



**OSTEOPHOENIX**

VETERINARY



# Guided bone reconstruction. **Custom-made solutions for every need.**

Each patient is unique. Each pathology has a thousand variations. That is why at **Osteophoenix** each project is different.

Starting from 3D CT scans, scanners or other formats that allow us to generate a three-dimensional model, we create and produce the prostheses, the osteotomies and test biomodels that are necessary.  
**Unique and custom-made.**

# A system that **improve your** patients' lives.

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The precision of our **custom-made prostheses** allow a perfect adaptation to the bone structures of your patients.

By providing a **specific biological support**, the healing process is facilitated and risks of infection are avoided. **No need for adjustments.** We make interventions faster, safer and less expensive for centers and patients. We improve the lives of your patients.

## Custom-made solutions

Shorter recovery time,  
better results.

The precision of our solutions reduces the time spent in the operating room, simplifies graft procedures and stabilization of fractures and improves healing. In short: it makes the process faster and with less risk in recovery, shortening hospital stays and improving the well-being of patients.

## CAD-CAM technology

Specific planning from the  
very first minute

CAD-CAM technology and our 3D printing systems in resins and PLA allow us to improve surgical planning and reduce the number of uncertainties, which avoids unnecessary risks, giving safety to the patient and the surgeon.

## Titanium 3D printing

Guided bone reconstruction,  
custom-made for every need

Each patient is unique. Each pathology has a thousand variations. Our technology allows to plan each case in a personalized manner and that the final solutions comply with all the specifications given by the professional. Personalizing your treatments improves the quality of life of your patients.

At **Osteophoenix** we want to facilitate and reduce the time in the operating room to obtain better results, for this we offer patient-specific biomodels using different 3D technologies. With the biomodel you will be able to study and plan the surgery in advance to optimize the work in the operating room. It will help the patient to have a better understanding of the treatment and it is a valuable tool for the informed consent.

The biomodel is produced starting from a CT-scan of the patient by means of which 3D models can be obtained with high precision.

# Biomodels



## Resin biomodels

The resin 3D printer has great precision and quality. We have this printer in our facilities to offer the best quality in biomodels that is offered in the market.

### Basic Data:

**Layer resolution:** 25, 50, 100, 200 microns  
**Technology:** Stereolithography (SLA)

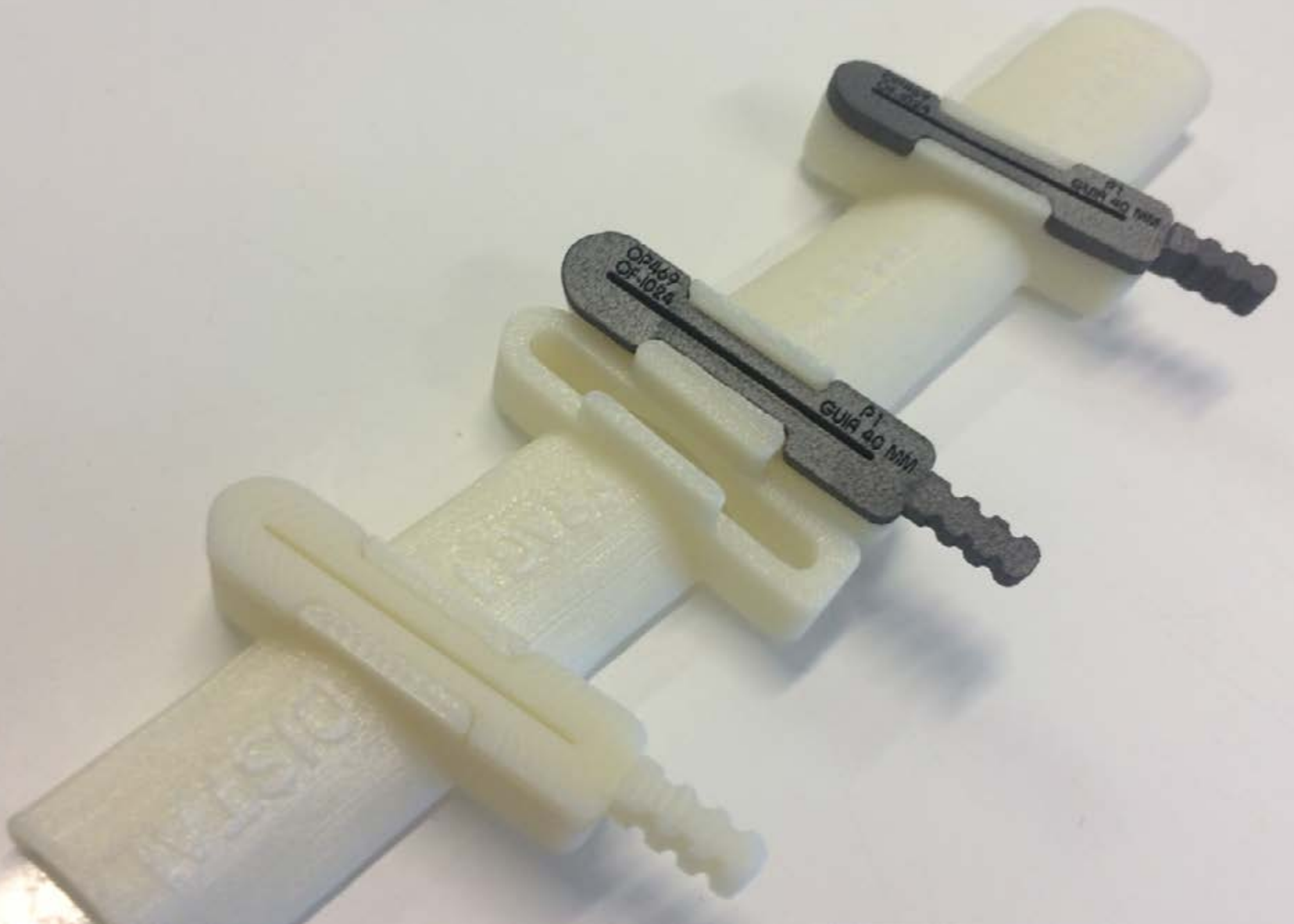


## PLA biomodels

We have desktop 3D printers to manufacture biomodels in PLA.

### Basic Data:

**Layer resolution:** Up to 0.06mm  
**Technology:** FFF (Fused Filament Fabrication)



# 3D printing of surgical guides

**Surgical guides** are tools designed and manufactured to suit the patient, which allows exact cutting during osteotomies.

## Benefits

1

**Experts in CAD-CAM technology.** Osteophoenix, after 10 years of experience in the additive manufacturing sector oriented to the production of custom devices, has an expert team in CAD-CAM technology. In addition to a group of specialized designers, we have all the necessary machinery to manufacture any device you have in mind.

2

**The patient-specific design process** using CAD-CAM tools allows us to work on the patient's anatomy, and the manufacturing process allows complex structures with high precision. This results in lightweight anatomical devices that are easy to manipulate and adapt to the surgical procedure for each patient and specialist.

3

**Planning.** Our devices are part of a comprehensive solution that allows the professional to plan the complete treatment of their patient from diagnosis to rehabilitation, with virtual surgical planning tools and surgical guides, being able to determine, among other things, the amount of tissue desired or required depending on the case.

# A biocompatible alternative for a biomechanical problem

As more advanced technologies are included within the medical veterinary medicine, the number of veterinarians to perform joint replacements, neurosurgery, limb-sparing surgeries, and other surgical procedures, increases. Modeling and additive manufacturing allow the individualization and personalization of therapeutic solutions to facilitate the management of complex medical problems that affect companion animals<sup>1</sup>.

Through these new technologies we can significantly improve numerous animal pathologies. Among some of them we can find: bone tumors (cranial, mandibular or in other parts of the body), bone fractures, rupture of the cranial cruciate ligament or bone deformations.



<sup>1</sup> Harrysson, O. L. A., Marcellin-Little, D. J., & Horn, T. J. (2015). Applications of Metal Additive Manufacturing in Veterinary Orthopedic Surgery. *JOM*, 67(3), 647-654. <https://doi.org/10.1007/s11837-015-1295-x>



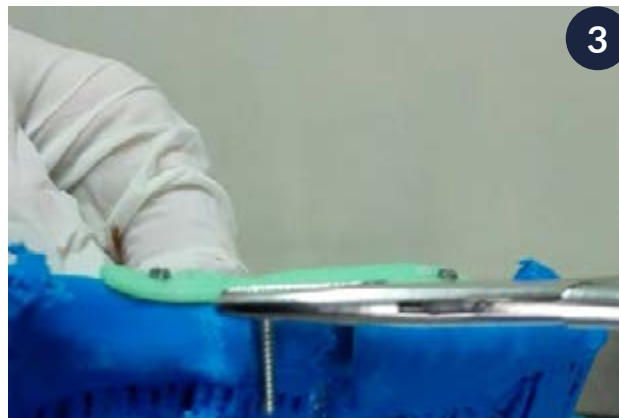


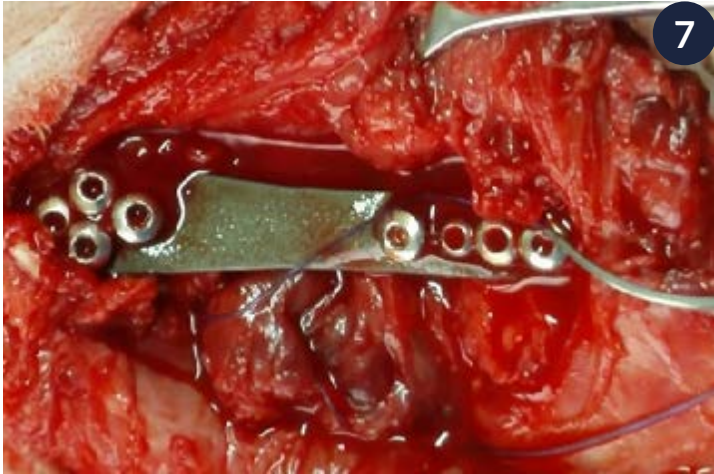
**Clinical  
case**



Case  
Patient-specific device  
placement in a cruciate  
ligament rupture.

1. Design of the defect.
2. Device. Side view.
3. Device on biomodel.
4. Device. Front view.
5. Implant placement I.
6. Implant placement II.
7. Fixed implant.
8. X-ray of the animal with the implant in place.







**OSTEOPHOENIX**

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