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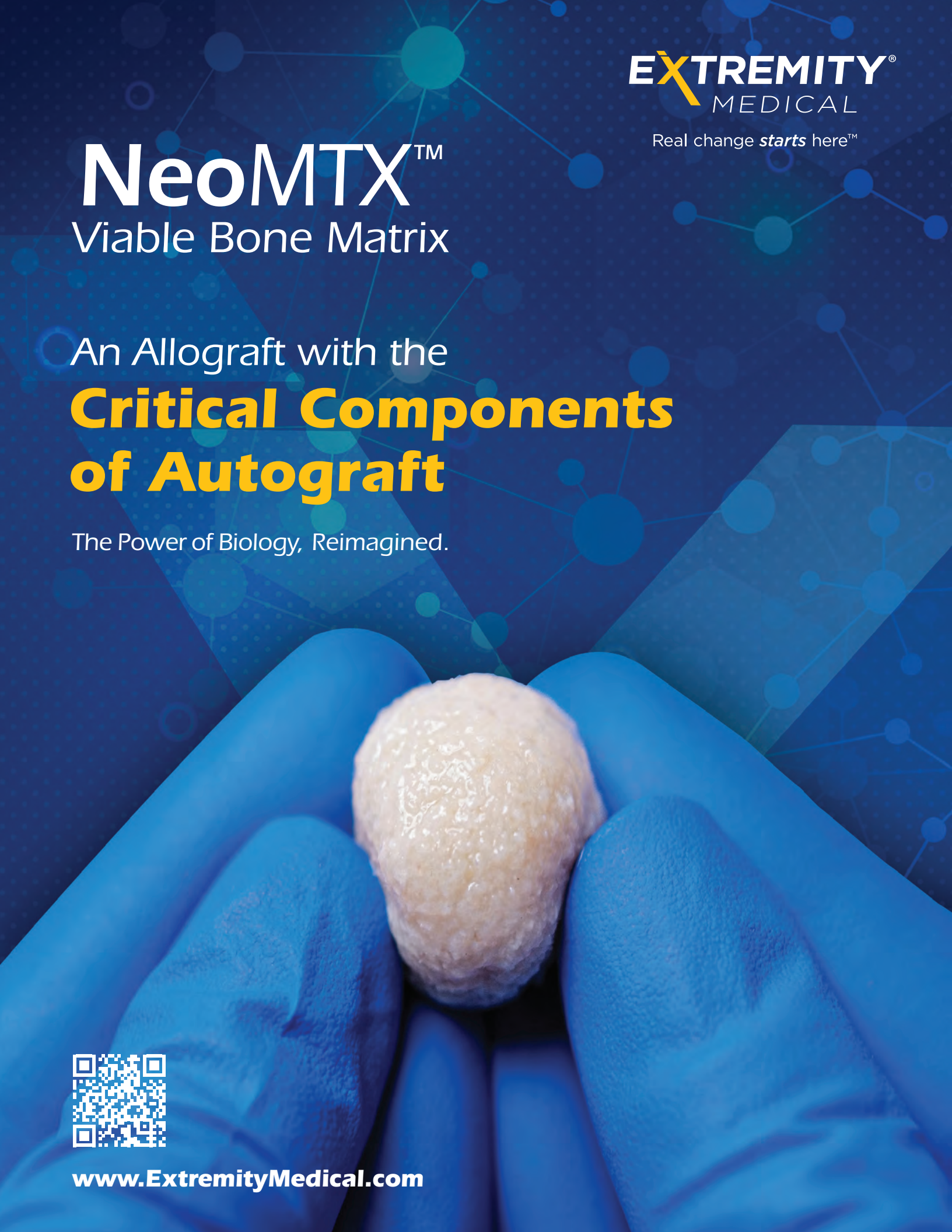
NeoMTX™

Viable Bone Matrix

An Allograft with the

Critical Components of Autograft

The Power of Biology, Reimagined.



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Rigorous Organ Donor Standards and Advanced Tissue Processing

Strict Donor Screening & Tissue Recovery	Tissue Processing	Packaging & Cryopreservation
≤ 8 hrs	≤ 72 hrs	≤ 82 hrs

All donors are screened according to FDA requirements for HCT/Ps, AATB requirements for tissue, and OPTN requirements for organs.

Osteoconductive

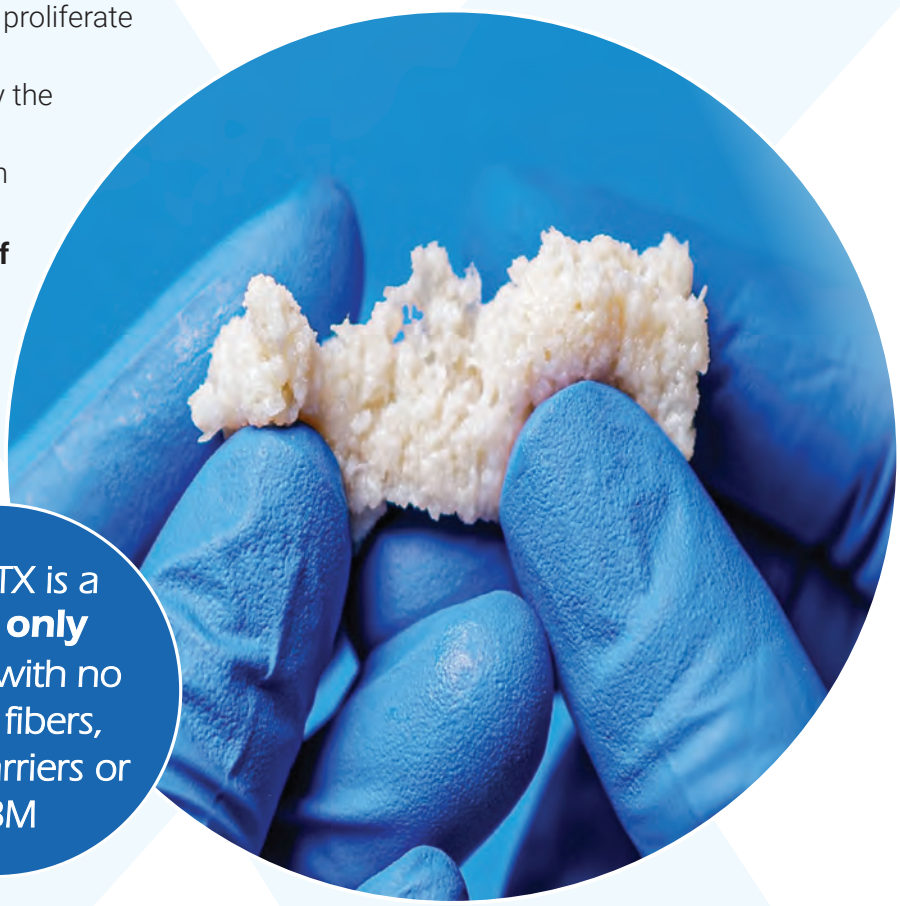
*The physical, three-dimension **scaffold** surface for bone growth.*

Cancellous bone, the trabecular matrix, is the optimal microenvironment for bone cells to attach, proliferate and remodel.[2]

Cancellous bone healing is less affected by the inflammatory response.[3]

Cancellous bone enables re-vascularization faster than cortical bone.[4]

An allograft with the critical component of autograft, NeoMTX provides mineralized cancellous bone as the scaffold.



NeoMTX is a **graft only** matrix, with no added fibers, fillers, carriers or DBM

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Osteogenic

*The transformation of **cells** into bone tissue.*

The mineralized component of an autograft is critically important for its osteogenic capacity.[1]
The osteogenic capacity of a bone graft declines with age:[1] bone mass typically peaks prior to 50 years of age.[5]

Donor Source	Cell Viability	Cell Count
Organ Donor	≥ 70% Post Thaw	~ 2,000,000 vertebral bone adherent cells (vBA)/cc (verified post thaw)
Age Restricted ≤ 55 yrs		
Median Age: ~ 35 yrs		

Osteoinductive

*The ability of chemical **signals** to induce a biologic response.*

NeoMTX contains physiologic levels of naturally occurring growth factors.

Growth Factor	Category	Function
BMP-2	Osteogenic	Bone development[6]
BMP-4		Most potent Osteoinductive protein[7]
BMP-7		Regulates bone formation and fracture repair
VEGF	Angiogenic	Vascularity and maintenance of normal bone remodeling and ossification in bone repair[8]
PDGF-BB	Proliferation	Most biologically effective PDFG subtype with mitogenic activity in Osteoblasts[9]
FGF-1		
FGF-2		Accelerates fracture healing and treat Osteoporosis[9]
BMP-9	Signalling	Most potent BMP for MSC osteogenic signaling[7]
Osteopontin	Bone Density, Recruitment, Differentiation	Skews MSCs to bone formation; maintains bone mass[5]
Osteoactivin		Aids in recruitment of MSCs to fracture site; polarization of MSCs to macrophages to M2 to reduce inflamammation

Validated process to confirm bone formation and remodeling genes, verfied by RNA sequencing.

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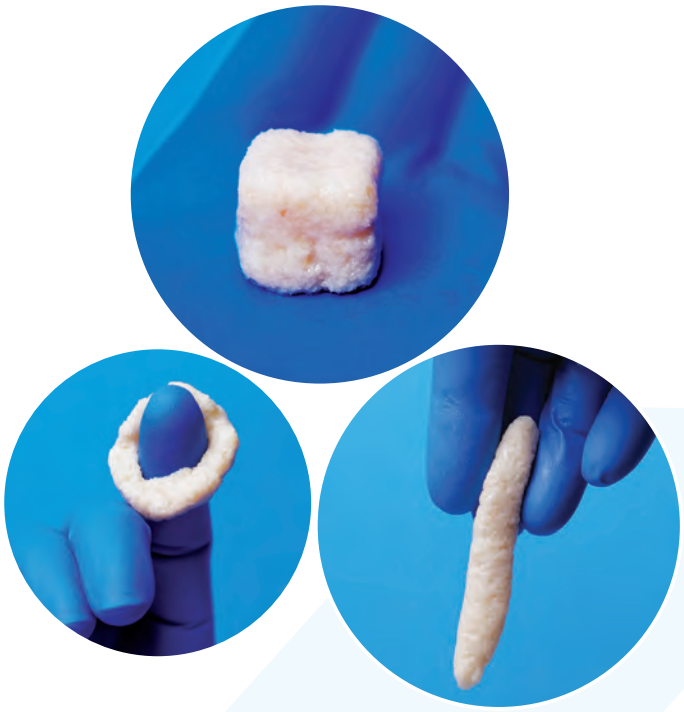
Advanced Proccesing Optimal Handling

No added demineralized bone particulates

- Approximate 5 Minute Thaw Time
- No Decanting
- USP <71> Sterility Tested
- Highly formable to pack in limited space voids
- Maintains graft integrity after significant handling or lavage

Part #	Description	Size
145-80025	Neo MTX Viable Bone Matrix	2.5 cc
145-80050	Neo MTX Viable Bone Matrix	5.0 cc
145-80100	Neo MTX Viable Bone Matrix	10 cc
145-80150	Neo MTX Viable Bone Matrix	15 cc



Footnotes

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