

Case No. 200

# OSTEONECROSIS: HIP

CASE STUDY | Pre-op radiograph.



## SIXTY-FOUR YEAR-OLD MALE

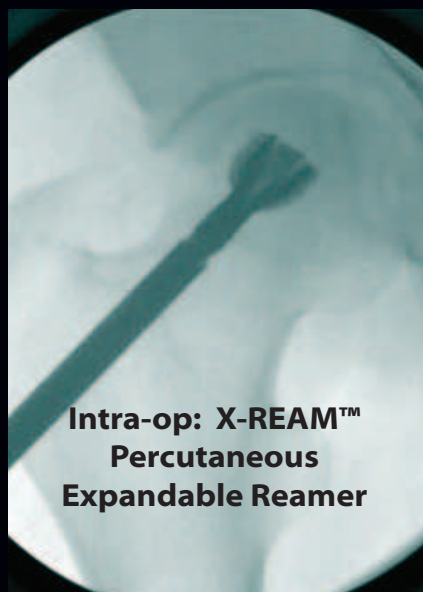
with late Stage II AVN of the right hip, but minimal pain. A core decompression was performed and backfilled by grafting with approximately 10-12cc of PRO-DENSE® graft. The one month follow-up exhibits slight resorption of the graft. The four month x-ray demonstrates apparent resorption of graft replaced with dense regenerated bone.

Pain has resolved as of last visit and activity level is independent without assist device.

**PRO-DENSE®**  
Injectable Regenerative Graft

CASE STUDY | Intra-operative fluoroscopic views, 1 month and 4 month follow-up radiographs.

*Images courtesy of: Mike Neel, MD • OrthoMemphis • Memphis, TN*



1 MONTH

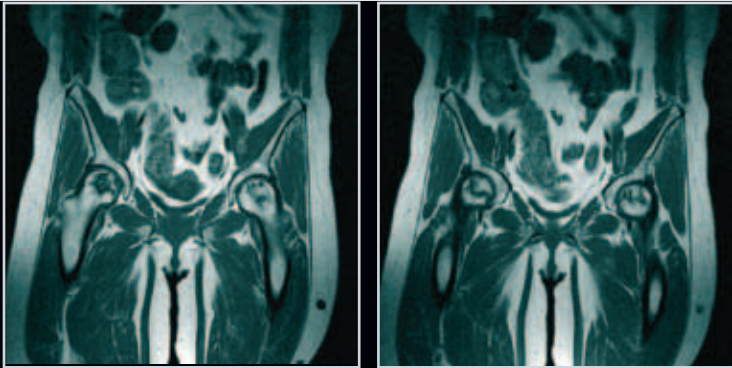


4 MONTHS

Case No. 201

# OSTEONECROSIS: BILATERAL HIP

CASE STUDY | Pre-op MRI.



**PRO-DENSE**<sup>®</sup>  
Injectable Regenerative Graft

## FORTY-TWO YEAR-OLD FEMALE

with idiopathic AVN of both hips (both Stage II AVN). Symptomatic with bilateral groin pain. A core decompression with advanced debridement with the X-REAM™ Percutaneous Expandable Reamer was performed on both hips in a staged fashion: the right hip first and the left hip followed 10 weeks later. Each was backfilled with PRO-DENSE<sup>®</sup> graft.

At one year follow-up for both hips, the patient does not exhibit any progression of the disease and is asymptomatic.

CASE STUDY | Post-op and 1 year post-op, right and left.

*Images courtesy of: Robert Heck, MD • Campbell Clinic • Memphis, TN*



POST-OP: RIGHT

POST-OP: LEFT



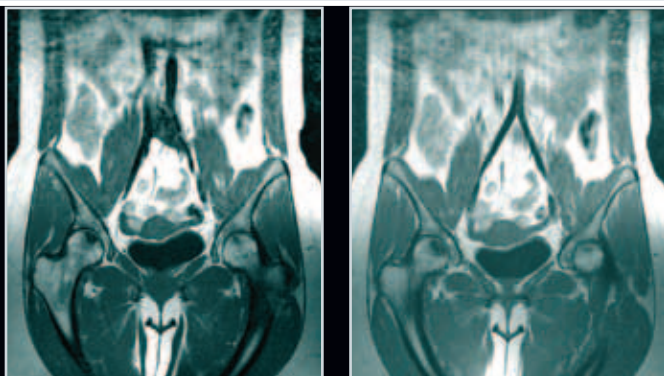
1 YEAR POST-OP: RIGHT

1 YEAR POST-OP: LEFT

Case No. 202

# OSTEONECROSIS: BILATERAL HIP

CASE STUDY | Pre-op MRI.



## TWENTY-NINE YEAR-OLD FEMALE

with idiopathic AVN of both hips (Stage II AVN of the right hip and Stage I of the left).

Symptomatic with groin pain in the right hip. A core decompression with advanced debridement with the X-REAM™ Percutaneous Expandable Reamer was performed on both hips in a staged fashion: the right hip first and the left hip followed 12 weeks later. Each was backfilled with PRO-DENSE® graft.

At one year follow-up for both hips, the patient does not exhibit any progression of the disease and is asymptomatic.

**PRO-DENSE®**  
Injectable Regenerative Graft

CASE STUDY | Immediate post-op and 1 year follow-up.

*Images courtesy of: Robert Heck, MD • Campbell Clinic • Memphis, TN*



POST-OP: RIGHT

POST-OP: LEFT

1 YEAR POST-OP: RIGHT

1 YEAR POST-OP: LEFT