Foreword

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All surgical disciplines are influenced by a so-called “magic triangle” that seeks to simultaneously reduce invasivity, lower costs and improve outcomes. Unfortunately, these goals are usually considered to be in mutual conflict. If we hope to have any chance at all of achieving these aspirations, we must embrace the use of advanced technology in the broad sense of the term. This issue of Surgical Technology International presents very good examples of how technology can contribute to less surgical trauma (by minimizing surgical access, improving wound healing, etc.) and an overall better outcome. The articles contained herein highlight the fact that surgical subdisciplines are equally dependent on advanced surgical technology.

While these papers cover a broad range of topics, they share a common denominator: the growing need for closer cooperation between basic scientists, engineers, computer scientists and surgeons. Surgeons and R&D experts can no longer live in different worlds. Today, we need a new Culture of Creative Collaboration (C³).

In the past, more often than not, clinicians passively waited for new developments instead of actively articulating what they needed or dreamt of.

On the other hand, engineers developed devices and solutions for problems that did not really exist in clinical reality. We all share an ethical obligation to continuously improve the treatment of patients by developing increasingly better diagnostic and therapeutic tools. This can be achieved best by an intensive dialogue among the surgical and scientific / technologic partners right from the beginning.

Ideally, this should not be limited to the traditional roles, with surgeons giving ideas and evaluating newly created solutions and engineers developing prototypes.

The surgeon as the user should also be ready to consider modifications of his / her traditional surgical strategies and tactics to facilitate new technological approaches. While this may sound trivial, it is indeed a revolutionary new way of interactive collaboration that will catalyze the introduction of new therapeutic options to clinical caregiving. We coined the term “surgineering” to describe this new type of active cooperation – both sides change their approach!

As this issue of Surgical Technology International proves yet again, this journal is an excellent platform to further disseminate the idea of “surgineering”.

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