In order to demonstrate to The RCT assessment panel that you are working at a sufficient level, it is necessary to produce a portfolio of evidence detailing how you meet each of the standards. Not everyone will have first-hand experience of every aspect and in these cases, you will need to demonstrate an understanding of the subject in lieu of being able to present first-hand evidence. First hand evidence is however preferential and in many cases without this you may not meet the requirements for entry. Your portfolio should be one complete document in PDF form and not submitted as multiple separate files. It should show an index at the front of the document and page numbers which are referenced against the evidence matrix. To assist you with the production of your evidence portfolio further, the RCT has given examples of the types of evidence which could be seen as acceptable for each of the criteria, details of which are below.

**A. Safe Working Practice**

1. Provide evidence that you are competent with a range of generic skills including mandatory training e.g. infection control and basic life support

* Explain how health and safety affects your day to day role.
* Provide details on infection control measures you adhere to when scanning patients.
* Show you have completed your mandatory infection control, life support, safeguarding and manual handling training and explain how this relates to your work.

2. Demonstrates an understanding and application of health and safety and risk management in all aspects of the Clinical Technologists role

• Can you demonstrate how your local health and safety policies cover your work or show an understanding of the risks around working in a clinical setting/lone working? Can you provide evidence how you meet these requirements in your day to day role?

• Show you have completed your mandatory health and safety training and explain how this relates to your work.

3. Demonstrates an understanding of, and works within, all relevant legislation to their role including departmental local rules and employers’ procedures

• Provide evidence of IRMER/IRR training

• Can you identify relevant legislation which governs your role? Are you able to identify the roles of others such as radiation protection advisers, or manual handling facilitators?

4. Perform health and safety risk assessments (including radiation risk assessments for ionising radiation in accordance with standard operating procedures

• Have you performed any risk assessments? If not, you may need to learn how to do one and carry out a range of assessments covering several aspects of your role. These may include COSHH, decontamination, moving and handling or radiation risk assessments.

• If you are unable to perform a risk assessment you could review one already carried out and comment on its suitability and how it applies to the workplace.

5. Provide evidence of radiation incident reporting

• Are you involved with reporting or investigating incidents? Provide either evidence that this is part of your role or demonstrate an understanding of the processes involved.

6. Demonstrates effective communication skills and team working

• Can you demonstrate who you communicate with in your daily role and how your team working benefits the service?

7. Demonstrates a professional approach to all aspects of the Bone Densitometry Technologists role

• Provide evidence to show how you have dealt with challenging situations in a professional manner.

• Describe how you work on a day to day basis in a professional manner, how do you comply with patient confidentiality or governance issues.

• Do you have any direct feedback from patients from patient satisfaction surveys or thank you cards?

8. Assists in giving instructions to patients and colleagues regarding radiation hazards, doses and restrictions

• Explain what instructions you give to patients before commencing routine scans. Do you provide any additional advice for patients with carers?

9. Demonstrates reflective practice as part of the learning process

• Provide evidence of reflective practice and how this has changed your technique or how you carry out a specific task.

**B. Equipment Management**

1. Performs cleaning/decontamination of equipment

• Explain how you clean equipment prior to and after use. Do you have any records of this which you can provide?

• What additional cleaning do you perform if a patient has MRSA or other infectious diseases?

2. Performs routine equipment quality control checks and review and interpret results

• Explain what quality control checks you do and how you determine if the equipment is safe for use. Eg daily QC checks that you do in your department. Are there any additional periodic checks made? What is your involvement in this?

• How do you decide the equipment is safe to use? What are the parameters you base this decision on?

• Explain what quality control checks you do and how you determine if the equipment is safe for use.

3. Performs basic fault finding and first line user maintenance

• Explain the procedure you follow if a piece of equipment is out of specification/faulty and what you would do?

4. Demonstrates an understanding of quality management systems

• Do you work under a Quality Management System? If so, what is your role in maintaining it? How are your procedures affected by the QMS? What benefit do you gain from it?

• If you don’t have a Quality Management System, show that you understand what the process entails and how it might affect processes within your department.

**C. Bone Densitometry**

1.Physical Principles of X-Ray Densitometry

• Provide evidence of the understanding of how DXA scans are acquired including how x-rays are generated, how they interact with different material, differences between manufacturers, limitations and assumptions that are made

• Provide evidence of understanding of statistics in relation to DXA Eg. Normal distribution, error, precision and accuracy, confidence levels, least significant change, monitoring time intervals

2. Perform all aspects of patient preparation imaging and compliance with legislation. Adhering to standards of professional practice throughout.

• Provide evidence to show that you are able to independently carry out patient preparation prior to a Bone Densitometry procedure.

• What checks are done prior to scanning? Are there specific checks which are done before specific scans? E.g. assessing if the patient has had any hip replacements.

• What piece of legislation are you complying with?

3. Operate equipment safely across all DXA acquisitions to produce high quality results for interpretation.

• Provide evidence to show that you are able to independently carry out a range of DXA scans, explaining optimum patient positioning, identification of lumbar anatomy, exclusion criteria, causes of precision errors, scan speeds, protocols and why they are used.

• Provide evidence to show accurate analysis of a range of DXA scans

• What is the rationale for vertebral fracture assessment (VFA)? How does this compare to conventional spinal imaging? What are the different qualitative and quantitative approaches to fracture identification and the strengths and limitations of each?

• Provide evidence of understanding scanning young people, including what software should be used, which sites should be measured, potential problems and issues and limitations of interpretation.

• Provide evidence of understanding of other Densitometric techniques eg pDXA, QCT, pQCT, HRpQCT, QUS, TBS etc

4. Show an understanding of understanding technical interpretation of Bone densitometry results

• Describe the calculation of BMD from a DXA scan, the use of T & Z scores, reference data

and how this is collected and which range is used for patients of differing ethnicity and age

• Provide evidence of understanding the interpretation of different scans. Is the scan of a diagnostic quality? Has appropriate vertebrae been included/excluded and reason for the decision? What is the diagnosis using the WHO criteria ie. Normal / osteopenic / osteoporotic / severely osteoporotic

• Provide evidence to show you have identified anomalies when scanning/analysing Eg. Vertebral fractures, clothing artefact etc. Was the artefact excluded from the analysis? Will this have impact on the diagnostic quality/usability of the scan?

• Discuss a clinical cases including all aspects of referral, scan quality, diagnosis outcome and fracture risk assessment

5. Show an understanding of Osteoporosis and fracture risk

• Give a description of your understanding of Osteoporosis, including Epidemiology, clinical presentation, etc

•Explain how this relates to fracture risk and what risk factors affect this. Give examples of fracture risk assessment tools and how they differ.

6. Assist in appointment scheduling

• Outline your role with this. Explain some of the challenges in booking E.g. accommodating hoist patients.

7. Assist with clinical audit

• Does your department have an audit schedule? What has been your involvement with this? Can you provide evidence?

• If you haven’t been involved can you explain the rationale behind a particular audit and how the results changed/modified working practices?

8. Assist with peer audit

• Does your department have a peer audit schedule? What does this involve? What has been your involvement? How has the process changed/modified the way you work? Can you provide evidence?

9. Demonstrates accurate recording keeping

• Provide evidence to show your involvement in record keeping in the department. E.g. patient questionnaires, daily cleaning logs, etc.

**D. Good Scientific Practice**

1. Adhere to relevant standards of professional practice as defined in Good Scientific Practice. Demonstrate that you have read, understood and comply with this document in all aspects of work

• Good Scientific Practice is a document written by the Academy of Healthcare Science, a copy of which is available on the Academy for Healthcare Science website.

• This document sets out the principles and values expected of the Healthcare Science workforce.

• Demonstrate how you have the ability to recognise your own limits of technical expertise and use professional judgement in all aspects of clinical and technical practice.