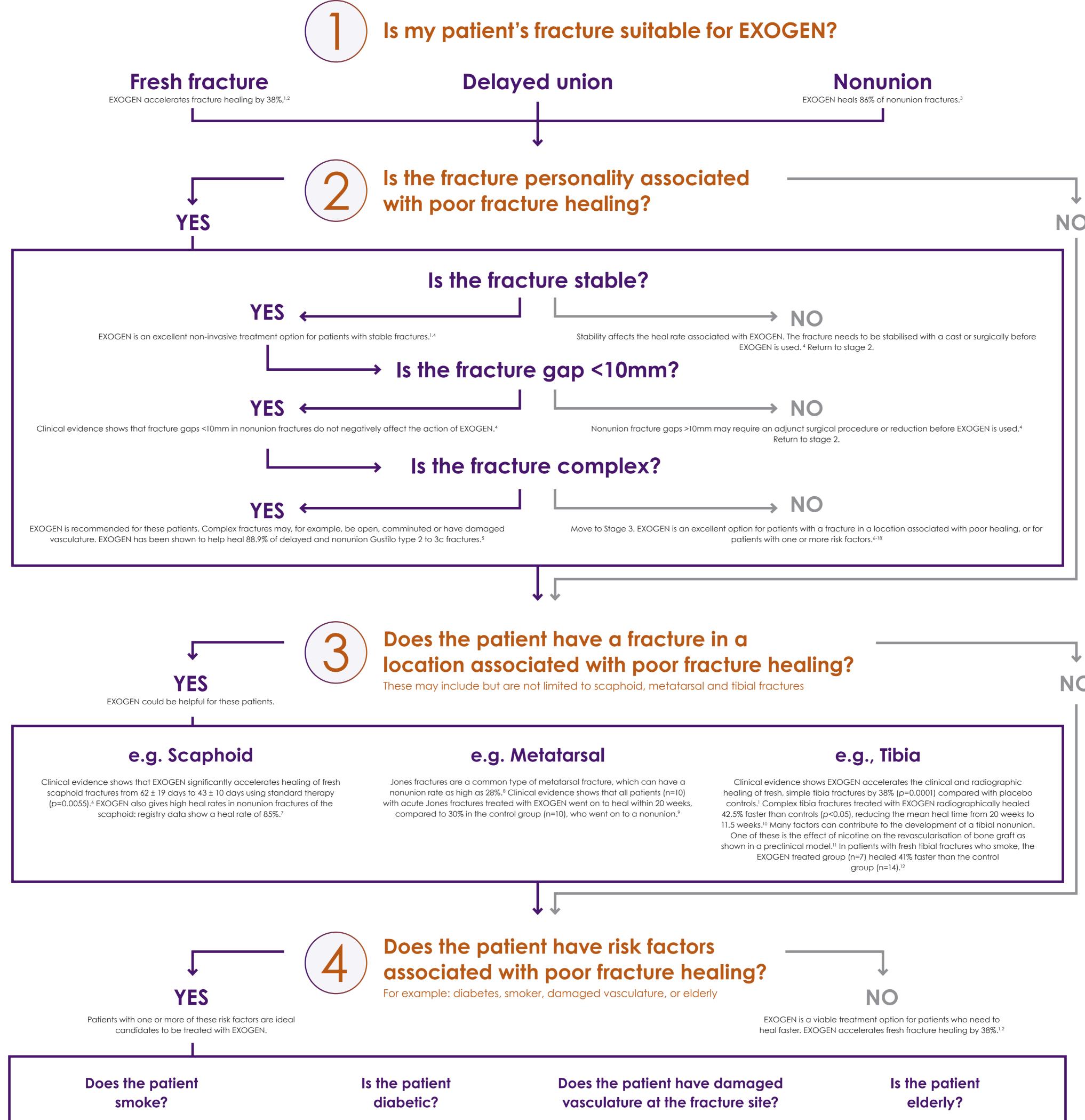


TREATMENT PATHWAY





The action of nicotine has an adverse effect on the revascularisation of bone graft, as shown in the preclinical model.*11

Preclinical models demonstrate that EXOGEN increases VEGF expression.* Registry data show that the nonunion fracture heal rate within patients who smoke is 79% vs. 82% for those who stopped smoking and 84% for patients who have never smoked.

Diabetic patients often have a problem with vascular insufficiency that can lead to problems in tissue and fracture healing.

Preclinical data show EXOGEN increases VEGF expression and vascular density in an animal model of diabetic fracture healing.*

Registry data show a heal rate of 82% of nonunion fractures in

diabetic patients.7

Vascular damage can occur during the initial trauma, especially if this is a high-energy trauma. It can also occur as a result of periosteal stripping during surgery. Vascular damage can be a cause of a fracture becoming an atrophic nonunion. Preclinical data show EXOGEN increases VEGF expression.*13

EXOGEN has been shown to accelerate clinical healing by 40% and radiographical healing by 42.5% in patients with complex tibial fractures.¹⁰

EXOGEN has also been shown to help heal 88.9% of delayed and nonunion Gustilo type 2 to 3c fractures.⁵

As we age, levels of COX-2 in the body decrease. This results in decreased mineralisation and vascularisation.¹⁵ EXOGEN increases the levels of COX-2 and VEGF to help overcome these problems.*^{13,16} Clinical data show a 45% acceleration in time to healing of fresh, simple tibia fractures in patients over 30 years of age.¹⁷ A recent study also shows that patients over 60 years old with fresh fractures treated with EXOGEN (n= 554) had a heal rate of 95.2%, indicating that EXOGEN has the effect of mitigating age as a risk factor for fracture repair.¹⁸

*The clinical relevance of in vivo findings is unknown

References: 1. Heckman JD, Ryaby JP, McCabe J, Frey JJ, Kilcoyne RF. Acceleration of tibial fractures with the use of specific, low-intensity ultrasound. J Bone Joint Surg Am. 1994;76(1):26-34. doi:10.2106/00004623-199707000-00002 3. Notice PE, yand for Krans A, Pataka P, Janssesan IMC, Ryaby JP, Albers GH. Low-intensity pulsed ultrasound in the treatment of non-unions: a 59-case pilot study. Orthop Traumands Surg Res. 2012;98(2):206-13. doi:10.1016/j. oltras. 2013.10.1016/j. oltras. 2012;98(2):206-13. doi:10.1016/j. oltras. 2013.10.1016/j. oltras. 2013.10.10.1016/j. oltras. 2013.10.1016/j. oltras.

Summary of Indications for Use:

EXOGEN is indicated for the non-invasive treatment of osseous defects (excluding vertebra and skull) that includes the treatment of delayed unions, nonunions,† stress fracture and joint fusion. EXOGEN is also indicated for the acceleration of fresh fracture heal time, repair following osteotomy, repair in bone transport procedures and repair in distraction osteogenesis procedures.

†A nonunion is considered to be established when the fracture site shows no visibly progressive signs of healing.

There are no known contraindications for the EXOGEN device. Safety and effectiveness have not been established for individuals lacking skeletal maturity, pregnant or nursing women, patients with poor blood circulation or clotting problems. Some patients may be sensitive to the ultrasound gel.

Full prescribing information can be found in product labeling, or at EXOGEN.com

Bioventus Coöperatief U.A. Taurusavenue 31 2132 LS Hoofddorp

© 2021 Bioventus LLC SMK-000801B 11/21

The Netherlands

Customer Care
T (UK): 0800 05 16 384 (toll fee)
T (IR): 1800 552 197 (toll free)
E: customercare-international@bioventusglobal.com

EXOGEN.com

