

## Scientific survey of ESCI supported by BDIZ EDI

# Results of the clinical approach of ceramic dental implants

Ceramic implants are already established in modern dental implantology as a supplement to the treatment spectrum with titanium implants. An increasing interest can be observed not only on the part of health-conscious patients, but also in the dental profession due to biological advantages. Promising short- and medium-term data on the successful use of ceramic implants are already available. .

Nevertheless, the topic of "ceramic implants" is still controversial in part due to the lack of longterm data. Systematic reviews refer to specific experiences with individual systems. Comprehensive findings from the general practical use of ceramic implants and experience from daily dental practice are still lacking. The European Society for Ceramic Implantology (ESCI) contributes with this survey to a deeper insight into the general daily handling of ceramic implants and to answer questions concerning ceramic implantology. This survey provides valuable information for the further development of ceramic implants and makes an important contribution to their reliable use—ultimately for safe use in our patients.

### Method

The questionnaire was designed by the ESCI Scientific Advisory Board in German/English and was addressed to users of ceramic implants as well as users of titanium implants and dental technicians. The results of the survey were evaluated by the ESCI. The survey was not conducted for commercial purposes, and no financial resources were provided by partners or other third parties. This questionnaire was implemented in an online survey tool and sent as an online link via email, among others to the members of the ESCI, published on the homepage of the ESCI, published via print media of the dental press, as well as distributed via various other channels of the survey partners from April to November 2021. This included social media activities and newsletters from collaborating professional societies and the ESCI Company Partners.

The number of 316 received responses from all over Europe and the whole World shows the impor-

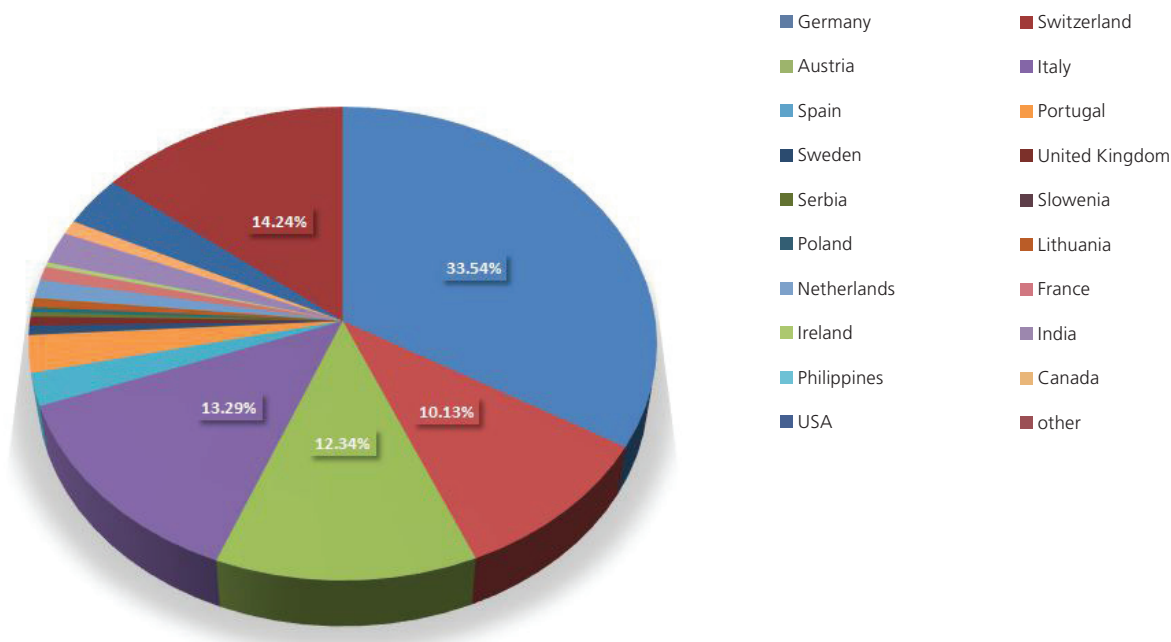
ance of the topic "ceramic implants" and allows to draw relevant conclusions (Fig 1).

### Distribution of responses from 45 countries

In addition to the general demographic information (Part A), the questionnaire was divided into three sections (Parts B, C and D). Each of the target groups was directed to a part of the overall catalogue with questions specific to that target group. (42 questions in total): Part B: Dentists, oral surgeons, maxillofacial surgeons with experience in ceramic implantology Part C: Dentists, oral surgeons, maxillofacial surgeons without experience in ceramic implantology Part D: Dental technicians

### Conclusion

The large number of participants in an extensive survey shows the interest in the topic of ceramic implants in dentistry and oral surgery. The comparison of the answers given by practical experienced participants to those who acquired theoretical knowledge of the subject is quite interesting. The assessments coincide in some areas but drift apart in others. The possible advantages of the material zirconia dioxide in terms of biocompatibility and low tendency to inflammation were confirmed and are in line with our view. In particular, a significantly lower tendency to peri-implantitis seems to be observed in free practice, which should be confirmed by the initialization of corresponding clinical studies. The fear of the past regarding stability could at least be relativized for the newer systems since fractures are not in the foreground in the data on the reasons for loss. The potential for osseointegration was rated equally for



both materials. In particular, the proportionally most frequently mentioned “early loss” during the healing phase gives cause for further evaluation. Since various factors such as overloading, incorrect loading, surface design, bone degeneration due to overheating can play a role, further differentiation should be made here in order to reduce failures. All responses indicate a clear tendency towards two-part systems, which allow a broader range of indications and offer more flexibility. Solutions are requested which simplify the application compared to titanium implants. See also “ESCI official scientific statement two piece ceramic implants” at [www.esci-online](http://www.esci-online). The clearest requirement, however, runs like a red thread through the survey: users of ceramic implants should convey their experiences and make them accessible to all interested parties. There should be broad, scientifically sound and objective information on the subject. The data on ceramic implants must be improved and long-term evidence-based studies initiated, then ceramic implants will increasingly establish

themselves for a broad user group in the interest of our patients. Implementing this requirement is a clear call from the survey to all manufacturers and research institutes - and a core topic of the European Society for Ceramic Implantology ESCI

For a detailed overview of all questions and results please visit [www.escionline.com](http://www.escionline.com) or request the full Data Summary directly at ESCI office by mail to [info@esci-online.com](mailto:info@esci-online.com)

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