Independently published studies speak for themselves:

“Often the mechanical advantage contributed by a bone graft makes the difference between healing the fracture and premature breaking of the implants.”

“A bone graft will act as a portable callus or bridge, and the structural strength of the graft can be expected to increase rapidly after the first 10 days.”

“Most surgeons will not hesitate to use bone graft if there is a large defect, but many will neglect its use for ostensibly insignificant cracks or gaps. [...] (However,) paradoxically, small gaps are potentially more devastating than large ones since they will cause greater concentrations of stress in the plate.”

“The use of axial compression in fracture fixation is only helpful if there is intact bone stock that will result in a stable situation under pressure.”

Nunamaker DM

*General techniques and biomechanics.*

“The most compelling reason for the use of the substance (allogeneic bone) is the elimination of the need of a harvesting operation on a patient already undergoing extensive surgery for the restitution of skeletal integrity.”

“The establishment of bone banks, eliminating the need for a 2nd surgical procedure, but providing dependable osteogenic material, presents a most attractive idea.”

Fackelman GE, Rechenberg B, Fetter AW

*Decalcified Bone Graft in the Horse.*

“Marrow and DBM stimulated defect healing. However, the combination of bone marrow with DBM produced a synergistic response in the defect, which was greater than the sum of either marrow or DBM alone.”

Tiedman JJ, Connolly JF, Strates BS, Lippiello L

*Treatment of nonunion by percutaneous injection of bone marrow and demineralized bone matrix. An experimental study in dogs.*

“The use of allogeneic grafting materials in the horse was inspired by the desire to eliminate the need for a second (harvesting) operation, thus saving time and avoiding potential complications.”

“There is an initial phase in revascularization relative to autogenous material, but this appears to disappear with time and by 9 weeks postoperatively the two graft materials show about the same degree of repopulation of osteoblasts.”

Auer JA, Fackelman GE

*Allogeneic grafts and bone substitutes.*

None of these studies were initiated or funded by VTS. Please see back for additional references...
Selected Additional References for Use of Bone Graft in Equine Orthopedic Applications

Equine Allograft Bone

“Capillary ingrowth on day 9 is followed by the start of bone formation on day 10.”


Indications for Bone Grafting

“The results obtained with lag screw fixation and bone grafting in these horses would indicate that the racing careers of many horses with transverse sesamoid bone fractures can be salvaged by use of this technique.”


Bone Grafting and Stem Cells

“SCR-enriched (Selective Cell Retention) DBM-CC (demineralized bone and cancellous chips) was equivalent to autograft to repair critical-size defects.”


Cost and Risk of Autograft Procurement

“Total mean (±SD) surgical time for harvesting bone […] was 38 ± 6 minutes. […] Mortality was 12.5%; one horse fractured the operated humerus during anesthetic recovery.”


Conflicting Results to Date and the Significance of Good Tissue Banking Practices

“Particles of 2 to 4 mm DBM should not be used as an aid to fracture repair because particles of this size interfere with normal mineralization.”


Basic Bone Healing Biology