The Nobel Biocare Procera® is a system developed for manufacturing of individualized dental restorations. Utilizing the latest scanning, CAD/CAM and manufacturing technologies, high accuracy and a perfect precision of fit is ensured. By combining the Procera® manufacturing technology with the use of alumina and zirconia ceramics, which are biocompatible materials with good mechanical properties, Nobel Biocare provides individualized, highly esthetical dental solutions\(^1\)\(^-\)\(^1\(^5\).

Since the introduction in 1991, more than 7 million Procera® ceramic crowns have been produced.

**Procera® Crowns, Bridges and Laminates**

The Procera® Crown Titanium was the first restoration to be produced by the Procera® System. It was introduced already in 1984, and long-term studies evaluating its clinical performance have shown good results\(^1\(^6\)\(^-\)\(^2\(^3\)). Over the time, the use of the Procera® Crown Titanium has been replaced by the all-ceramic Procera® Crown Alumina and Procera® Crown Zirconia.

The Procera® Crown Alumina was introduced in 1991, and clinical long-term studies have shown cumulative success rates of 98% after 5 years and 92% after 10 years in function\(^2\(^2\)\(^4\)\(^-\)\(^4\(^2\)). Results from long-term studies have also revealed a good prognosis for Procera® Crown Alumina on posterior teeth\(^2\(^5\),\(^3\(^0\),\(^3\(^6\),\(^4\(^2\)). In addition, the good precision of fit of the Procera® Crown Alumina has been repeatedly reported\(^4\(^3\)\(^-\)\(^4\(^8\)).

The Procera® Bridge Alumina was introduced in 1999. Tests have shown that the restorations exceed the biomechanical requirements for all-ceramic fixed partial dentures, and excellent esthetic and functional outcomes have been reported\(^4\(^9\)). The Procera® Bridge Alumina is available in up to 4 units, and is intended for anterior regions.

The Procera® Crown Zirconia was introduced in 2001, and in 2004 the Procera® Bridge Zirconia was launched. Zirconia has a flexural strength and fracture toughness almost twice as high as that of alumina, which makes zirconia very resistant to masticatory forces, still with maintained exact precision of fit\(^5\(^0\)\(^-\)\(^5\(^7\)). The Procera® Bridge Zirconia is available in up to 14 units.

The Procera® Implant Bridge was introduced in 1996. Both full and partial bridge frameworks are available. The bridges are produced using CAD/CAM technology and are milled out of one piece of pure titanium. Good precision of fit as well as good clinical performance has been reported\(^4\(^8\),\(^5\(^8\)\(^-\)\(^6\(^9\)). A cumulative survival rate of 98% after 5 years' of function has been reported\(^6\(^7\)). The Procera® Implant Bridge Zirconia was introduced in 2007, and is available in up to 14 units. Clinical studies with the aim to evaluate the long-term performance of the Procera® Implant Bridge Zirconia are ongoing.
Procera® Laminates are thin (0.25-0.40 mm) alumina shells, used for patients with discolored anterior teeth, providing possibilities for excellent esthetics.

**Procera Abutments**

The Procera® Abutment Titanium was launched in 1998 and the Procera® Abutment Alumina and Procera® Abutment Zirconia were introduced on the market in 2002 and 2003, respectively. In vitro studies, case reports and prospective clinical studies have proven the good performance of these individualized abutments. Good esthetic results have been reported. The Procera® Abutment Alumina was completely replaced by the Procera® Abutment Zirconia in June 2005.

**References**


