International Atomic Energy Agency Scientific Forum

# A Decade of Action on Cancer Control and the Way Forward

IAEA
International Atomic Energy Agency
*Atoms for Peace and Development*

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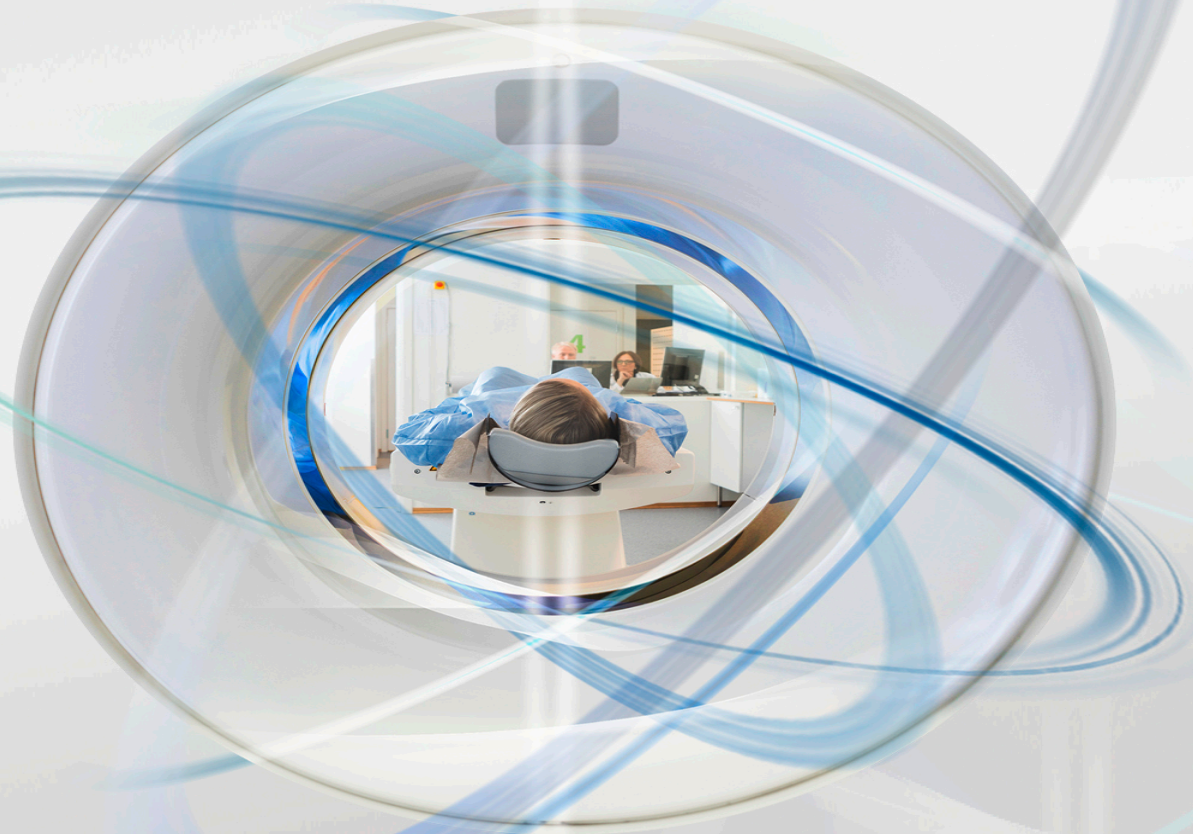
Vienna International Centre
Board Room D, C Building, 4th Floor

## Developing of Cancer Staging Apps such as TNM and FIGO to Support Health Professionals

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# Outline

1. Mobile Health Applications and their Global Health Impact
2. The development of TNM and FIGO Apps
3. Resource-based management and reducing health disparities
4. Current usage and uptake, health technology assessment challenges, potential benefits
5. The future of mobile health applications

# Mobile Health (mHealth) Applications and their Global Health Impact

- mHealth applications: new territory, worldwide access and data, greater distribution of knowledge and health equality
- Mobile applications ('apps') with affordable smart hand-held devices
- Two primary uses for these platforms cater to different groups:
  - clinical decision support for **clinicians** and
  - **patient** self-management

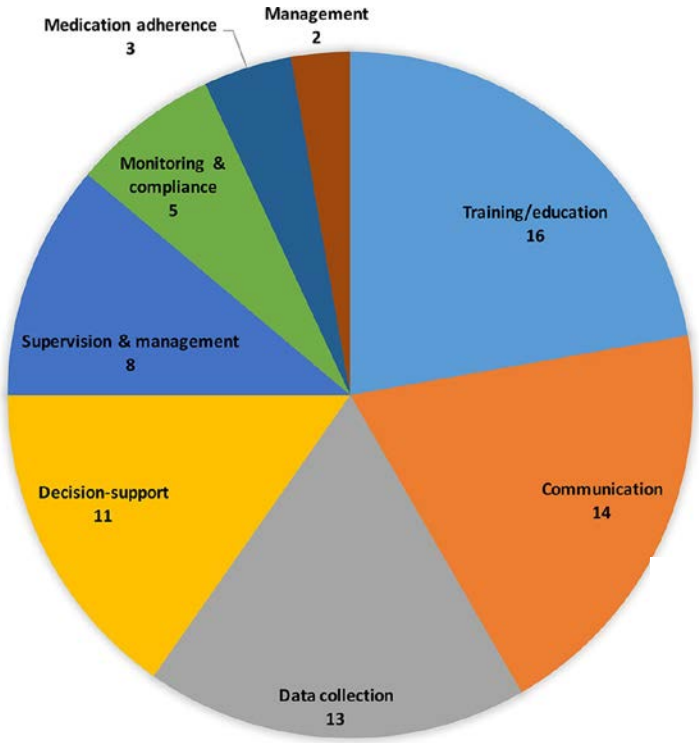
# A) Clinical Decision Support for Clinicians

mHealth apps are becoming a mainstay for clinicians

Focus is on:

- Education (general, specialized, and continuing medical education)
- Reference tools
- Clinical calculator tools
- EHR and data synthesizing platforms
- Communication, management, decision support

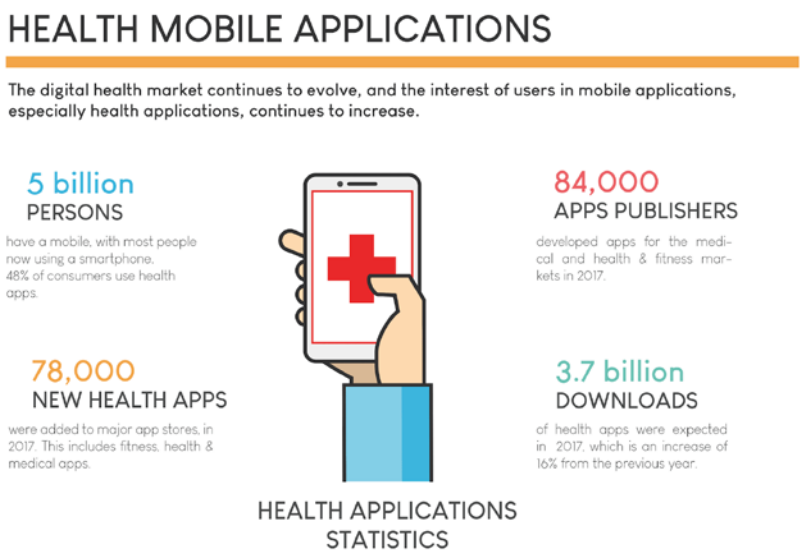

**Overview of mHealth intervention categories- data from 16 reviews on the clinical value of mHealth**




Niall Winters et al. BMJ Open 2018

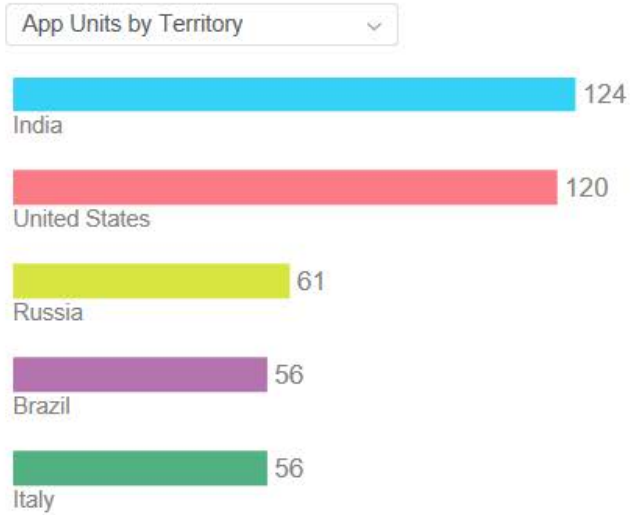
## B) Self- Management for Patients

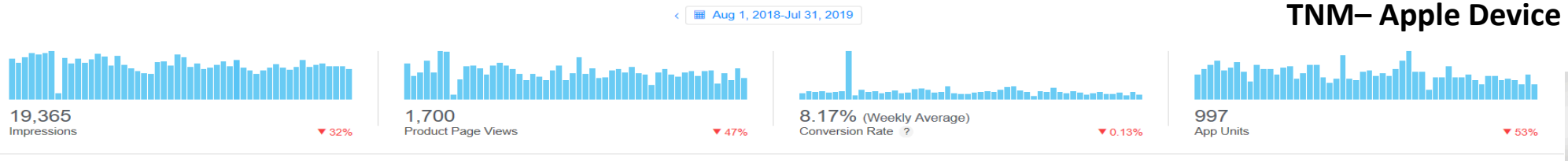
- This growing field of mHealth follows new trends to capture patient health data, providing new ways to promote healthy lifestyle
- mHealth apps have a positive impact on health-related behaviours (physical activity, diet change, adherence to medication or therapy, and health knowledge)
- Promote better clinical health outcomes
- Surveys indicate user satisfaction with mHealth apps to manage their health




# TNM Cancer Staging App

- A simple-to-use mobile app developed to stage all cancers
- Prospective search by Alphabetical, System, Interactive parameters can derive staging values
- The “Universal Search” searches indexes and lists.
- Developed for IAEA in collaboration with Tata Memorial Centre (TMH), Department of Atomic Energy (DAE), India.

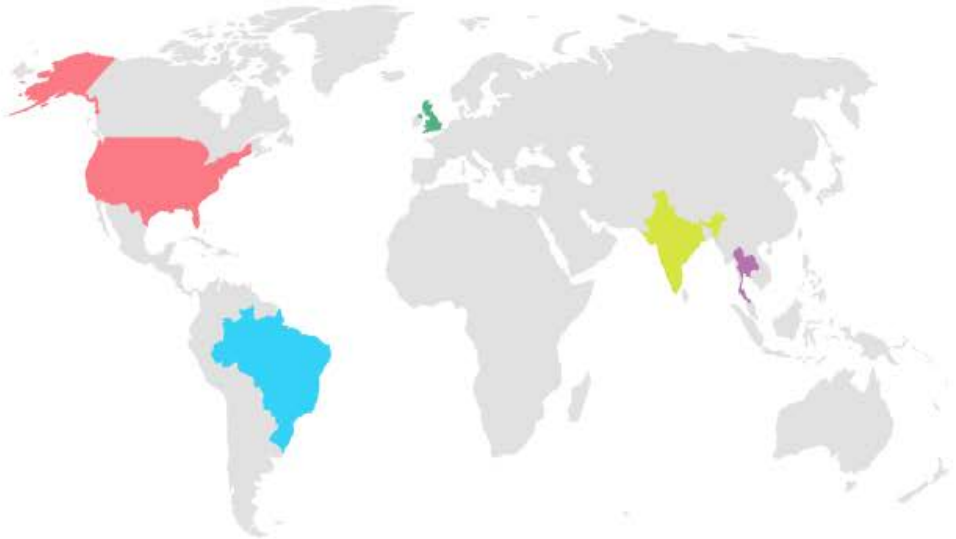


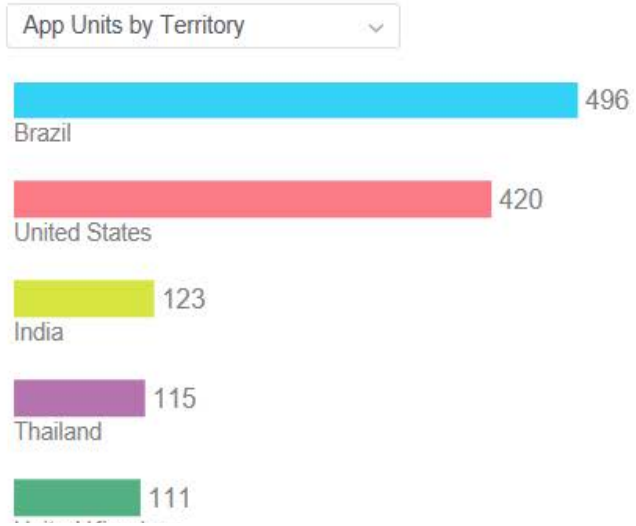




**TNM– Apple Device**

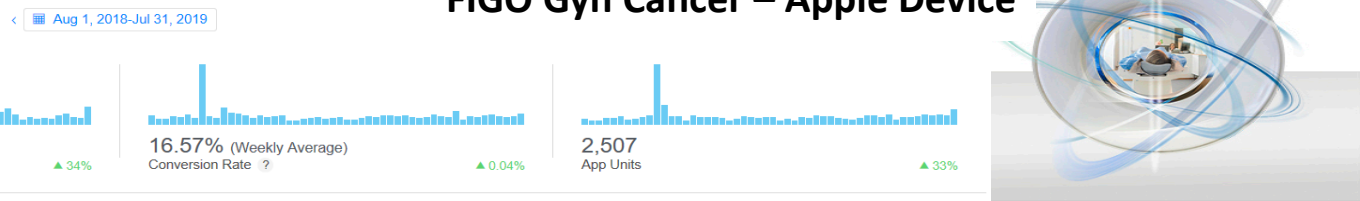
# FIGO Gyn Cancer Management App

- Designed for health professionals by the FIGO Gyn Oncology Committee in collaboration with AIIMS, New Delhi and TMH, Mumbai, India
- Latest FIGO Staging of Gyn cancers
- Recommends resource-based management solutions - a unique feature
- Simple, user-friendly, useful for oncologists, gynaecologists, medical students and residents





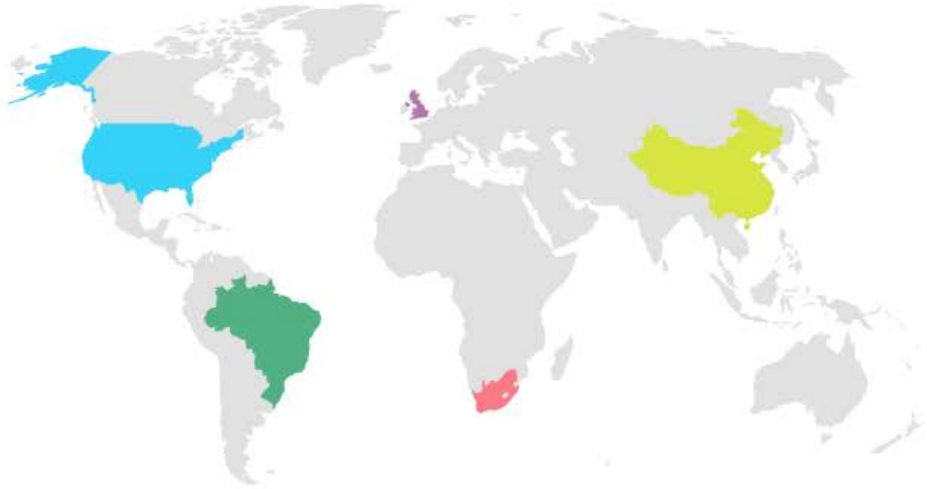

**FIGO Gyn Cancer – Apple Device**

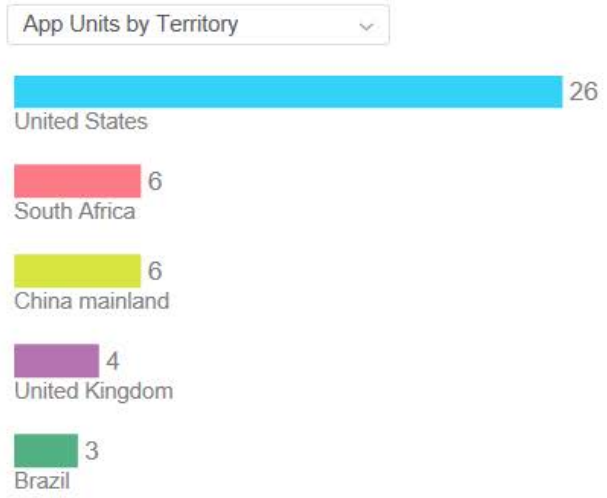


# NUCARD

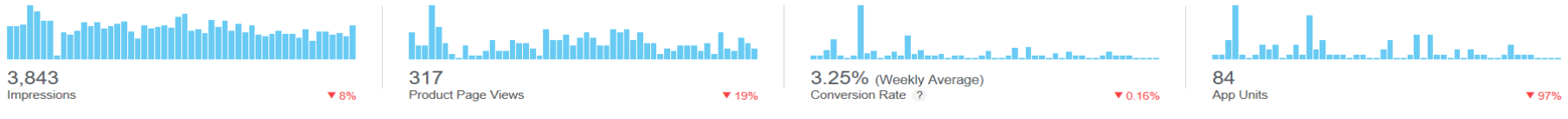
- Web application for clinical indications for nuclear cardiology procedures
- Mobile guide to be used in in different clinical scenarios
- Developed by IAEA in cooperation with the Italian Working Group of Nuclear Cardiology
- Reliable and useful tool that can help physicians to choose the right test for each patient



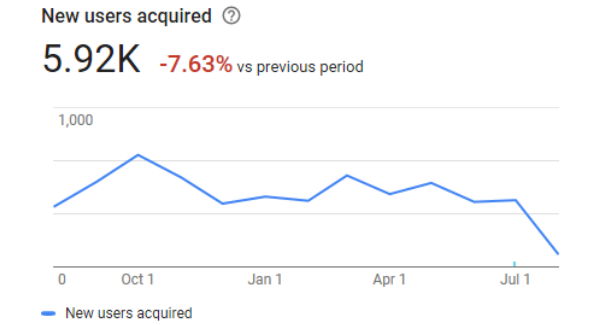




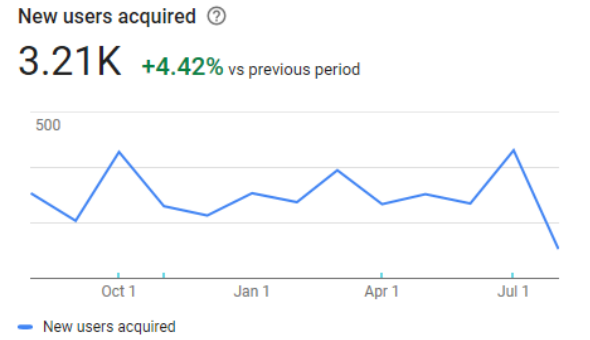

**NUCARD – Apple Device**



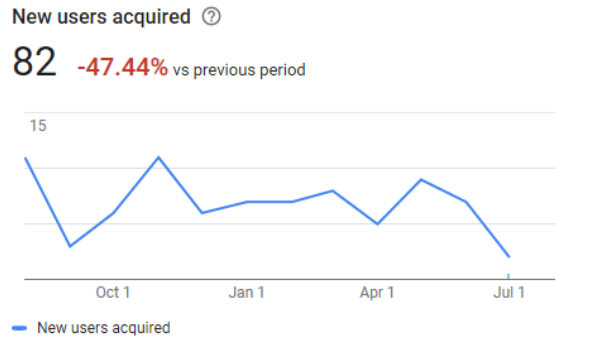

# Android Use- new users in the last year




**TNM Cancer Management – Android Device**

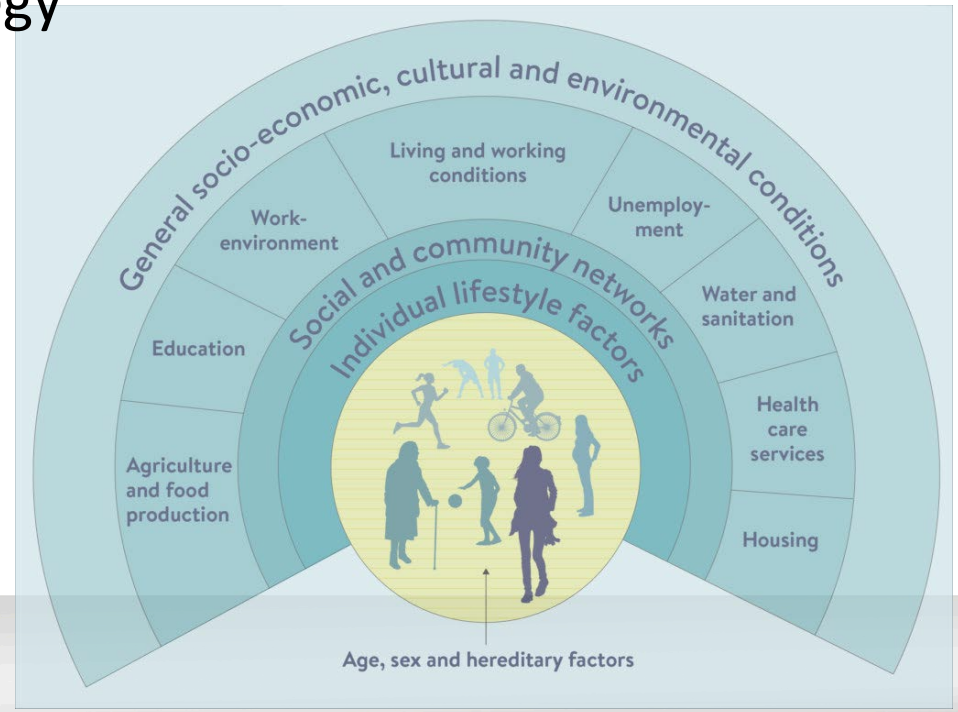

**FIGO Gyn Cancer – Android Device**




**NUCARD – Android Device**

# Resource-based management and reducing health disparities

- IAEA mHealth apps are resource-based tools with varied usage for different clinical settings globally
- Scarce resources in low and middle income countries (LMICs); lLack of broad access to healthcare as well as quality and safety
- Innovative healthcare systems can use technology to improve processes and provide equitable care
- mHealth can lessen inequalities in medical education, clinical practice, knowledge, and medical technology



# The future of mobile health applications

- Health professionals will use mobile devices to access medical and drug databases, laboratory results, and electronic EHRs
- Remote consultation and monitoring, medical reference/tool/calculator usage; cloud-based mHealth data storage
- Versatile sensors will become increasingly accurate and available, data streams in apps will move toward prediction algorithms
- Will include vulnerable populations
- The IAEA will continue to develop mHealth apps and aim to propagate the technology to all member states.

# Thank You

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