


Fairuuj Mahama

Diagnostic Medical Sonographer

 Kumasi Ghana

 233-248-034746

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Seasoned Diagnostic Medical Sonographer with success in building relationships with patients to produce the highest quality images. Highly proficient in interpreting physicians' orders, determining appropriate imaging, and maintaining comprehensive patient records. Offering 8 years of experience across multiple modalities.

Currently serving as Head of the Medical Imaging Department at Spectra Health Imaging and Interventional Radiology, Kumasi, where I oversee departmental operations, ensure compliance with imaging standards, and provide mentorship and technical supervision to staff and trainees. I am also a Co-Founder and CEO of Switch Medical Diagnostic Services, a private imaging startup focused on accessible, patient-centered diagnostic care. Additionally, I am a Clinical Instructor at the Department of Medical Imaging, Kwame Nkrumah University of Science and Technology (KNUST), mentoring students and facilitating hands-on training in ultrasound and cross-sectional imaging. My strong background in ultrasound elastography research, coupled with my clinical leadership and teaching experience, underpins my commitment to evidence-based imaging practice and patient-centered care.

Professional Registration


Allied Health Professions Council of Ghana (AHPC)

Registered diagnostic medical sonographer *(In good standing)*
Registration **Number:** 07001819.

Skills

Excellent in performing ultrasound Elastography for various organs, including liver, Breast, Thyroid, and Prostate. 

Advanced

Excellent in guiding clinicians in ultrasound-guided interventional procedures such as biopsies, FNAC, and aspirations at various body parts. 

Advanced

Excellent scanning skills, image acquisition, and interpretations 

Advanced

Good communications and patient relations. 

Advanced

Computer literacy and internet research skills. 

Advanced

Leadership and entrepreneurship

2023 - Current

Co-Founder and CEO

Switch Medical Diagnostic Services – Kumasi, Ghana.

Co-founded a private diagnostic center providing ultrasound and laboratory services. Offer strategic leadership, oversee operational management, and provide professional guidance on imaging quality and service delivery. Occasionally supervise imaging workflow and consult on complex cases.



Work History

2018 - Current

Head of medical imaging department/Registered Diagnostic Medical Sonographer

Spectra Health Imaging and Interventional Radiology, Kumasi.

Job Description

Leadership and Administrative Responsibilities

- Head of the Medical Imaging Department, responsible for coordinating day-to-day operations across all imaging units, including ultrasound, mammography, fluoroscopy, CT, MRI, and interventional radiology.
- Oversee scheduling, workflow management, and quality assurance to ensure efficiency, patient safety, and compliance with national and international imaging standards.
- Supervise and mentor radiographers, sonographers, and student interns on safe imaging practices, radiation protection, and patient-centered care.
- Liaise with radiologists, physicians, and administrative teams to ensure seamless patient service delivery and adherence to best clinical practices.
- Contribute to departmental policy development, equipment maintenance planning, and continuous professional development (CPD) sessions for staff.

Performing Ultrasound Examinations

- Conducting routine and specialised ultrasound examinations for patients of all age groups, including paediatric, adult, and geriatric patients.
- Skilled in handling both ambulatory and non-ambulatory patients, as well as those with special needs or limited mobility, ensuring their comfort and safety throughout the procedure.
- Performing a wide range of examinations including abdominal, pelvic, obstetric and gynaecological, musculoskeletal (MSK), small parts, breast, thyroid, prostate, scrotal, renal, vascular, and soft tissue studies.
- Experienced in specialised procedures such as 4D obstetric ultrasound, developmental dysplasia of the hip (DDH) ultrasound, transcranial Doppler studies and transfontanelle ultrasound.
- Selecting appropriate ultrasound techniques and adjusting equipment settings to obtain optimal images based on clinical indications.
- Positioning patients correctly to achieve the best acoustic windows and diagnostic image quality.

Operating Ultrasound Equipment

- Operating and maintaining ultrasound machines, ensuring their proper functioning and safety.

- Calibrating and adjusting equipment settings to achieve the desired image quality.
- Following safety protocols and ensuring patient comfort and safety during the procedure.

Image Acquisition and Analysis

- Capturing high-quality images of the targeted body area using ultrasound technology.
- Analyzing images to identify and document abnormalities, anomalies, or diseases.
- Collaborating with radiologists or other healthcare professionals to assist in interpreting the images accurately.

Patient Care and Communication

- Explaining the ultrasound procedure to patients and addressing their concerns and questions.
- Providing patient education about the examination process and preparation requirements.
- Ensuring a comfortable and reassuring environment for patients during the procedure.

Documentation and Recordkeeping

- Maintaining accurate and complete patient records, including medical history, images, and examination findings.
- Documenting technical details and observations during the ultrasound examination.
- Adhering to confidentiality and privacy regulations in handling patient information.

Collaboration and Teamwork

- Collaborating with a multidisciplinary healthcare team, including physicians, radiologists, and nurses, to ensure coordinated patient care.
- Communicating effectively with other healthcare professionals to discuss imaging results and provide insights for diagnosis and treatment.

Ultrasound-Guided Interventions

- Proper pre-procedure patient preparation and positioning.
- Analysing the lesion(s) and carefully adjusting the machine setting to optimum.
- Stable and correct hand positioning.
- Ability to focus on the needle and lesion.

Ultrasound Elastography

- Performing ARFI elastography and 2D shear wave elastography on liver to determine general stiffness as a determinant of fibrosis.
- Performing strain elastography, ARFI elastography and 2D shear wave elastography on breast, thyroid and prostate lesions to determine their stiffness as an extra tool to rule out or rule in malignancy.
- Performing the various elastography techniques on other parts of the body.

Continuing Education and Professional Development:

- Staying updated on advancements in ultrasound technology, equipment, and imaging techniques through ongoing education and training.
- Maintaining relevant certifications and licenses to practice as a sonographer.
- Pursuing opportunities for professional development and skill enhancement.
- Participating in in-house CPD sessions.

Teaching

- Serving as a clinical instructor at the Department of Medical Imaging, Kwame Nkrumah University of Science and Technology (KNUST).
- Teaching students and interns fundamental sonographic principles and procedures through observation, organised tutorials, and supervised hands-on sessions.
- Teaching assistant after my BSc for the department of medical imaging, KNUST.

2018 - 2018

Registered Diagnostic Medical Sonographer

- *Stewards Hospital, Kumasi.*
- Performed diagnostic and interventional sonographic procedures.

2017 - 2018

Registered Diagnostic Medical Sonographer

- *Poku Transport Hospital, Kumasi.*
- Performed diagnostic and interventional sonographic procedures.

2017 - 2018

Registered Diagnostic Medical Sonographer

- *Focus Diagnostic center, Kumasi.*
- Performed diagnostic and interventional sonographic procedures.

2017 - 2018

Teaching Assistant

- *Department Of Medical Imaging, KNUST, Kumasi.*
- Organised tutorial sections for students.
- Took students through practical hands on sections on various sonographic procedures.
- Gives students reading assignments and organises discussion sections.

2016 - 2017

Student Sonographer

- *Komfo Anokye Teaching Hospital (KATH), Kumasi.*
- Assists sonographers and radiologists in various sonographic procedures.

2013 - 2013

Sonographer Intern

- *Ashanti Akim South Government Hospital, Juaso.*
- Basic Nursing training.



Education

2023 - 2025

Master of Philosophy (MPhil) in Medical Imaging

Kwame Nkrumah University of Science and Technology (KNUST) – Kumasi.

Completed advanced postgraduate training and research in medical imaging, focusing on diagnostic applications and imaging innovations.

2013 - 2017

Bachelor of Science (BSc) in Sonography

Kwame Nkrumah University of Science And Technology (KNUST) – Kumasi.

Achievements at KNUST:

- Best Sonography Student, 2013/2014 (First Academic Year).
- Best Sonography Student, 2014/2015 (Second Academic Year).
- Best Sonography Student, 2015/2016 (Third Academic Year).
- Best Graduating Student in Sonography, 2017.

2008 - 2012

WASSCE: General Science

Presbyterian Senior High School – Bechem.

Science program with subjects in - English, social Studies, Mathematics, Science, Physics, Chemistry, Biology, Elective Mathematics.



Research

Research Experience (2018 – 2025)

- Advancing Breast Cancer Diagnosis: The Impact of Elastography Integration Into BIRADS Categorization. *Published research exploring how elastography enhances accuracy in BIRADS classification.* [DOI: [10.7759/cureus.65449](https://doi.org/10.7759/cureus.65449)].
- Shear Wave Elastography in Breast Cancer: Unveiling Correlations With Histopathological Grades and Subtypes. *Published study assessing the relationship between elastography findings and histopathological subtypes of breast cancer.* [DOI: [10.7759/cureus.63759](https://doi.org/10.7759/cureus.63759)].
- Microwave Thermal Ablation for Breast Cancer in Africa: A Pioneering Case Report Utilizing TATOpro. *Published case report documenting the first known use of microwave thermal ablation (TATOpro) for breast cancer in Africa* [DOI: [10.7759/cureus.64029](https://doi.org/10.7759/cureus.64029)].
- **MPhil Research:** Diagnostic Value of Ultrasound Elastography in Differentiating Benign and Malignant Breast Lesions in Ghana. *Kwame Nkrumah University of Science and Technology (KNUST), 2025.* This postgraduate research includes a systematic review and meta-analysis titled “The Diagnostic Value of Strain Elastography in Inflammatory Breast Lesions,” registered on the International Prospective Register of Systematic Reviews (PROSPERO), registration number CRD420251015836. Manuscript in preparation.
- **BSc Thesis project,** “ Incidence of Goiter in Ghanaian Hypertensive Patients” at Komfo Anokye Teaching Hospital.
- Assisted in research on “Urinary Iodine Status and Thyroid Volume of School Children from 6-12 years within Ejisu Juaben Municipality” by the Department of Medical Imaging and the Department of Medical Laboratory Sciences, KNUST.
- **ROLE:** Examination of the thyroids of 400 basic school Pupils in six different schools in the Ejisu Juaben Municipality, Ashanti Region.



Conference presentations and dissemination

Poster Presentation

- Mahama, F. (2025). Diagnostic Utility of Shear Wave Elastography in Identifying Malignant Breast Lesions in the Ghanaian Population. Poster presented at the KNUST College of Health Sciences 11th Biennial Scientific Conference, Kumasi, Ghana.
- Presented findings from MPhil thesis highlighting the diagnostic value of Shear Wave Elastography (SWE) in differentiating malignant and benign breast lesions in a Ghanaian cohort.



Software

- CobaltRIS
- Syngo.Via
- Microsoft Office (Word, Excel, and PowerPoint)
- Statistical Package for Social Sciences (SPSS)



Hobbies

- Research
- Reading
- playing video games



Referees

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