

CASE STUDY

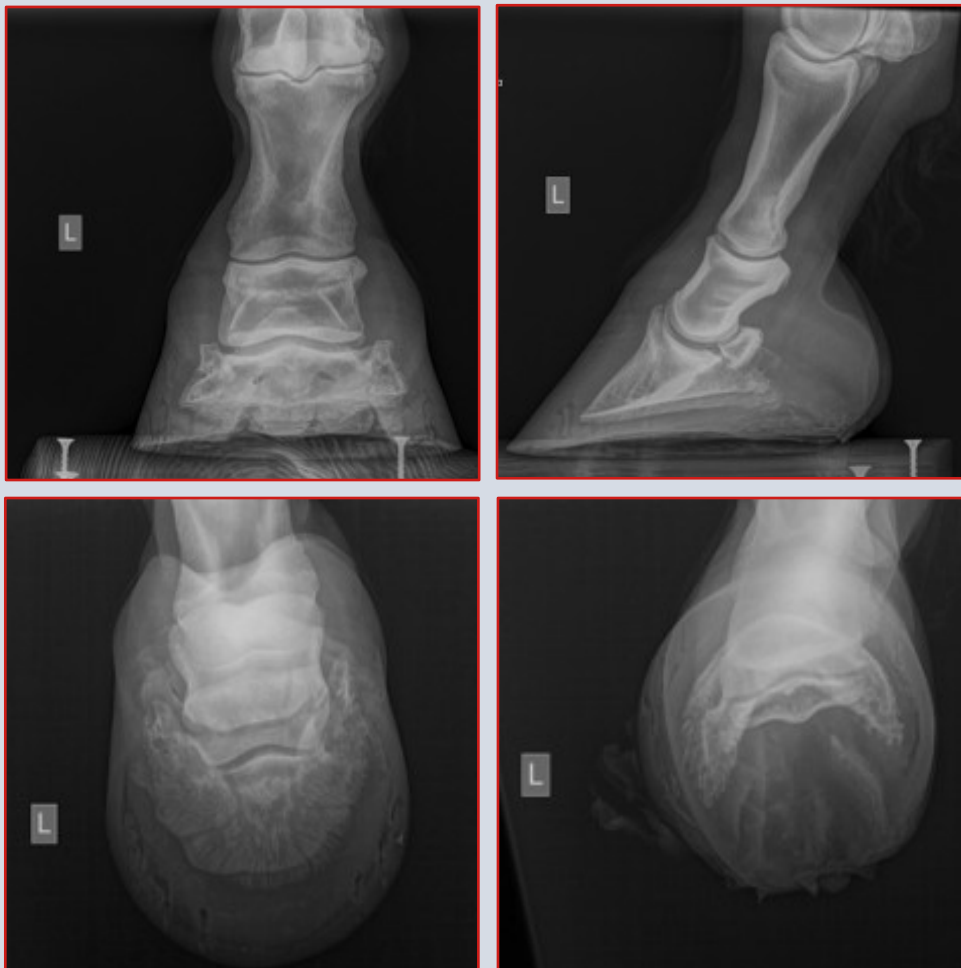
Chronic Navicular Syndrome in Rope Horse

May 11, 2026

A 24-year-old Quarter Horse gelding presented for updated radiographic evaluation of previously diagnosed navicular disease and discussion of additional therapeutic options due to progressive discomfort. The gelding had historically been managed with therapeutic shoeing modifications and firocoxib (Equioxx®) as needed. Despite these interventions, the owner reported a recent decline in comfort, with the patient no longer consistently maintaining pasture soundness. Baseline gait evaluation demonstrated marked right forelimb lameness, graded 3/5. On a physical exam, the patient was positive to hoof testers across heels on both fronts. A complete series of navicular radiographic projections was obtained of both front feet to assess the extent and severity of osseous changes.

Radiographic evaluation revealed moderate bilateral osseous remodeling of the navicular bones. Abnormalities were characterized by loss of normal medullary architecture and corticomedullary distinction, increased sclerosis, irregularity of the distal borders, and an increased number and prominence of synovial invaginations. Radiographic changes were more advanced in the right forelimb compared with the left, consistent with the greater clinical severity observed during gait evaluation.

Baseline radiographic series of the left front navicular bone are shown below demonstrating moderate chronic osseous degeneration, characterized by loss of normal corticomedullary definition, increased sclerosis, irregularity of the distal border, and increased number and prominence of synovial invaginations.



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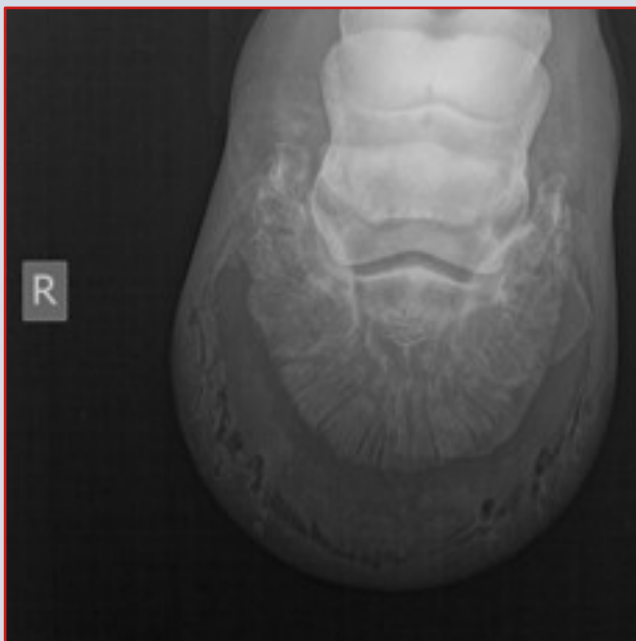
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May 11, 2026 (continued)

Baseline radiographic series of the right front navicular bone are shown below demonstrating moderate to advanced chronic osseous degeneration, characterized by loss of normal corticomedullary definition, increased sclerosis, irregularity of the distal border, and increased number, width, and prominence of synovial invaginations. Changes are more pronounced than those observed in the left front.

Given the progression of clinical signs despite conventional management and the degree of radiographic change present, additional therapeutic intervention was pursued with the goal of improving patient comfort and supporting the affected tissues.



May 11, 2026 (continued)

Initial Treatment and Clinical Response

Based on the clinical and radiographic findings, the decision was made to treat both distal interphalangeal (coffin) joints with StrideGUARD™. The patient was appropriately sedated, and each injection site was aseptically prepared. Under sterile conditions, StrideGUARD™ was drawn into an 18-gauge needle and combined with 2.0 mL of sodium bicarbonate, resulting in a total treatment volume of 4.0 mL per joint. The preparation of 2.0mLs was administered into each distal interphalangeal joint using a 20-gauge, 1-inch needle.

Following treatment, the patient was discharged with a four-day course of non-steroidal anti-inflammatory medication. Three days of rest from ridden exercise were recommended, followed by a gradual return to activity over the subsequent four days before resuming his normal routine. A concurrent therapeutic farriery plan was also discussed with the farrier, with particular emphasis on improving sole depth and optimizing the palmar angle.

Two days following treatment, the owner reported a marked improvement in the gelding's comfort and spontaneous activity. The patient was observed loping freely in the pasture on both leads, an activity the owner reported he had not performed comfortably in several years.

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June 30, 2026

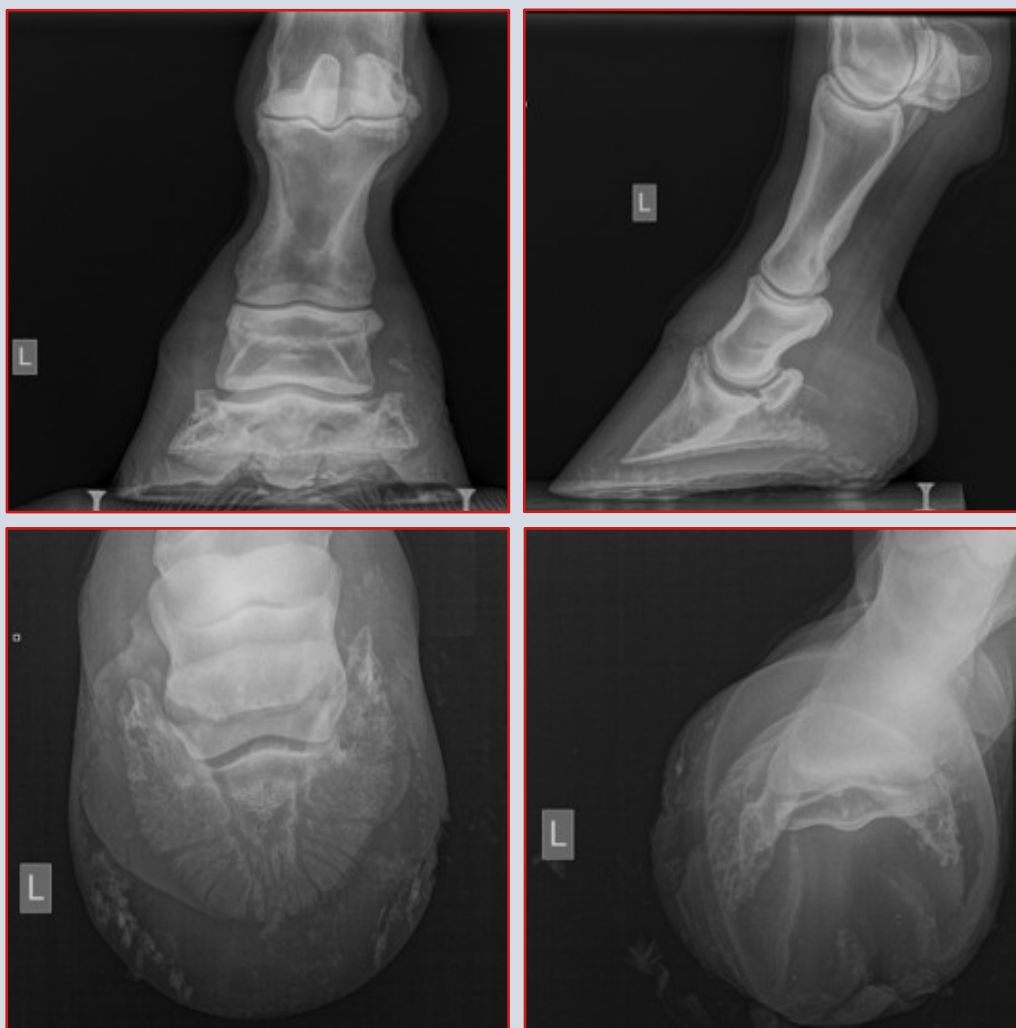
First Recheck Evaluation

Approximately seven weeks following the initial treatment, the patient returned for clinical and radiographic reevaluation and consideration of a second StrideGUARD™ treatment.

On physical examination, the patient appeared comfortable and demonstrated no adverse response to hoof tester application across the heel region. Gait evaluation demonstrated substantial improvement from baseline, with right forelimb lameness graded 1/5 compared with 3/5 at the initial examination.

Repeat navicular radiographs demonstrated improvement compared with the May 11, 2026 baseline images. The navicular bones exhibited smoother and more uniform cortical margins, decreased number and prominence of synovial invaginations, and improved definition between the cortical and medullary regions. Collectively, these findings represented a notable change in both clinical presentation and radiographic appearance over the seven-week interval following the initial treatment.

Seven-week post-treatment radiographic series of the left front navicular bone are shown below demonstrating marked interval improvement compared with baseline. There is improved corticomedullary definition with smoother, more distinct cortical margins, decreased prominence of sclerosis, and reduction in the width and prominence of the synovial invaginations.



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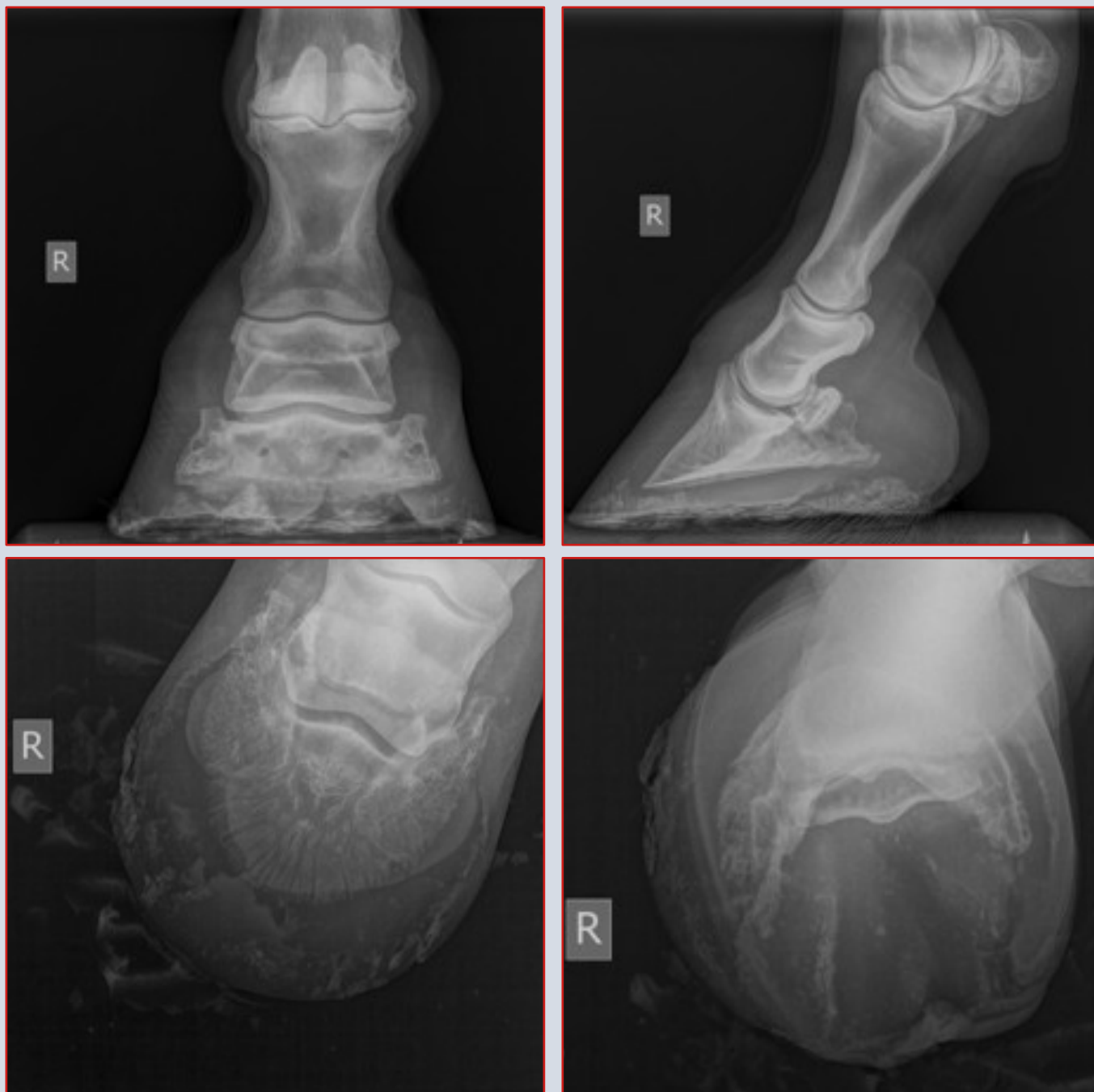
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June 30, 2026 (continued)

Seven-week post-treatment radiographic series of the right front navicular bone are also shown below demonstrating marked interval improvement compared with baseline. There is improved corticomedullary definition with smoother, more uniform cortical margins, decreased prominence of sclerosis, and reduction in the width and prominence of the synovial invaginations.



June 30, 2026 (continued)

Second Treatment and Continued Clinical Response

Based on the substantial clinical improvement and interval radiographic changes observed at the June 30, 2026 recheck examination, a second treatment with StrideGUARD™ was elected for both distal interphalangeal joints.

The patient was appropriately sedated, and each injection site was aseptically prepared. Under sterile conditions, StrideGUARD™ was drawn using an 18-gauge needle and combined with 2.0 mL of sodium bicarbonate, resulting in a total treatment volume of 4.0 mL per joint. The preparation was administered into each distal interphalangeal joint using a 20-gauge, 1-inch needle.

Following treatment, the patient was discharged with a four-day course of non-steroidal anti-inflammatory medication. Three days of rest from ridden exercise were recommended, followed by a gradual return to activity over the subsequent four days before resuming his normal routine.

Following the second treatment, the owner reported continued improvement in the gelding's comfort, willingness to move forward, and overall activity level. The patient successfully returned to regular ridden work, including lessons and trail riding. Of particular significance to the owner, the gelding had resumed comfortably leading trail rides, an activity he reportedly had not performed in several years.

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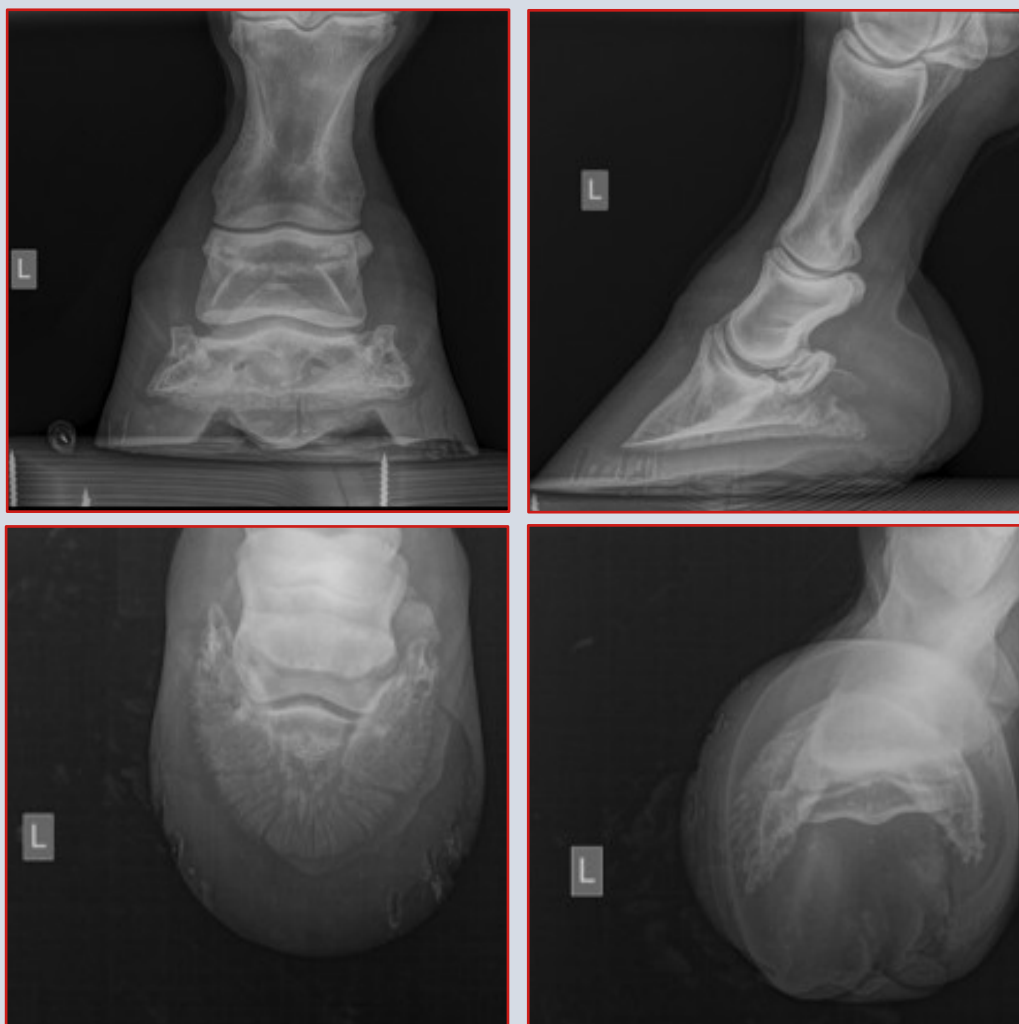
August 11, 2026

Final Recheck Evaluation

Approximately six weeks following the second treatment and three months after the initial evaluation, the patient returned for final clinical and radiographic assessment. On physical examination, the patient remained comfortable and demonstrated no adverse response to hoof tester application. Gait evaluation revealed no appreciable forelimb lameness, representing continued improvement from the initial right forelimb lameness grade of 3/5 and the grade 1/5 lameness documented at the first recheck. A grade 2/5 right hindlimb lameness was identified at this examination; however, no recurrence of the original forelimb lameness was appreciated.

Repeat navicular radiographs were obtained to complete the serial evaluation. Radiographically, the navicular bones maintained smooth, more uniform margins with continued improvement in corticomedullary definition. Overall osseous opacity and trabecular architecture appeared more uniform compared with baseline images. The previously prominent sclerotic cortical border appeared thinner and less distinct, while the previously enlarged synovial invaginations demonstrated decreased width and prominence.

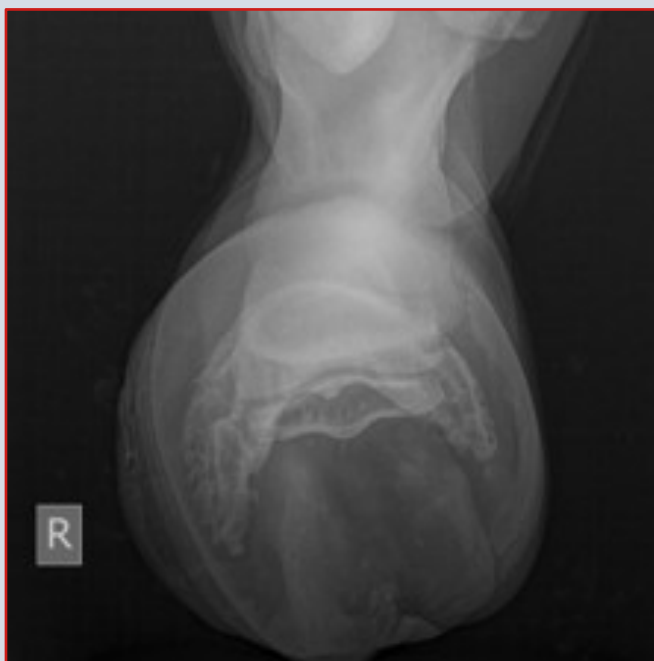
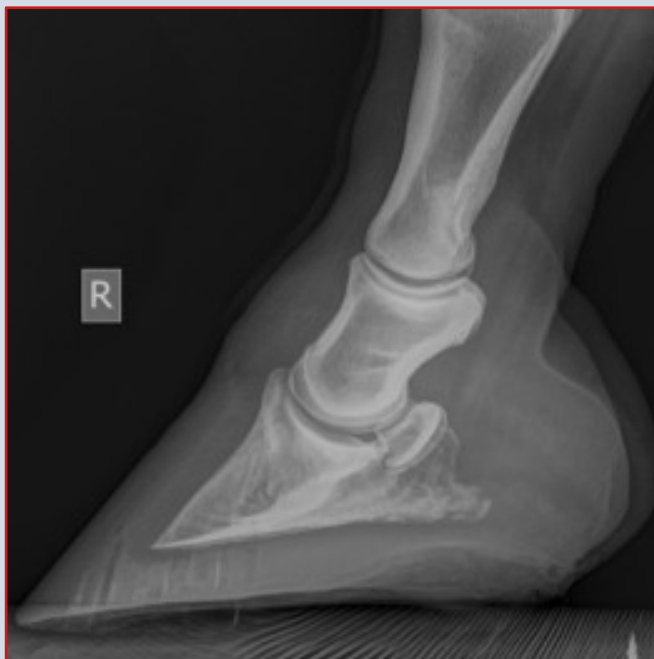
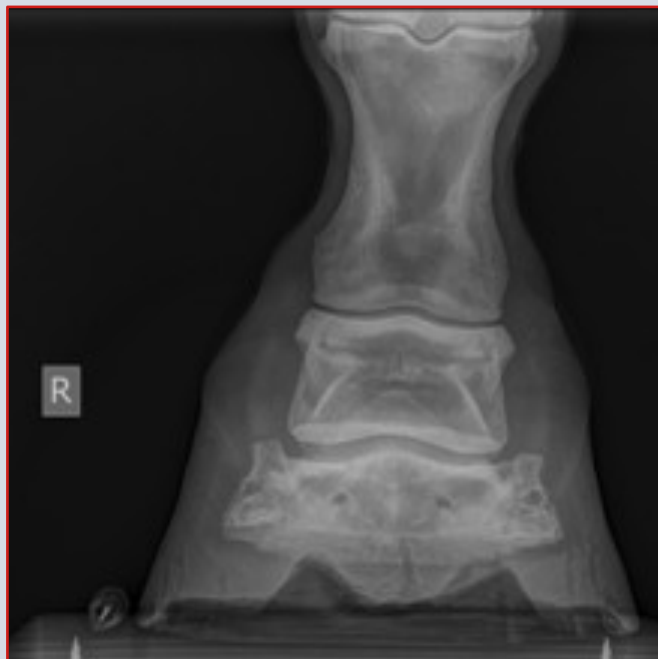
Specifically, final radiographic series of the left front navicular bone are shown below demonstrating continued improvement compared with baseline and maintenance of the positive changes observed at the first recheck. The navicular bone demonstrates smooth, well-defined cortical margins, improved corticomedullary distinction, and a more uniform osseous and trabecular appearance. The previously prominent sclerotic border is thinner and less distinct, with continued reduction in the width and prominence of the synovial invaginations.



August 11, 2026 (continued)

Final radiographic series of the right front navicular bone are also shown below demonstrating continued improvement compared with baseline and the first post-treatment evaluation. Corticomedullary definition is markedly improved, with smoother and more uniform cortical margins and a more organized trabecular appearance. The previously prominent sclerotic cortical border is thinner and less distinct, with decreased width and prominence of the synovial invaginations.

At the conclusion of the study period, the patient demonstrated sustained clinical improvement in the originally affected forelimbs, return to a substantially higher level of voluntary and ridden activity, and progressive improvement in the radiographic appearance of the navicular bones across serial examinations.



Comparison to standard of care

Conventional management of navicular syndrome has advanced considerably over the past decade, with a growing range of therapeutic options available to improve patient comfort and maintain athletic function. Current management strategies may include bisphosphonate therapy, such as Osphos®, corrective or therapeutic shoeing, and targeted intra-articular or regional therapies. While these approaches can provide meaningful clinical improvement, navicular syndrome remains a challenging condition to manage due to its multifactorial nature, variable disease severity, and differences in individual patient response.

A notable finding in this case was the combination of rapid improvement in patient comfort and measurable radiographic changes following two treatments with StrideGUARD™. In addition to clinical improvement, serial radiographs demonstrated progressive improvement in the appearance of the navicular bone over a relatively short treatment interval. These changes included improved definition and uniformity of the medullary and cortical margins, increased smoothness of the distal border, and decreased prominence and width of the synovial invaginations.

The concurrent clinical and radiographic improvements observed in this case are particularly noteworthy, as conventional management of navicular syndrome is frequently focused on reducing pain, modifying biomechanical loading, and slowing disease progression rather than producing substantial radiographic improvement over a short period.