, W.G., and Lisanti, C. (2017). *MRI: The Basics*. 4th ed. Lippincott, Williams, and WilkinsMcRobbie, D., Moore, E., Graves, M., and Prince, M. (2017). *MRI from Picture to Proton*. 3rd ed. Cambridge: Cambridge University Press

Westbrook, C., Roth, C. K., and Talbot, J. (2011). *MRI in Practice*. 4th ed. West Sussex: John Wiley and Sons Ltd.

Westbrook, C., and Talbot, J. (2018). *MRI in Practice*. 5th ed. Wiley-Blackwell

Runge, V. M., & Heverhagen, J. T. (2022). *The physics of clinical MR taught through images*. (Fifth edition / Val M. Runge, Johannes T. Heverhagen.). Springer. <https://doi.org/10.1007/978-3-030-85413-3>

Appendix 2: Online proctoring – preparing for your exam



Online Proctored Guidance

Online testing requirements: What you need to know

Summary: Online or remote proctored exams should be done on a personal computer, no virtual machines are allowed, and the LockDown Browser download/installation may require an Administrative user account.

Solution (Public)

Kryterion strongly recommends use of a non-work related or personal computer for online proctored (OLP) exams.

In order to participate in an OLP exam, you must download and install the provided Secure Browser software. This may require administrator privileges in your system. Launching the Secure Browser software will not work on its own; refer to article: [How to Launch an Online Proctored \(OLP\) Exam](#)

Those administrative user privileges may not be available in corporate networks. This is why we ask you to use a non-work related or personal computer for online proctored exams.

Online Testing Requirements: What You Need to Know

For information regarding the system requirements for your Online Proctored Exam: [Click Here](#)