

The Art of Medical Photography in Breast Surgery: Clinical, Intra-operative and Specimen Photography – Standards and Recommendations: Current Recommendations on Using Mobile Devices Compared to Professional Cameras

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Dear Editor,

In 2021, we published an article titled “The Art of Medical Photography in Breast Surgery: Clinical, Intra-operative and Specimen Photography- Standards and Recommendations” in *Chirurgia* (1). The main objective of this article was to define medical visual documentation, which is now an indispensable part of breast surgery, with its purposes and justifications for use, and to set standards by putting specific suggestions to reach good medical visual documentation defined as high quality and academically effective in breast surgery.

Through the Medical Visual Documentation Unit, which started to work on the subject in 2013 and was established within Kocaeli University Faculty of Medicine of Kocaeli Türkiye in 2015, we brought an academic perspective to the subject and tried to add standards to the literature to reach better medical visual documentation with the support of the Faculty of Fine Arts Photography Department. In line with the studies carried out until 2021 and the technologies of that period, we determined and published the recommendations that will enable us to reach the highest quality and academic effective medical visual documentation in breast surgery (1). As a result of the technology and experience at that time, we recommended the use of a professional camera with a changeable lens and with an exposure control system as a best choice for high-level facilities for medical visual documentation in breast surgery to obtain good medical visual documentation (1).

Since the publication of the article, we have seen that the use of alternative mobile devices to the professional cameras that we recommend in the use of medical documentation, especially in breast surgery, will have very close results, in line with our ongoing studies

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and efforts to integrate technology into medicine.

With the technological developments brought by the last few years, we have seen that the camera technologies used in mobile devices can also reach the highest quality. When we followed the world of photography, we saw that many photographers also produced projects using these mobile devices and that it was possible to achieve results close to professional cameras by observing certain settings.

In fact, although the professional cameras we recommend achieve high quality results, we have seen that their use for results is limited and causes fewer documents to be obtained due to their heavy weight, the need for carrying equipment, the fact that they are not always with the physician and mostly stay at home or in the office, and the extra apparatus such as lenses and flashes used are expensive. It is sometimes impossible for physicians to always walk around with a fully equipped professional camera. It is often impossible to use high-end cameras for patient photography in intensive outpatient clinics. In surgical practice, it is an extra challenge to have professional cameras and equipment to take medical documents.

On the other hand, it has become obvious that mobile devices are always with us, powerful photographic features, easy to use and learn, and the ability to take photos and videos without the need for an extra widget, and that they are successful in archiving and especially in editing such as optimization in a very practical way without the need for extra programs, especially in breast surgery, medical visual documentation, and that much more data is collected in terms of documentation.

In the light of technological development over the years, we have tried the use of different models of mobile devices in Medical Visual Documentation in breast surgery. When compared with many different models of cameras, lenses and equipment at the professional level, the photographic results obtained by mobile devices are similar and sometimes even superior in terms of ease of use, portability and practicality.

When compared with many different models of cameras, lenses and equipments at the professional level in breast health practices. Also, in this period we tried different brands of mobile phones having different specifications. Our practices all contained in the three different areas of medical visual documentation: clinical photography (*Fig. 1*), intra-operative photography (*Fig. 2*) and specimen photography (*Fig. 3*). All the practices contained the same settings and the same light sources both



Figure 1. Sample clinical photography for breast surgery taken by mobile device

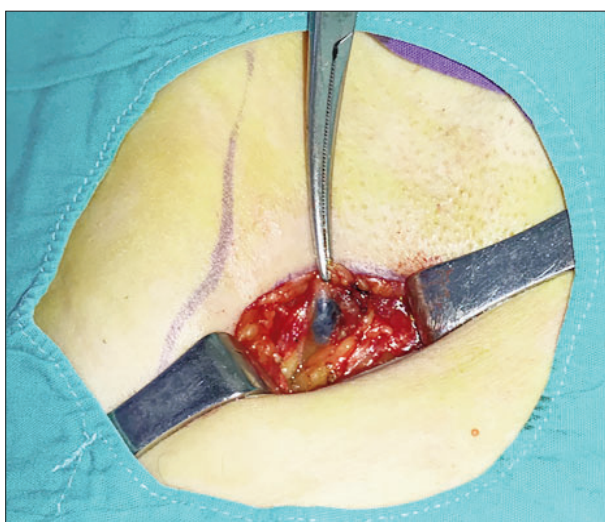


Figure 2. Sample intra-operative photography for breast surgery taken by mobile device

in studio and in the operating rooms. We analyzed all the taken medical visual documents by using high technological screens. The analyzes were

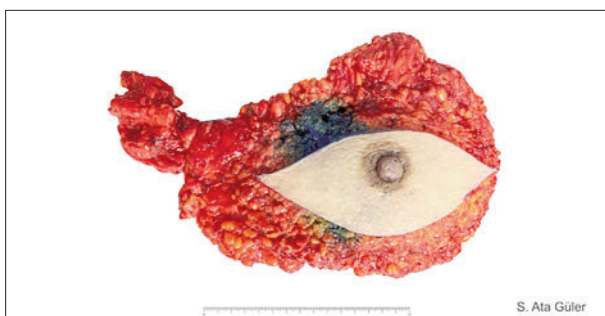
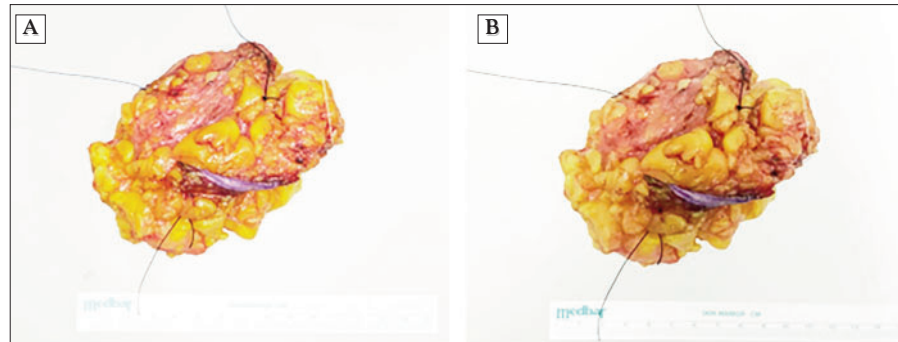


Figure 3. Sample specimen photography for breast surgery taken by mobile device

Figure 4. The same lumpectomy specimen photographed under same light, with the same background and by the same person.
(A) With a professional camera;
(B) With a mobile device camera.



made by both experienced breast surgeons and by photography professionals. The photographic results obtained by mobile devices are similar and sometimes even superior in terms of ease of use, portability and practicality (2). From a technical point of view, we have experienced that there is no significant difference in academic effectiveness between medical visual documentation in breast surgery and medical visual documents taken with a mobile device and a professional camera, provided that appropriate settings and recommendations are followed (*Fig. 4*).

Also, by using mobile devices in breast health we found out more data and documents might be recorded other than professional cameras. With the smart learning and computer learning features added to the camera technologies of mobile devices in recent years, the environment and subject features are recognized by the device, and much higher quality images are obtained much faster and without imposing an extra workload on the user.

During obtaining the medical visual documents, the philosophy of “The best camera is always the one that you are carrying with you”, has become the point of view in recent time. We would like to say that mobile devices are indispensable in many respects in the field of Medical Visual Documentation and the best usable device by considering all factors, considering the imaging quality and practical use of the camera, which has many professional features with today’s technology.

Adopting the philosophy of “If you don’t take good medical photographs, you can be a good doctor, but even if you are good at your job, no one can know that, not even you” as the basic motto, we believe that much more academically effective medical visual documents will be obtained and that much more academically effective medical visual

documents will be contributed to the medical literature, especially with the basic trainings to be given with mobile devices with today’s superior technologies and the fact that it is a device that everyone already carries, in order to ensure much higher quality and academically effective photographs, and medical display styles that will be the mirror of the medical world in our country and around the world.

From this point of view, in all our Medical Visual Documentation trainings, courses and conferences, we now emphasize the use of mobile devices as an alternative to the use of professional cameras and encourage them to be preferred to obtain more data and provide practicality.

In our “Medical Visual Documentation in Breast Surgery” speech we gave in the Breast Diseases section at the National Conference of Surgery held in Iasi, Romania between May 28, 2025, and May 31, 2025, we highlighted this issue and discussed the advantages of the use of mobile devices in medical visual documentation in breast surgery. As a conclusion to be drawn from this, we would like to add this additional up-to-date information to our article published in the journal *Chirurgia* in 2021 (1) and update that the use of medical visual documentation in breast surgery can be used to obtain much more academic effective and high-quality documentation using mobile devices.

References

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