

POROUS


Cortical Bone Microstructure Analysis


EMPOWER BONE HEALTH




**Julia
Eschenbrenner**

CEO

 +49 151 2423 7644

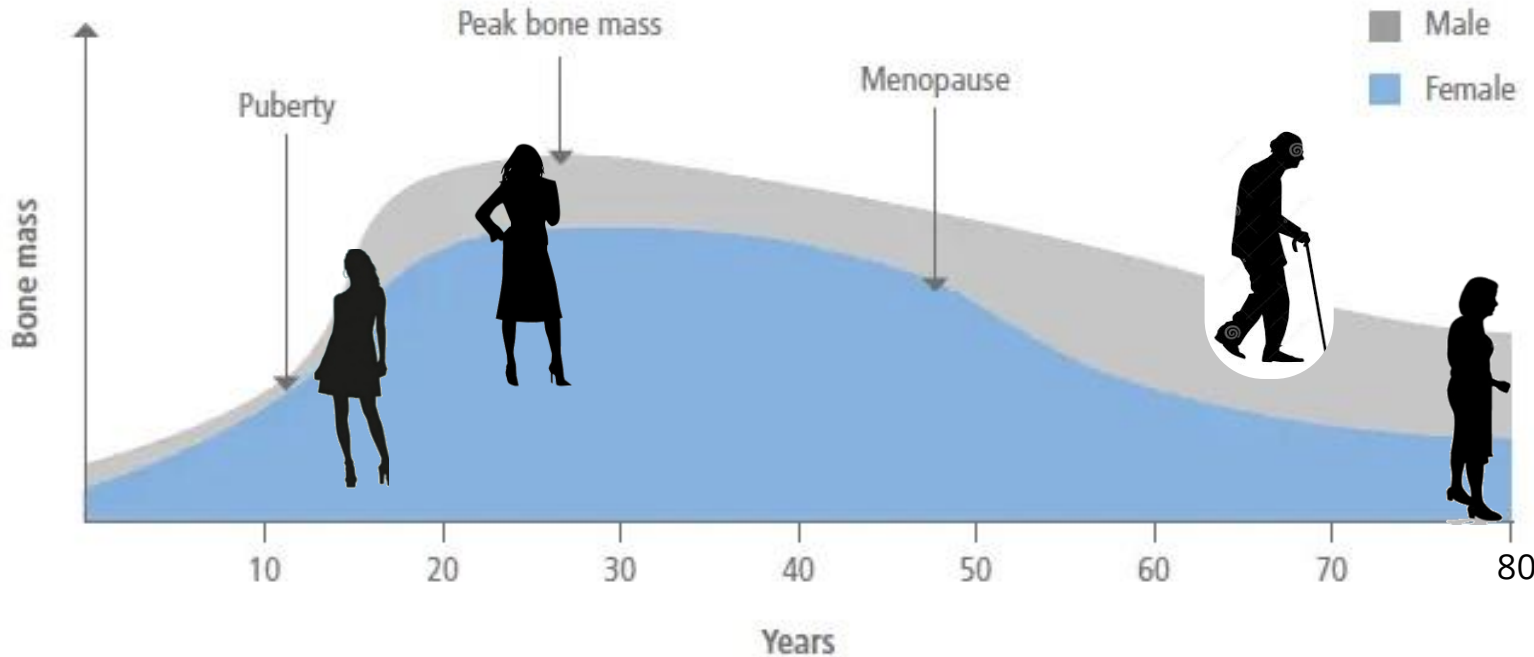
 porous.care

 eschenbrenner@porous.care

 Am Mühlenberg 11, 14476 Potsdam, Germany

"Silent thief" osteoporosis steals bone mass in menopause & aging

Osteoporosis causes bones to become brittle and fragile

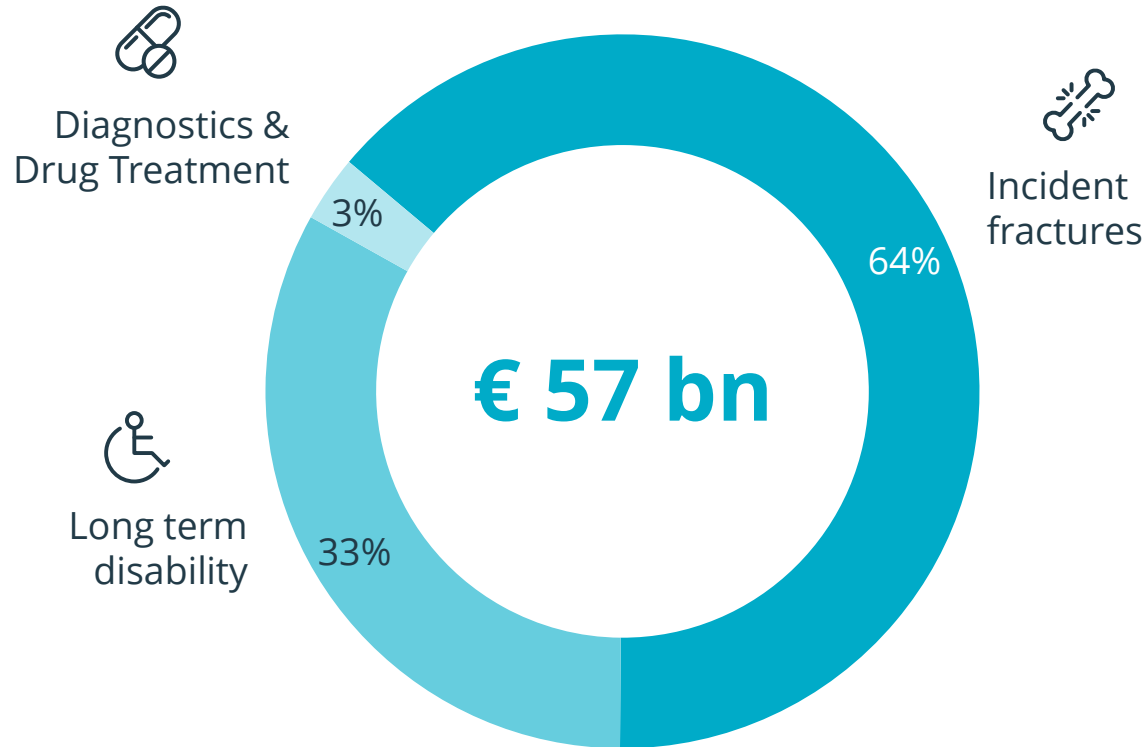


1 in 3 women
&
1 in 5 men

50 yrs+ suffer an
osteoporotic fracture
in their lifetime.

The consequences of osteoporotic fragility fractures

Exploding socio-economic costs in aging societies and individual suffering



Annual healthcare costs of fragility fractures in Europe

Increased mortality

20% of women die within 1 year after hip fracture

Loss of independence

25 % of women are admitted to nursing home

Poor health & loss of quality of life

50 % of women never regain prefracture function.

Current diagnostic standard is failing

Osteoporosis treatment and fracture prevention do not reach the patient

Diagnosis typically after the 1st fracture

Limitations of old standard bone mineral density measurement by dual X-ray absorptiometry (DXA-BMD):

- X-ray
- Recommended & reimbursed only if there are risk factors for fragility fractures
- Limited access in many countries

Underdiagnosis by gold standard BMD



Up to
82% patients
who had osteoporotic fracture/s are
not identified by standard diagnostic BMD

POROUS ultrasound solution delivers rich bone health data far beyond the standard BMD



Safe ultrasound measurement
Cortical bone assessment at tibia

Backscatter analysis by smart algorithms quantifies:

Cortical bone mass

- Cortical bone thickness

Cortical bone microstructure

- Cortical pore size & size distribution

Bone material properties

- Stiffness & Viscoelasticity

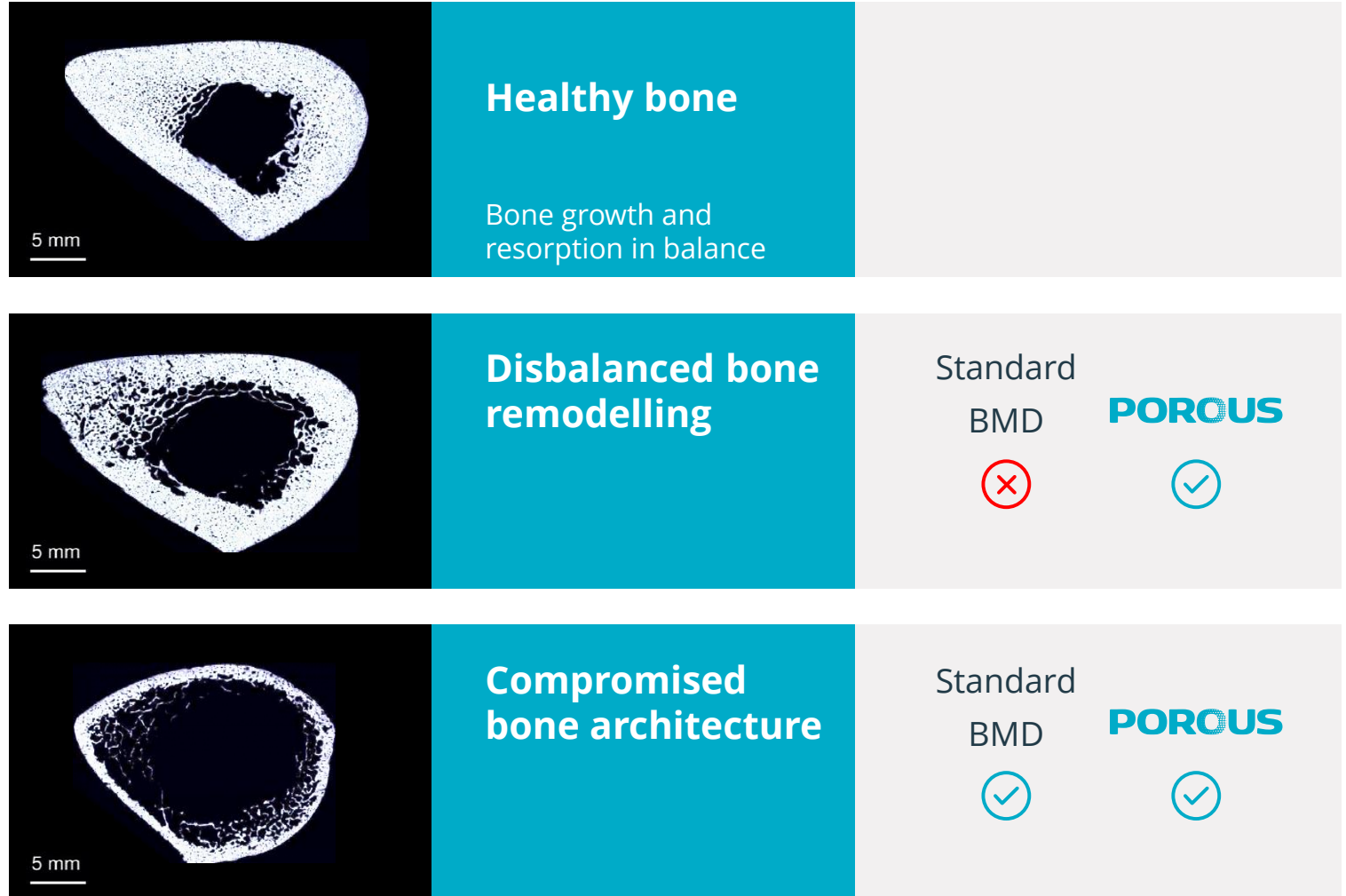
Strong IP:

- Invented at Charité Universitätsmedizin Berlin.
- Patents granted in US, JP & CN. Pending in EU.
- POROUS exclusive license holder.

POROUS next generation diagnostic for better fracture prevention

Shifting the diagnostic window:

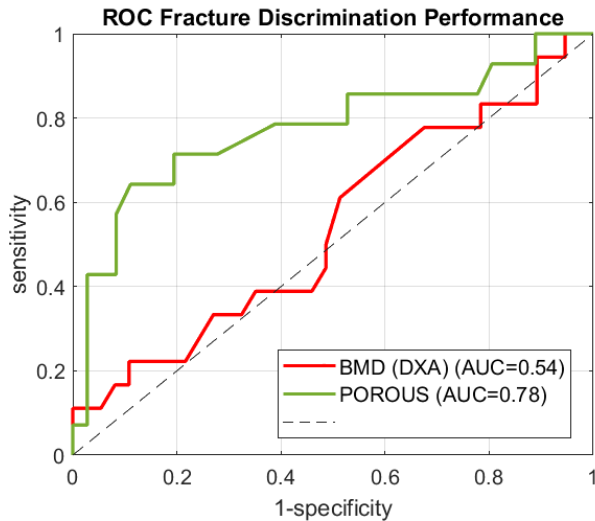
POROUS ultrasound bone health diagnostic before bones become brittle & fragile.



Ex-vivo acoustic microscopy images of tibia cross sections at different osteoporosis stages

Minh et al. IEEE TUFFC (2019), Iori et al. IEEE TUFFC (2021); Minh QMSKI 2022, Raum et al. Curr Osteop Rep (2014)

Revolutionary Bone Quality Diagnostics clinically validated



First Pilot at Charité Universitätsmedizin Berlin:

- Postmenopausal Women (n=55)
 - > **30% improvement over BMD (DXA)** in fracture discrimination
- Confirmed in further pilot studies (total n > 500)

Ongoing: Confirmatory Clinical Evaluation of Fracture Risk Prediction

N = 1600

6 clinical centers: Charité Universitätsmedizin Berlin, Universitätsklinik Marburg, Universitätsklinik Halle, AKH Vienna, VieCurie Venlo

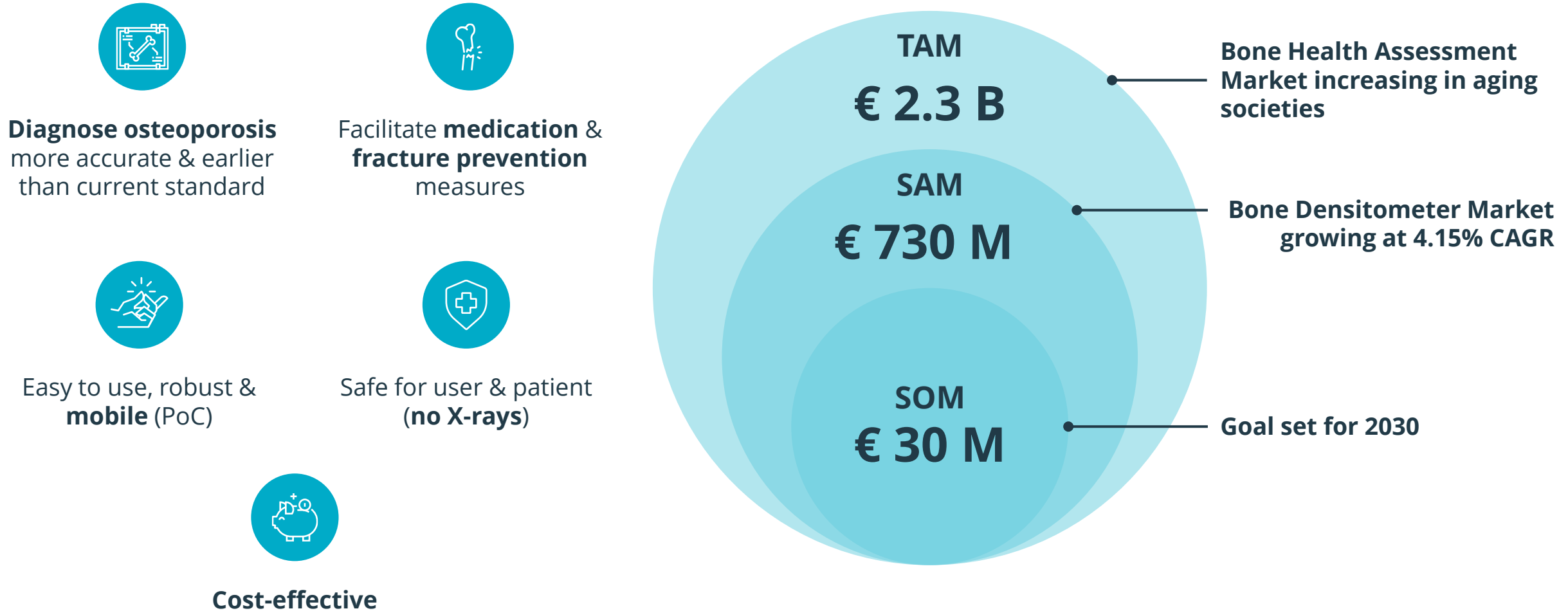


First product on the market: POROUS cortical bone assessment for bone health research



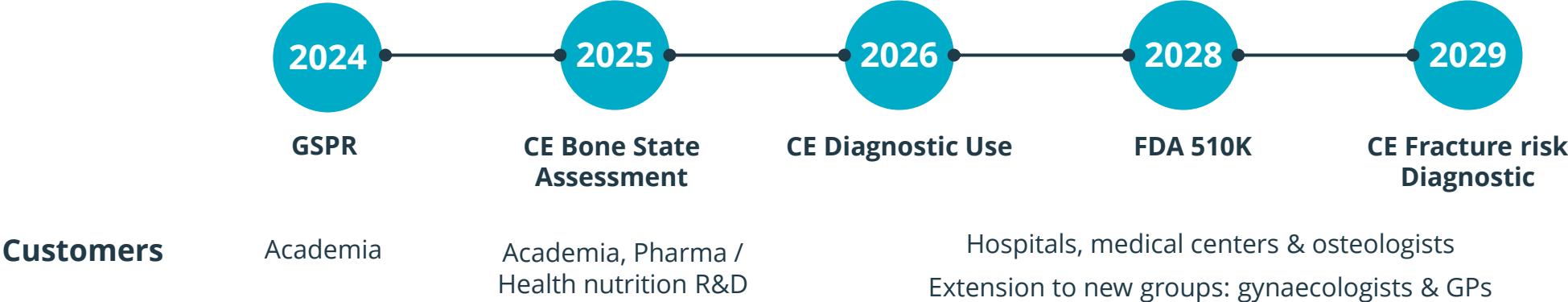
- ✓ Revenue earning since 2023
- ✓ In clinical use at
 - Charité Universitätsmedizin
 - AKH Vienna
 - European Space Agency
- ✓ Partners in pharma & health nutrition
 - Lol Organon
 - Lol Nippon Zoki
 - others

A Unique Offering for the Large Market of Bone Health Dx



Route to Market & Business Model

Market entry by Device Sales



Scaling up with Software Licenses & SaaS



Diverse Team with Strong & Proven Competences



Business Development, Marketing & Finances

- Dr.-Ing. Julia Eschenbrenner / **CEO**
10+ years in business development, 10+ years in pharma/biotech industry R&D
- Dr. Maren Glüer / Market Development Manager
10+ years marketing experience & extensive international network in osteology
- Konstantin Hemmelrath / Finance Consultant



Scientific Expertise

- Prof. Dr. Dr. Kay Raum / **CSO** & Inventor
Head of Imaging, Simulation & Stimulation Group at Charité Universitätsmedizin Berlin



Study management and Regulatory

- Irina Lorenz-Meyer / Clinical Trial Manager
- Dr. Kfir Lapid / Medical Writer & Expert
- Jürgen Wieser / PRRC & QR Consultant
Quality Management & Regulatory Affairs expert with 20+ years international experience



Software Development

- Jonas Massmann / **CTO**
Former Lead Software Developer, Award-winning Masters' in Electrical Engineering
- Sujeethadevi Lalitha / Software Developer
- Saber Izak / Software Developer
- Harvey McLachlan / Biomedical Engineer
- Yun Pan / Biomedical Engineer



HR and Support

- Isabel Guttmann / Assistant General Management

Investment Proposal to join POROUS Series A

Raising € 6 M direct equity

Status: € 5.2 M committed

- Including EIC accelerator equity

Matching focus areas:

#medtech #digital

#womens_health

#longevity #healthspan

#sustainability #healthcare_emissions

Start-Up of the
Charité Universitätsmedizin Berlin



POROUS

Cortical Bone Microstructure Analysis



Thank you



**Julia
Eschenbrenner**
CEO

+49 151 2423 7644

eschenbrenner@porous.care

porous.care

Am Mühlenberg 11, 14476 Potsdam, Germany