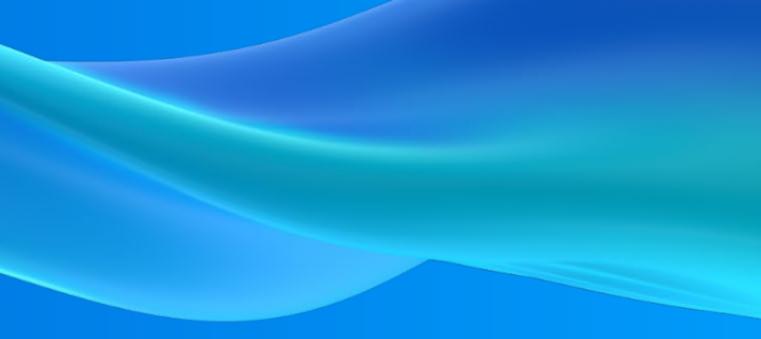
## KNÖFLER et al., 2016

10,1583,095up to 20implantspatientsup to 20

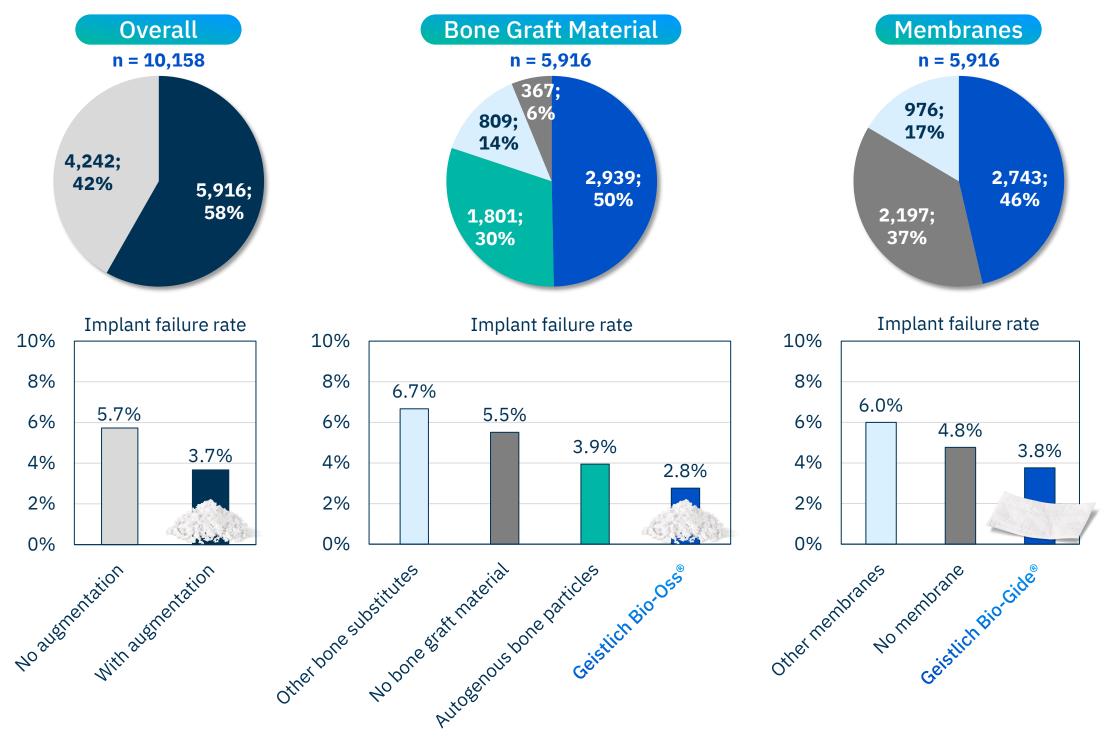
# ! DISCLAIMER

The following pages contain summaries of data published by Knöfler et al., 2016 as interpreted by Geistlich. Although we try to reflect to the best of our knowledge the results and conclusions of the cited studies, errors cannot be excluded. We explicitly emphasize that the authors of the cited study cannot be held responsible for the content of the summaries.



**Minor Bone Augmentation** 

10,158 implants in 3,095 patients up to 20.2 years: implant survival in augmented bone is slightly better than in native bone



Knöfler W, et al. Int J Implant Dent. 2016 Dec;2(1):25. Read now.

## Key Message

The retrospective analysis shows that implants inserted in bone that was NOT augmented with Geistlich Bio-Oss® have a higher long-term implant failure rate.



#### **Study results**

Overall failure rate without bone augmentation is 5.7% (=94.3% success rate) compared to 3.7% (=96.3% success rate) with bone augmentation

⇒ on average, augmented bone is slightly more stable long-term than bone that was not augmented when the implant was placed

Bone graft materials: Geistlich Bio-Oss® resulted in significantly lower number of implant losses, whereas the use of non-Geistlich Bio-Oss® bone graft materials led to higher rates of implant failure ⇒ Geistlich Bio-Oss® performs better than autogenous bone particles

 Membranes: fewest implants were lost when using Geistlich Bio-Gide<sup>®</sup>, while the highest number of implants were lost when

other membranes were used ⇒ the use of a membrane is essential, and the most predictable outcome is achieved with Geistlich Bio-Gide®





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Retrospective analysis



10,158 implants, 3 study centers



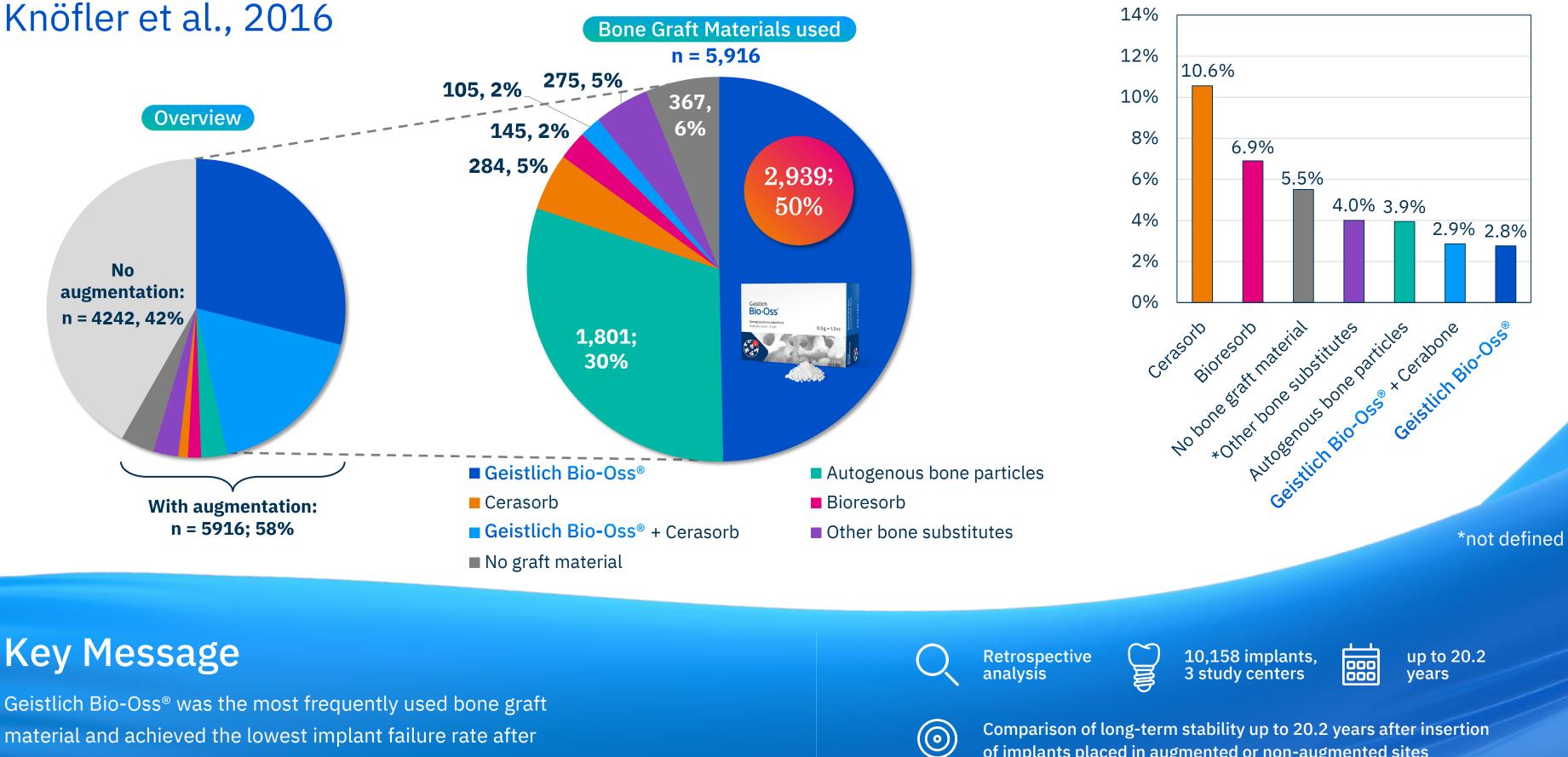
up to 20.2 years



Comparison of long-term stability up to 20.2 years after insertion of implants placed in augmented or non-augmented sites

#### Minor Bone Augmentation

#### Knöfler et al., 2016



## Key Message

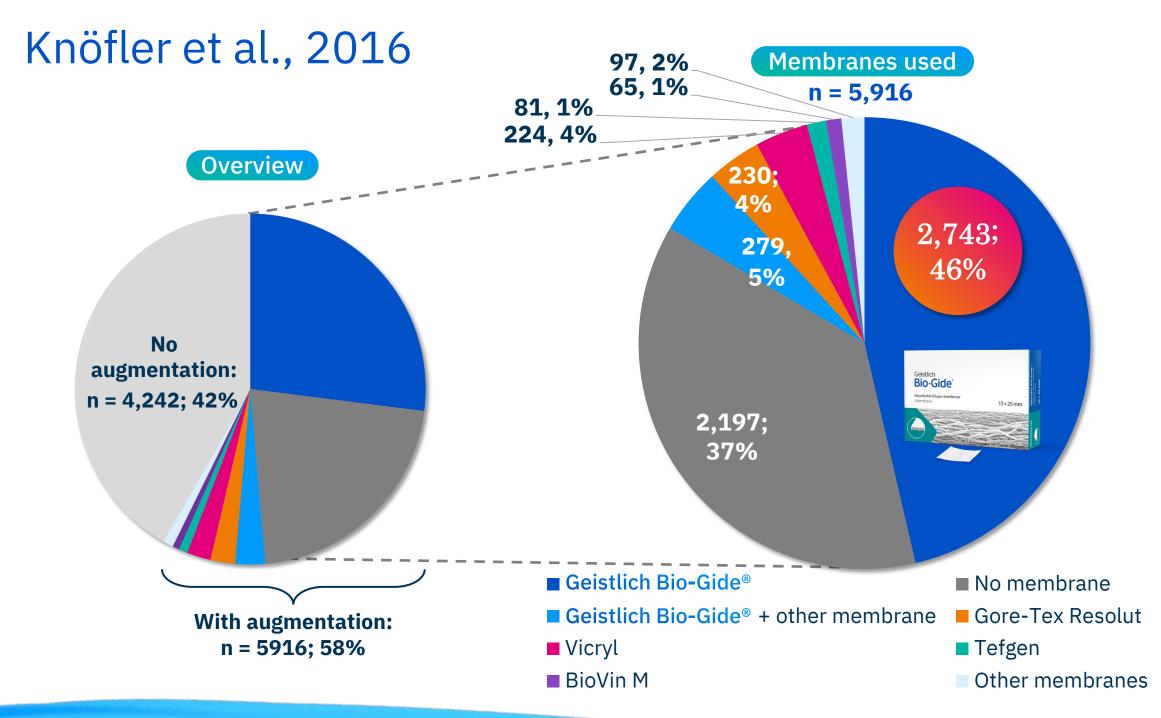
material and achieved the lowest implant failure rate after up to 20.2 years.



#### Implant Failure Rate

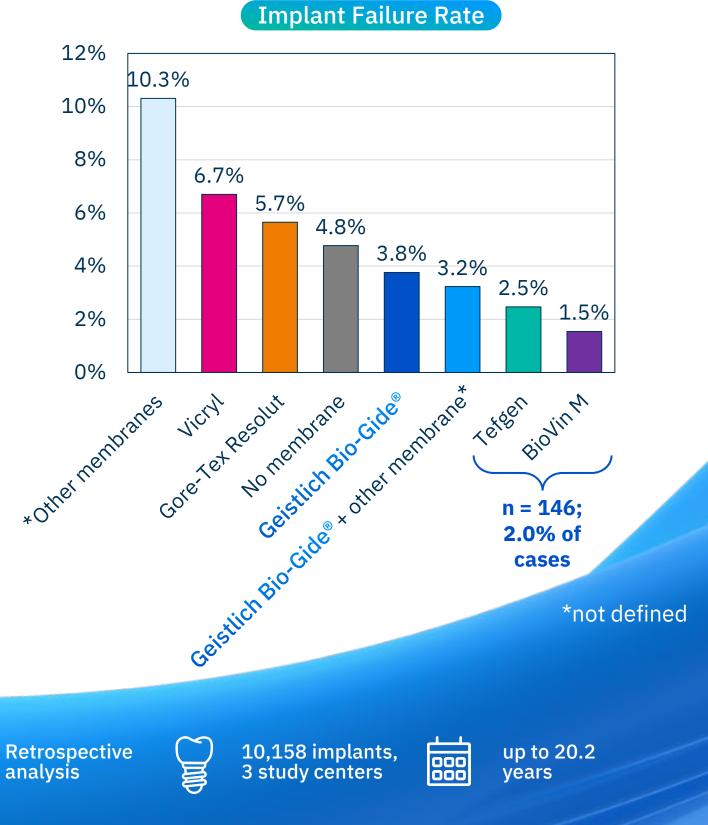
of implants placed in augmented or non-augmented sites

#### **Minor Bone Augmentation**



### Key Message

Geistlich Bio-Gide<sup>®</sup> was the most frequently used membrane and achieved an implant failure rate of less than 4% after up to 20.2 years.  $\bigcirc$ 



Comparison of long-term stability up to 20.2 years after insertion of implants placed in augmented or non-augmented sites