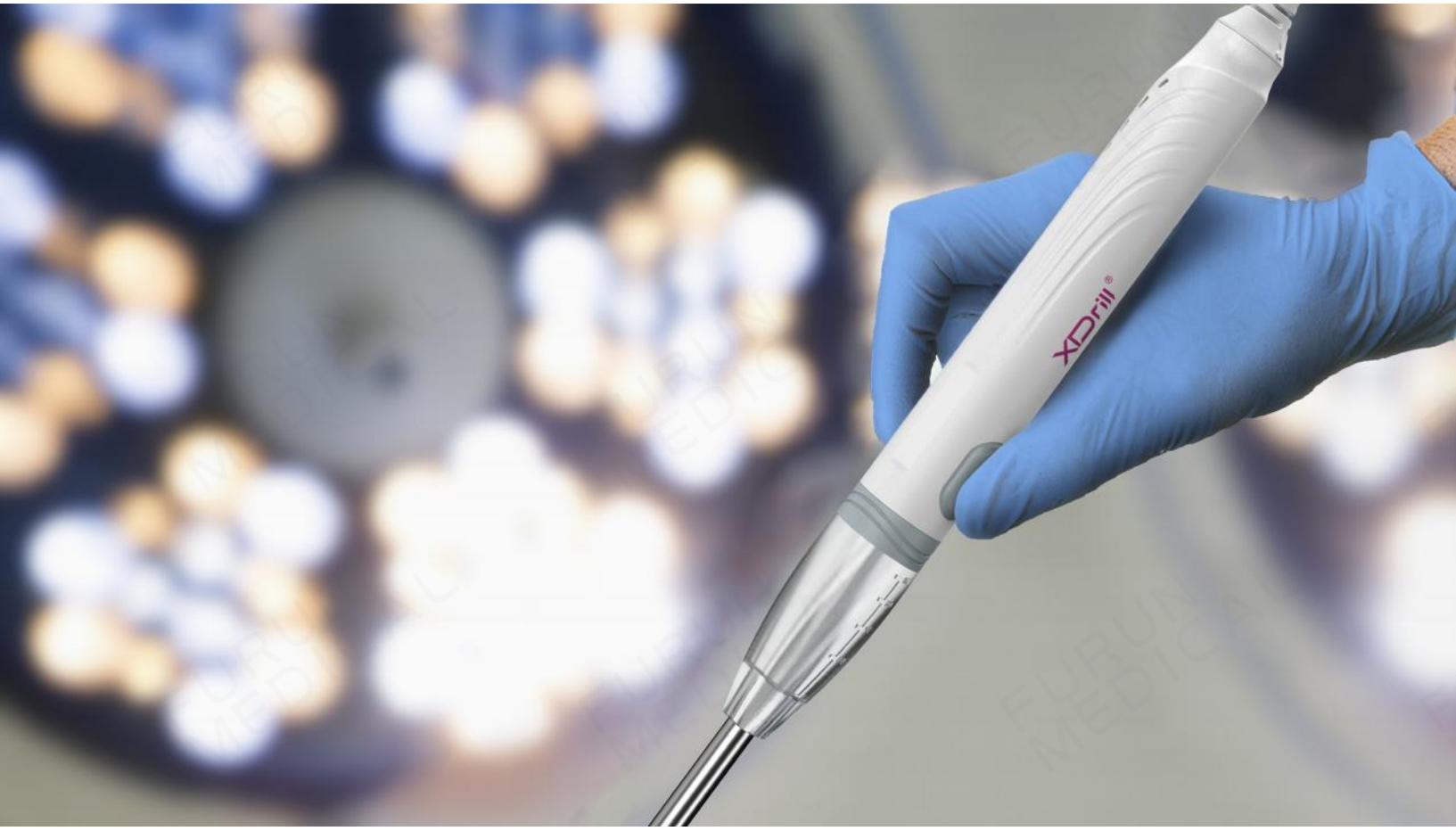
XDrill® Disposable Bone Harvesting Drill

# *Less Trauma, Less Pain*




**Gold-standard bone graft solution for clinical practice**

Global leading technology; minimally invasive and efficient bone harvesting

Global PCT coverage and invention patents granted in the US, Europe, China and Japan

Registered with CE, NMPA, ANVISA and TGA; launched globally

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## Features and Advantages

- **Synchronized bone harvesting, transfer, and collection—harvest bone within minutes**
- **Minimal skin incision; donor-site pain is barely noticeable**
- **Rapid recovery at donor site with no infections or complications reported**
- **Preserves the activity of autologous osteogenic factors, promoting rapid healing at the bone graft site**

## Clinical Application

### Harvest autologous cancellous bone for bone grafting surgeries

In clinical practice, autologous bone is regarded as the "gold standard" for bone grafts. [1-6]

**Properties of Different Types of Bone Grafts[6]**

| Type of graft | Autologous cancellous bone graft | Bone marrow | Heterologous cancellous bone graft | DBM |
|---|---|---|---|---|
| Osteogenesis | +++ | ++ | - | - |
| Osteoinduction | +++ | + | + | - |
| Osteoconduction | +++ | - | ++ | + |
| Extent of activity (-,+,++,+++) from none(-)to maximal(+++). | | | | |
| DBM,demineralized bone matix | | | | |

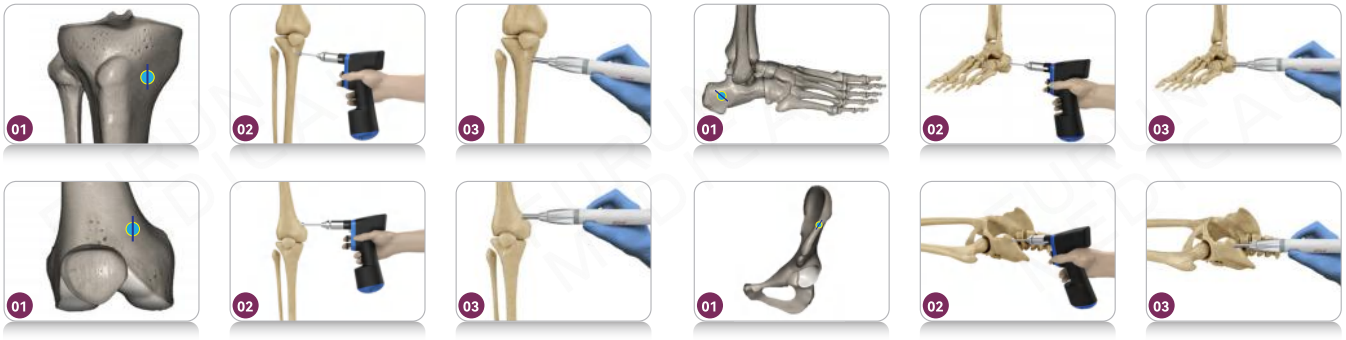
Example: The harvest site including the proximal tibia, calcaneus, distal femur, distal radius and iliac crest.



proximal tibia | calcaneus | distal femur | distal radius | iliac crest

## Usage (Please refer to the user manual for more details)

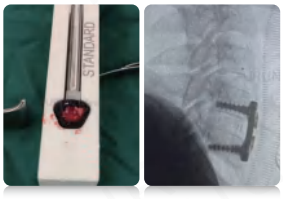
**01.** Incision Exposure (proximal tibia, calcaneus, distal femur, distal radius and anterior iliac)
**02.** Harvest Site Preparations and Drill
**03.** Minimally Invasive Bone Graft Harvest



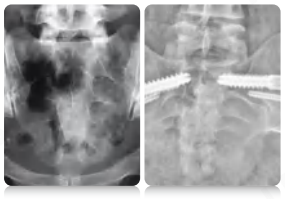

# Applications of the Autologous Cancellous Bone

## Spine Surgery

Spine surgery anterior cervical discectomy fusion (ACDF)



Sacroiliac joint fusion surgery



Lateral spinal fixation and fusion (XLIF, CLIF, OLIF)



Posterior atlantoaxial bone grafting, fusion and internal fixation



## Orthopedic Trauma (For large bone defects, can be combined with allograft or bone substitutes.)

Nonunion of tibiofibular fracture



Open fracture of tibia and fibula with bone defect



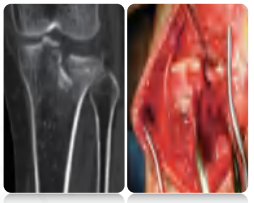
Nonunion of humeral shaft fracture



Infected nonunion of femoral fracture



Split collapse fracture of tibial Plateau with bone defect



## Joint Surgery

Femoral head necrosis medullarycore decompression
(Can be used with artificial bone and/or allograft)



## Hand, Foot and Ankle Surgery

Curettage and bone graft surgery of metacarpal and phalangeal cysts



Bone graft after removal of calcaneal cyst lesions



## Bone Tumor

Bone graft after curettage of tibial bone tumor



For the foreseeable future, for most nonunions, autograft bone remains the gold standard. - The journal of JBJS, 2021

## Company Profile

Zhejiang Furun Medical Technology Co., Ltd. is a National High-Tech Enterprise dedicated to the globalization of its innovative orthopedic medical business. Founded in 2016 and headquartered in Hangzhou—the tech & E-commerce hub locates in the southeast coast of China. The company was initially established with investment led by the Zhejiang University Innovation Technology Research Institute.

Furun Medical adheres to a clinically-driven development strategy, deepening its strategic focus on innovative orthopedic medical devices while actively promoting and introducing advanced international technologies. Our products are protected under the global PCT framework and granted by invention patents in the US, Europe, China and Japan. We have also filed and obtained multiple domestic patents. The products are registered with CE, NMPA, ANVISA and TGA, is launched globally.

Wholly owned GMP facility (Hangzhou Xinrun Medical Technology Co., Ltd.), compliant with CE, FDA and NMPA manufacturing standards. It holds an ISO13485 quality management system certification issued by TÜV SÜD (Germany), featuring independent GMP cleanrooms of Class 10,000 and Class 100,000, and is equipped to produce Class II and Class III sterile medical devices. The facility includes Class 10,000 microbiology laboratory, positive control laboratory, and physicochemical laboratory, providing an efficient innovative translational medicine platform and solutions for various innovative medical products.

## REFERENCE


【1】Safdar N. Khan, MD et al:The biology of bone grafting, J Am Acad Orthop Surg 2005;13:77-86.

【2】Andrew H. Schmidt, MD et al: Autologous bone graft : Is it still the gold standard? Injury 52S2 (2021) S18–S22.

【3】ELKE AHLMANN, MD, MICHAEL PATZAKIS, MD et al: Comparison of anterior and posterior iliac crest bone grafts in terms of harvest-site morbidity and functional outcomes. THE JOURNAL OF BONE & JOINT SURGERY·JBJS.ORG VOLUME 84-A·NUMBER 5·MAY 2002

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【5】David H. Kim, MD et al: Prospective study of iliac crest bone graft harvest site pain and morbidity,The Spine Journal 9 (2009) 886–892.

【6】Hans Christoph Pape, MD et al: Autologous Bone Graft: Properties and Techniques. J Orthop Trauma · Volume 24, Number 3 Supplement, March 2010


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**Innovative Translational Medicine Platform**


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