

The great divide



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In contrast to other African countries, South Africa is classified as an upper-middle-income country in 2024–2025 according to the World Bank data.¹ However, there is a stark dichotomy across the country's rural and urban areas, and public and private healthcare provision. While natural and mineral resources abound, water and energy constraints continue, compounded by ongoing security issues. Healthcare providers face the quadruple disease burden in South Africa, which includes communicable diseases such as HIV and AIDS, as well as tuberculosis; non-communicable diseases such as diabetes, cardiac disease and malignancy; maternal, neonatal and child health; as well as violence-related trauma.² While these factors call attention to the local divide, there is an even greater divide when comparing South Africa to the developed or high-income countries, which are only one tier above.

The 2025 issue of the *South African Journal of Radiology* clearly highlights the trials faced by present-day local radiologists. In their 5-year record review of interventional radiology practice, Madingwane and Creamer underscore the value of local interventional expertise, particularly in the face of more favourable less invasive procedures for pathologies previously managed with surgery. The demand for and interest in subspeciality interventional training is further expressed by Idrees et al. in their qualitative article analysing local registrar training needs. With local training programmes in infancy, interventional expertise is often sought internationally and there is still a dire shortage of skill. The companion interventional radiology research by Thompson et al. evaluates the outcomes of transjugular intrahepatic portosystemic shunt (TIPS) procedures in a South African centre, comparing the Viatorr and WallFlex stents. While both stents had comparable outcomes, the study also focuses on the stent types available in South Africa and problem solving when standard or ideal procedural equipment is not available. There are only two liver transplant unit centres in South Africa compared to five in Australia,³ which has a similar population size, 183 in India,⁴ and more than 150 in USA⁵ and Europe⁶ each.

Pivoting to breast imaging, the published articles once more mention the lack of a screening programme in South Africa and the need for broader national research. De Lima et al. observed a stable breast cancer age presentation and breast cancer subtype profile in their study cohort, evaluated over a 10-year time period. Mthombeni et al. emphasised the integral role of ultrasound and mammography in papillary breast cancer and limited access to breast MRI. More recent work has evaluated artificial intelligence (AI)-enabled point of care ultrasound in breast cancer risk prediction.

The use of AI in local practice is limited. Perceptions and attitudes towards AI were qualitatively assessed by Nicki and Hlabangana documenting a hiatus in AI learning and upskilling. While most registrars were aware of the integration of AI in radiology, few had used AI models. Another local AI research article by Minty et al. examined the automated BoneXpert method for bone age assessment, which correlated positively with manual bone age assessments. Overall, on the AI front, South Africa is strides behind high-income countries.

Comparative international original research manuscripts published in the 2025 volume of the *South African Journal of Radiology* include evaluation of imaging phenotypes in interstitial pulmonary fibrosis based on data from an institutional diffuse lung disease registry from the University of Pennsylvania in the USA (a high-income country), assessing 396 cases of fibrotic interstitial lung disease. Creating registries and collaborating with other universities is an avenue that can be channelled in South Africa for stronger research data. Research on imaging advances is also presented from India, a low and middle-income country, looking at 4DCT parathyroid imaging, elasticity imaging of breast lesions and MR fistulography with percutaneous jelly.

While it is clear that the research landscape is as varied as the per capita income of countries, we must continue to bridge the gap in radiology, while balancing skill and resources and stepping up to align with others. The demand for general radiologists in South Africa

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is transparent but there is also a definite need for subspeciality-trained radiologists. Radiation, contrast and image-guided interventional procedures should be used wisely, effectively and sustainably to provide patients with the best possible services globally.

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