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NEWS RELEASE

UP expert rings the alarm on preventable cancer deaths among South African women

From left to right: Prof Flavia Senkubuge, Prof Greta Dreyer, and Prof Themba Mosia.

PRETORIA - Cervical cancer among South African women is almost entirely preventable and breast cancer outcomes can drastically improve with earlier detection. Yet, too many women – many of them breadwinners and single parents – are dying unnecessarily.

During an inaugural address, titled: 'Preventing Premature Cancer Death', Greta Dreyer, a Professor at the University of Pretoria's Department of Obstetrics and Gynaecology, outlined the human cost of cancer mortality in South African women, especially those under the age of 45.

She highlighted that despite decades of scientific breakthroughs and the availability of vaccines and screening technologies in relation to cervical cancer in particular, many women are still being diagnosed too late. This, Prof Dreyer argued, is not just a public health issue – it's a societal emergency.

“Losing a South African woman means we lose part of the backbone of society,” she said. “They are the educators and mentors, they are the entrepreneurs, the core of rural and agricultural development, and the pillar of homes.”

Prof Dreyer pointed out that with an estimated 6 million female-headed households in the country, more than 12 million children depend directly on a mother’s income. When a mother dies, families often collapse into poverty and children suffer lasting emotional and developmental harm. Yet cervical cancer deaths are largely avoidable.

Cervical cancer: A preventable crisis

While breast cancer has more public awareness and attention, cervical cancer is nearly as common and more deadly. According to Prof Dreyer, this is largely due to stigma, because this is an intimate disease, as well as late detection and systemic barriers to screening. “Women do not speak about their diagnosis and generally do not survive long, leading to reduced consciousness of the problem.”

Prof Dreyer’s work has contributed to understanding the causes of cervical cancer and identifying more accurate ways to screen for it in local contexts. Internationally, Human papillomavirus (HPV) types 16 and 18 lead to most about 70% cervical cancer cases. But when Prof Dreyer and her team studied South African women, they found this percentage to be smaller and that HPV35 was another very common type, particularly in women living with HIV.

This insight shifted the conversation around HPV testing and vaccine effectiveness for South African populations. Collaborating with international researchers and local universities, Prof Dreyer’s team helped develop a screening test tailored to the South African context that can prevent nearly 90% of cervical cancer cases if widely implemented. The PreTect SA, designed specifically for South African women, tests the top eight HPV types found to be most oncogenic (tumour causing) in the population.

Prof Dreyer also started and lead the Vaccine and Cervical Cancer Screen (VACCS) research consortium, which produced a series of “firsts” in the country: first time that maternal screening and child vaccination were linked, the first time that two HPV vaccine doses were administered, the first time self-screening was offered to mothers via schools and the first school-based HPV-vaccine programme.

Yet, despite national HPV vaccination being offered to primary school girls, the programme remains disconnected from maternal screening and broader public education efforts. This disconnect, Prof Dreyer said, undermines the potential impact of the vaccine.

Evidence-based strategies overlooked

Prof Dreyer stressed that while the science behind cervical cancer prevention is well-established, implementation in South Africa remains patchy. Cytology-based screening methods, such as the traditional Pap smear, are difficult to sustain in under-resourced settings. Their effectiveness rely heavily on infrastructure, follow-up systems and population registries that are often lacking in the country.

“Cytology-based screening is highly dependent on health infrastructure, repeated testing, call and recall, and thus cannot be expected to work in South Africa,” she said.

To address this, Prof Dreyer and her research collaborators turned to molecular screening and self-sampling methods, which are more feasible in low-resource environments and easier for women to access. They found that these alternatives were both effective and acceptable to participants. This included the use of tampon-collected samples and molecular testing techniques rather than cytology.

Genetics and personalised treatment

In addition to her work on HPV-related cancers, Prof Dreyer has played a leading role in advancing research on inherited cancer risk, particularly among South African women with breast and ovarian cancer. She was part of the University of Pretoria team that identified BRCA1 and BRCA2 founder mutations among Afrikaner women. These research findings enabled targeted risk-reduction strategies such as genetic testing, preventive surgery and hormone therapy.

Prof Dreyer's current collaboration with the Council for Scientific and Industrial Research (CSIR) explores personalised treatment options for aggressive forms of endometrial cancer.

"Among African women, endometrial cancer often involves the highly aggressive types, for which we lack therapeutic options," she explained. "This urgent need for new therapy for high grade cancer motivated us to collaborate with the CSIR drug-repurposing group."

"This exciting new research aims at personalising therapeutic decisions by growing fresh tumour material to be tested on an individualised, personalised medicine platform. Identifying and testing unusual chemotherapeutic drugs and combinations will hopefully lead us to new drugs and new drug combinations."

As President of the International Gynecologic Cancer Society and a member of the council of the International Federation of Gynecology and Obstetrics (FIGO), Prof Dreyer advocates for evidence-based and context-appropriate interventions both in South Africa and globally. "Cancer control relies on implementing the most applicable technologies in an affordable, sustainable way," she said.

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ABOUT THE UNIVERSITY OF PRETORIA

The University of Pretoria (UP) is one of the largest contact and residential universities in South Africa, with its administration offices located on its Hatfield Campus in Pretoria. This 115-year-old institution is also one of the largest producers of research in South Africa.

Spread over seven campuses, it has nine faculties and a business school, the Gordon Institute of Business Science (GIBS). It is the only university in the country with a Faculty of Veterinary Science, which is ranked the best in Africa. UP has 120 academic departments and 92 centres and institutes, accommodating more than 56 000 students and offering about 1 100 study programmes. It has the most academic staff with PhDs (70%), NRF-rated researchers (613).

The 2025 Times Higher Education subject rankings placed UP first in South Africa in the fields of Accounting and Finance; Architecture; Electrical and Electronic Engineering; Law; Sport Science; and Veterinary Science. UP's Faculty of Law has been ranked as the top law school in Africa for a remarkable eighth consecutive year.

Quacquarelli Symonds (QS) ranked the University among the top five in Africa, as part of their 2024 World University Rankings (WUR). UP was the only South African university featured in the 2023 World University Rankings for Innovation (WURI), falling within in the 101-200 range of innovative universities.

For more information, please go to www.up.ac.za