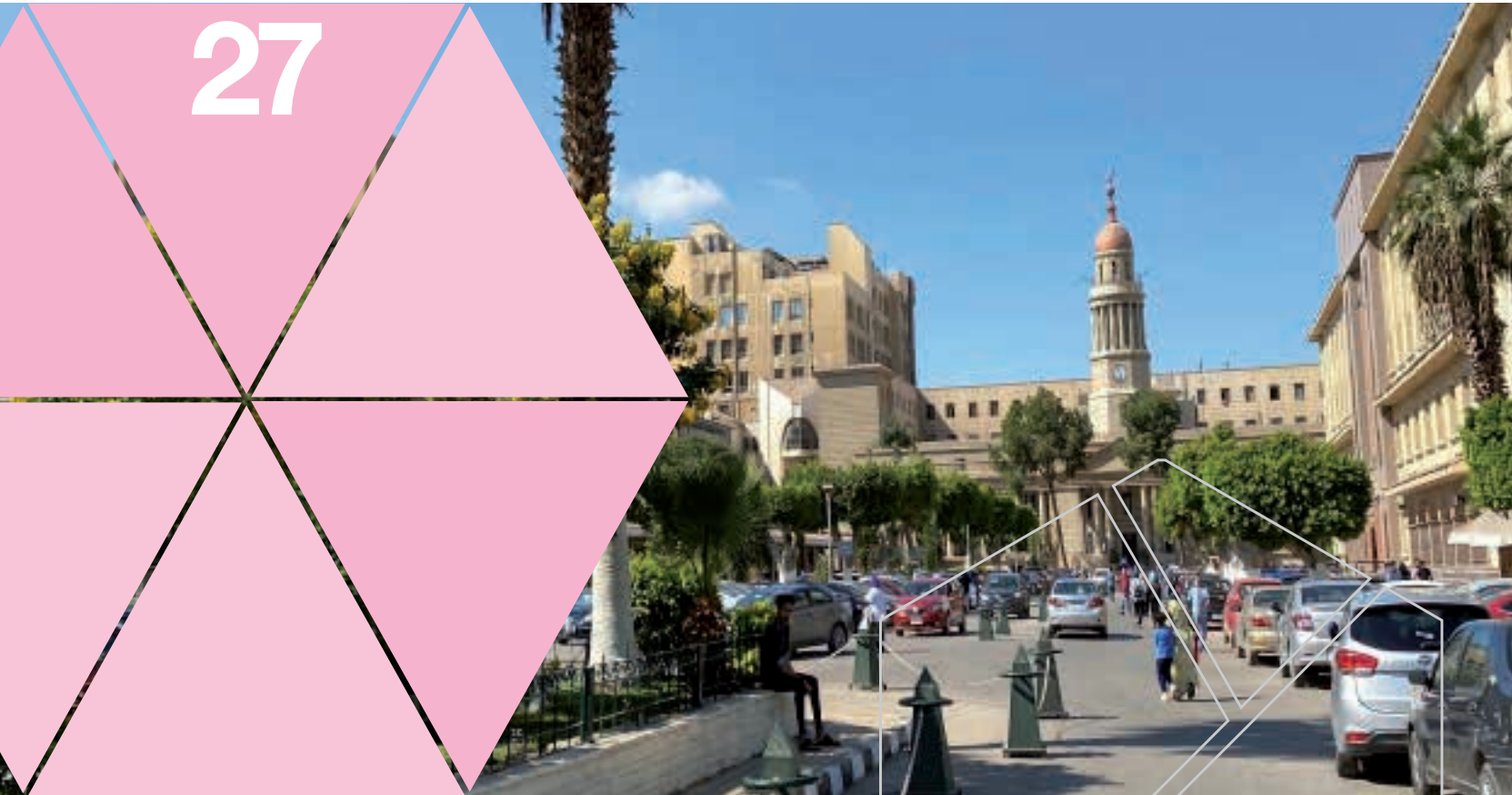


# AMULET INNOVATION USER'S VOICE

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Women's Health

# Egypt Our concept is “DIFFERENT”

Prof. Dr.  
Rasha Kamal



Prof. Dr.  
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## The Egyptian Center of Education

### *Education – Dedication – Passion – One Team – Women’s Healthon*

Kasr Al-Ainy, an educational hospital affiliated with Cairo University, provides high medical care to millions of Egyptian citizens. Thousands of doctors have graduated since its establishment in 1827, keeping the international standard, participation in research, and open to innovations in all specialties.

Prof. Dr. Rasha Kamal and Prof. Dr. Sahar Mansour speak about their dedication and passion for women’s imaging and care. As one strong team, they establish a working group of excellence for the Egyptian breast screening and diagnostic imaging society, utilizing two Fujifilm’s Amulet Innovality Mammography units and Bellus II reading workstation, since July 2019 fitted with AI MMG software.

## “Before the implementation of AI MMG the workload was a burden for our team”

Kas Al-Ainy MMG Workflow before AI MMG integration  
Around 35 mammography studies are daily performed at Kasr Al-Ainy Hospital, routinely analyzed by two mammography readers. A 1st reader that represents a minimum of 3 years’ experience, and a 2nd reader of at least ten years’ experience in breast imaging to achieve an unbiased diagnostic report, the opinion of a highly experienced 3rd reader is frequently required.

“I believe that the cornerstone of the civilized and strong societies, is healthy women. My vision is to find a way to get early and remote access to those life-threatening breast cancers. We need a thriving, healthy female population which should not worry when falling ill.” Dr. Sahar Mansour says  
“We run a new government-sponsored “screening program” concept in Egypt, starting at the age of 18 where we provide education, clinical breast examinations, high-risk category assessment and if needed indicate work up and breast ultrasound. My personal motivation is to generate an environment, which I could describe as a guided

pathway, for our women to find professional advice and guidance, when they feel that their breast feels somehow different. Most women in our country are not covered by health insurance, don’t know whom to ask, where to get support and advice”. Prof. Dr. Rasha Kamal comments with passion.



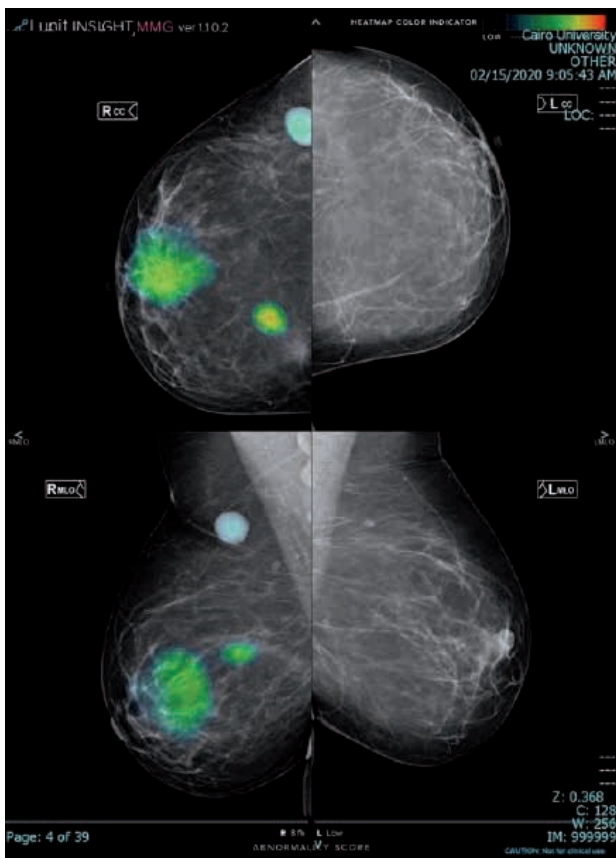
### The situation in Egypt

It is an era of renaissance and prosperity of the health service in Egypt.

A large health presidential campaign , “the 100 Million Healthy Lives Initiative” was set in the republic (on 2018), which aims to eradicate chronic diseases across the nation as part of the administration strategic plan. All of the above helped in the generation of “Out of the box breast screening campaign ” in our country.

**MMG AI software was implemented in July 2019 into our breast imaging workflow.**

The prominent reason why we had decided to install AI MMG was, that the daily breast imaging workflow had been complicated to maintain due to limited resources. Additionally, we wanted to overcome the massive case reading time consumption, especially on the common ACR C and D density types in Egypt.



**Image Reading workflow with AI MMG and its benefits for Kasr Al-Ainy team**

Currently, AI MMG is registered as the 1st reader. The AI MMG heat map result is worked up by the 2nd reader. All negative AI MMG reports are reconfirmed by the 3rd image reader. This workflow strategy enhances our efficiency and reduces reading time not only with the above utilization as well with the fact that we don't need so many additional views as SPOT view, MAG view and DBT (Tomosynthesis) anymore to establish a screening result due to AI MMG information.

**Outlook**

There are ongoing research studies in our women imaging unit, with an already great outlook on AI MMG performance and implementation into routine breast imaging reducing the number of false-positive and recalls.

AI performance is supervised and developed together with the radiologist into a so-called “Augmented Radiologist”, the hybrid of human and AI outperforming a standalone concept due to saving on time and costs for physicians.

**Improvements**

Circumscribed masses hidden within the breast tissue, which are difficult to spot on FFDM, sometimes results in AI negative markings. We have learned that AI MMG contemplates those structures as benign. This needs a case work-up for clarification, monitoring and timely follow up. Yet, we would like to see AI development associating the patients clinical history into its sensitivity, so that family history, BRCA 1 and 2 genetic relevance and patient age can be considered. Another aspect which we would like to see in MMG AI software development is a display of the cancer histopathology subtypes.



**The success** of breast imaging is the ability to choose the most appropriate imaging modality for the patient. This modality has to be convenient, fast and cost-effective all at the same time.

AI is easily incorporated into the daily workflow and so helps shorter examination and interpretation time.