



The Dilemmas of Science and Innovation—Happy New Year!



New digital technologies have significantly changed prosthodontics in recent years. New materials have been introduced, and new fabrication pathways have been enabled. All these new options are promising: They seem more efficient, faster, and less expensive for patients. Yet, are they as sustainable as the conventional, well-documented pathways that we are about to leave?

It is obvious that industrial developments are much faster than academic research can ever be. To plan and prepare a clinical investigation, to have it approved by an Ethical Committee, and to find, include, and treat the respective patients takes from months to years, depending on the research. Finally, only after insertion of the last restoration is when the interesting follow-up period starts. Then, at least 3 to 5 years of follow-up are needed to gain knowledge on the clinical outcomes; ie, the survival rates and the potential complications of a new type of material or fabrication concept.

While in the past, new developments were first researched extensively before introduction into clinical practice—one excellent example is the work of Per-Ingvar Brånemark—neither time nor patience are available for this today, and new developments are released to clinics prior to their scientific documentation. It is, hence, likely that new products are *tested* in daily clinical practice before evidence exists on their long-term performance.

A good example of this issue are the recent material options; eg, the ceramics lithium disilicate and zirconia, which are widely used for monolithic or microveneered fixed restorations on teeth and implants today without substantial knowledge on their performance. Many open questions besides the long-term survival rates remain unanswered, such as:

- What is the effect of the rather hard and wear-resistant materials on the temporomandibular joints and the remaining dentition?
- Is the adhesive cementation of the new monolithic restorations predictable, most specifically when cemented to a titanium base abutment?
- What is the biologic effect of the new ceramics when adhesively cemented to a titanium base abutment—what will the bone reaction be over time?

The evidence-based treatment concepts of our patients are in contradiction with fast (digital) developments, a true dilemma that needs to be addressed when discussing treatment plans with patients.

In the current issue of the IJP, some of the above topics are addressed. Still, much research is needed to address these points in the future. We will continue working on increasing the knowledge available in the future and look forward to the interesting submissions to come. Thank you for considering us!

On behalf of the entire Editorial Board team,

Irena Sailer
Editor-in-Chief