Ester Sicari

Time of scan:
10 Jan 2024, 03:15PM

Item:
Comprehensive whole body scan

Sex:
Female

Height:
5' 7''

Weight:
207 pounds

Date of Birth:
1953-09-02

Referring Clinician:
Brent Madaris

Facility:
Prenuvo New York

Reason For Scan:
Specific symptoms

TECHNIQUE:

Head: Flair, TOF, 3DT1; Neck: Axial T2; Whole-body: T1, STIR , DWI; Spine: Sagittal T2; Chest/Abdomen/Pelvis: axial T2; Abdomen: Axial T2, Pelvis: Sagittal T2

DISCUSSION:

The Prenuvo whole-body MRI screening: (1) can serve as an adjunct to, but is not intended to replace, other established evidence–based screening practices for early detection of specific malignancies (e.g. colonoscopy, dedicated breast imaging, Pap-smear screening for cervical cancer, low-dose chest CT for high risk patients), (2) is effective for visualization of solid lesions on the order of 1 cm or larger within the head, neck, chest, abdomen, and pelvis. As with any medical test, there are limitations, which make it impossible to detect all malignancies and disease conditions, (3) is generally sensitive and specific for detection of cerebral artery aneurysms on the order of 3 mm or greater in size, (4) does not evaluate the heart or heart vessels, (5) does not evaluate lung microarchitecture or pulmonary micronodules, (6) does not replace dedicated breast imaging for screening or diagnostic evaluation (e.g. mammography, breast ultrasound, breast MRI with contrast), (7) is limited in the evaluation of the gastrointestinal tract and does not replace endoscopy or colonoscopy (e.g. cannot detect bowel polyps), (8) is limited in its assessment of the large joints as the exam is not tailored for detailed evaluation of the joint ligaments, cartilage, menisci, and labrum, (9) should not be considered a primary screening modality of the skin. This is best assessed by direct physical examination, (10) is not intended to replace dedicated diagnostic imaging in the setting of specific clinical diagnostic questions.

COMPARISON:

No previous Prenuvo imaging available.

FINAL IMPRESSIONS:

Ventricles are dilated out of proportion to sulcal enlargement, raising the possibility of normal pressure hydrocephalus. Please correlate with clinical triad of gait disturbance,

dementia, and incontinence.
Retractile scar in the right breast's superolateral quadrant.
Metaphyseal bone lesions in right tibia and left humerus, suggestive of enchondroma vs bone infarct.
Likely periventricular white matter chronic small-vessel ischemic changes.
Thickened pericardial fat.
Small joint effusion in shoulders and hips.
Right knee joint effusion. Status post left left knee replacement.
Colonic diverticulosis without diverticulitis.

NEXT APPOINTMENT:

A follow up scan in 24 months is suggested for further proactive health unless clinically indicated sooner.

REPORT RECIPIENT(S):

Joy Archie, and Brent Madaris

FINDINGS:

Head and Neck

Brain
4 findings 2 require minor attention

We detected lesions which are consistent with patchy chronic small vessel ischemia.

- The lesions are scattered throughout your brain deep white matter.

Discuss with you doctor how to manage your risk factors.

- Your cardiovascular health declines with age and this correlates with an increasing prevalence of small vessel ischemia.
- Managing your diabetes can help prevent progression. Controlling your blood pressure can help prevent progression.
- At a minimum, re-evaluation of the brain with a followup Prenuvo scan will be useful to determine if there is progression of these findings.

See Figure 3

There are multiple nonspecific T2/FLAIR hyperintensities within the white matter.

- There are bilateral lesions located in your brain.

No action is necessary at this time.

- This can be reassessed on your next scan.

See Figure 1

There is a vascular normal variant configuration.

- There is a hypoplastic right vertebral artery of the Circle of Willis.

This is a normal anatomic variant and no action is required.

- This information is only relevant if you were to need brain surgery in the future.

See Figure 2

Ventricles are dilated out of proportion to sulcal enlargement, raising the possibility of normal pressure hydrocephalus. Please correlate with clinical triad of gait disturbance, dementia, and incontinence.

Please correlate clinically.

See Figure 4

No evidence of proximal intracranial arterial aneurysm.
No worrisome intracranial lesion is identified within the brain parenchyma.
The generalized brain parenchyma volume is normal for age.

Sinuses and mastoids

1 finding requires minor attention

We detected findings consistent with sinusitis.

- There is mucosal thickening present bilaterally in your ethmoid sinuses.
- There is mucosal thickening present bilaterally in your maxillary sinuses.

This will generally resolve itself without the need for further followup

- Sinusitis is extremely common and usually season or allergy-related. The majority of sinusitis is of no concern and resolves either spontaneously or after removal of the trigger.
- There are many over-the-counter medications that may help alleviate symptoms. Many patients relieve discomfort through nasal sprays, steam or flushing the sinuses with saline.
- If you have discomfort, or symptoms do not resolve, discuss this finding with your doctor as you may require antibiotics, anti-fungal medication or steroids to treat the sinusitis.

See Figure 5

The remaining paranasal sinuses are clear.
The mastoids are clear.

Nasal pharynx

No adverse finding

No worrisome mass is identified.

Oral pharynx
No adverse finding

No worrisome mass is identified.

Hypopharynx
No adverse finding

No worrisome mass is identified.

Thyroid
No adverse finding

No worrisome lesion is present within the thyroid.

Cervical lymph node chain
No adverse finding

No adenopathy is present.

Chest, Abdomen and Pelvis

Lungs and mediastinum
No adverse finding

No restricted solid mass is identified within the pulmonary parenchyma.
There is no mediastinal or hilar adenopathy.

Heart and great vessels
2 findings 1 requires minor attention

There is an increased amount of pericardial fat.

- The fat is primarily adjacent to your left ventricle.

Let your doctor be aware that you have this pericardial fat.

- Increased pericardial fat is seen in obesity and can be sign of metabolic syndrome.
- It can also lead to abnormal features on chest xrays.

See Figure 6

Bovine arch noted, a common variant in which both the innominate artery and the left carotid artery share a common origin.

No follow up is needed unless you have symptoms related to this finding.

See Figure 7

Breasts

2 findings 1 requires minor attention

Your breast tissue is fatty (>75% fat content) and is thus not considered dense.

- Fatty breast tissue is more common in older women as the glandular tissue is replaced with fat because of hormonal changes. When the breast is less dense (ie fatty) it may be easier to find early breast cancer on routine mammography.

No further investigations are required.

- This is an informational finding. Your breast tissue is well suited to routine mammography screening.

The MRI findings indicate a retractile scar in the superolateral quadrant of the right breast, characterized by hypointensity on T2-weighted images, probably fibrotic changes typically seen in scar tissue.

Please correlate with mammogram and breast ultrasound.

See Figure 8

No worrisome solid or cystic mass is identified within either breast. There is no axillary adenopathy.

Esophagus

No adverse finding

No solid mass is identified within the visualized esophagus.

Stomach

No adverse finding

No solid mass is identified within the stomach wall.
There is no fixed hiatal hernia.

Liver

No adverse finding

There is no evidence of fatty liver disease.
There is no evidence of increased iron deposition in the liver.
No evidence of worrisome hepatic mass is identified.

Gallbladder and biliary system

No adverse finding

No biliary ductal dilatation is present.

The patient has had a cholecystectomy.

Pancreas

No adverse finding

No worrisome pancreatic mass is visualized, with the pancreatic duct appearing normal in diameter.
There is no evidence of fatty atrophy in the pancreas.

Spleen

No adverse finding

The spleen is unremarkable and normal in size.

Kidneys
No adverse finding

The kidneys are normal in size and position.
No worrisome mass is present within the renal parenchyma.
There is no hydronephrosis.

Adrenals
No adverse finding

The adrenals demonstrate normal morphology and signal.

Bowel
1 finding requires minor attention

We detected evidence of diverticulosis.

- The diverticula are located in the sigmoid.

This is a benign finding.

- If you are asymptomatic, no further investigations are required.

See Figure 9

There is no evidence of inflammatory changes involving the large bowel.
There is no evidence of fixed inguinal hernia bilaterally.

Bladder and ureters
No adverse finding

There is no evidence of hydroureter bilaterally.
There is no visualized filling defect in the bladder.

Uterus
1 informational finding

Your uterus is surgically absent.

The patient is post menopausal.

Ovaries

1 informational finding

The ovaries were unable to be definitively visualized.

- No worrisome adnexal/ovarian masses were identified.

Since you are postmenopausal, this is not an unexpected finding.

- If you have concerns about your ovaries, please discuss them with your doctor.

Spine and MSK

Spine

1 informational finding

You have 7 cervical spine vertebrae, 12 thoracic spine vertebrae, and 5 lumbar spine vertebrae.

Sacroiliac joints

No adverse finding

Normal appearance without evidence of active sacroiliitis or ankylosis.

Shoulders

1 finding requires minor attention

We detected bilateral shoulder joint effusions.

- There are small bilateral shoulder joint effusions. They are located in the glenohumeral joint.

Discuss this finding with your doctor, physiotherapist and/or trainer so they are aware of your limitations at this joint.

- In the absence of arthritis, a joint effusion can indicate an underlying subtle injury to the joint, most commonly from repetitive trauma, however many other causes exist, and therefore it is suggested to monitor your symptoms.

See Figure 10

Pelvis and hips

1 finding requires minor attention

We detected bilateral hip joint effusions.

- There are small bilateral hip joint effusions.

Discuss this finding with your doctor, physiotherapist and/or trainer so they are aware of your limitations at this joint.

- In the absence of arthritis, a joint effusion can indicate an underlying subtle injury to the joint, most commonly from repetitive trauma, however many other causes exist, and therefore it is suggested to monitor your symptoms.

See Figure 11

Knees

2 findings require minor attention

Knee replacement has been identified.

- There is a left total knee replacement.
  The patient had undergone previous left total knee replacement (TKR,) which triggered magnetic susceptibility artifact.

Discuss this finding with your doctor

- The metal in the knee replacement limits evaluation of the joint.
- If symptomatic, discuss this finding with your doctor or orthopedic surgeon for subsequent management.

See Figure 12

We detected a small right knee joint effusion.

Discuss this finding with your doctor, or physiotherapist so they can further assess your joint.

- Sharp pain with movement in conjunction with a joint effusion may indicate an underlying subtle injury to the cartilaginous or other soft tissues of the joint. This is best assessed by a detailed physical examination of the joint.

See Figure 13

Ankles

No adverse finding

There is no joint effusion or advanced degenerative change affecting either ankle.

Bony skeleton and soft tissue

2 informational findings

2 cm right tibial metaphyseal macrolobulated lesion suggestive of enchondroma vs bone infarct.

Please correlate clinically with plain film x-ray.

See Figure 14

2 cm macrolobulated lesion in the proximal left humerus, probably enchondroma or bone infarct.

Please correlate clinically with plain film x-ray.

See Figure 15

Within the limitations of MRI, no worrisome aggressive osseous lesion is identified.

Richard Chang, MD, DABR
1 February 2024

CLINICAL IMAGES:

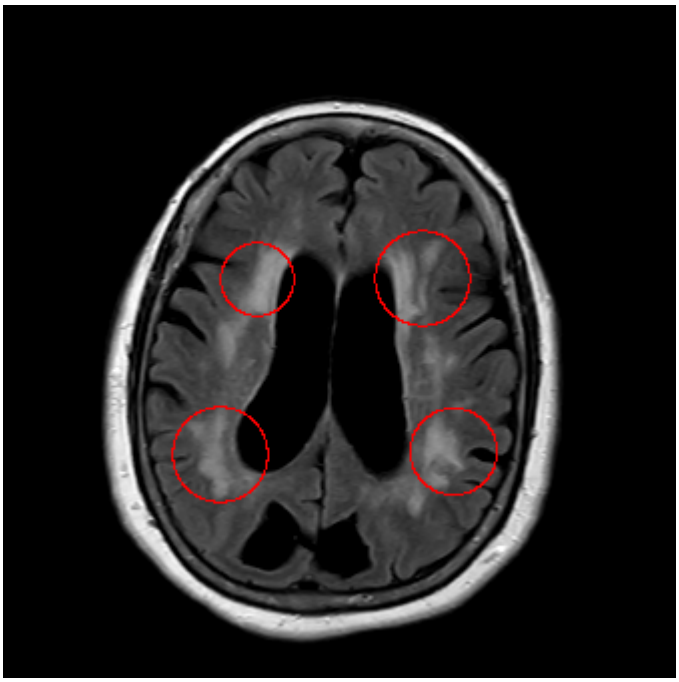

Figure 1. Nonspecific/age Related White Spots.

Figure 2. Circle of Willis Variant Anatomy.

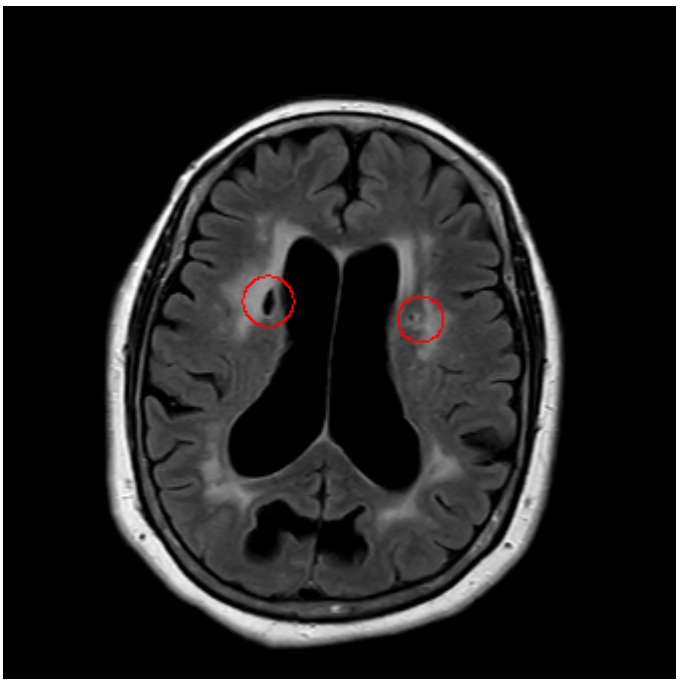

Figure 3. Small lacunar infarct..

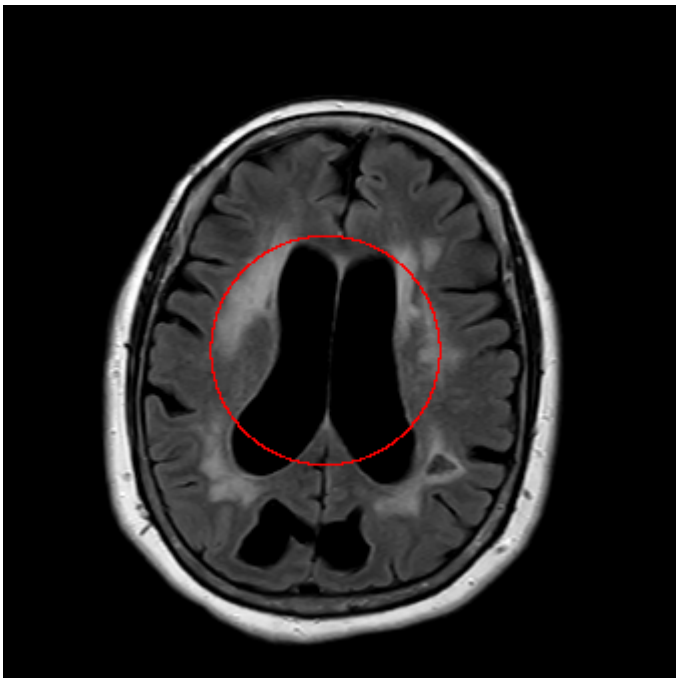

Figure 4. Ventriculomegaly.

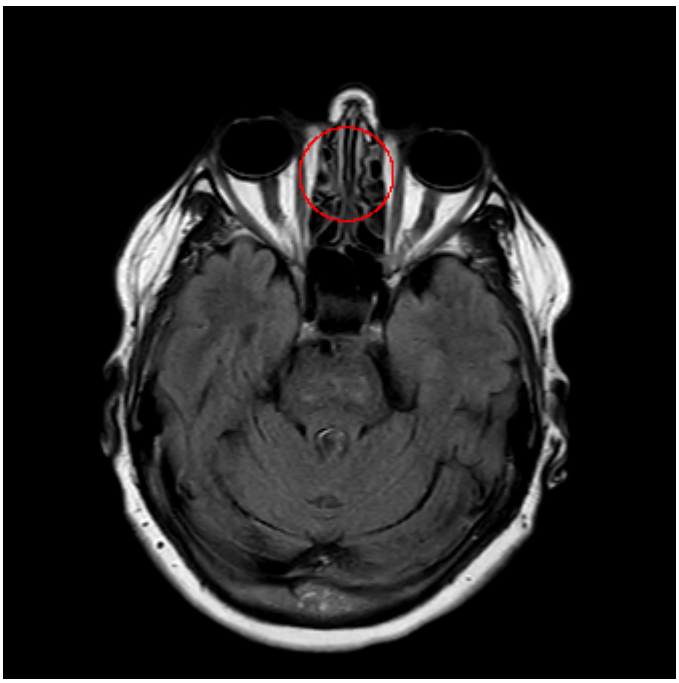

Figure 5. Sinusitis.

Figure 6. Pericardial Fat.

Figure 7. Bovine arch noted, a common variant..

Figure 8. Right breast scar.

Figure 9. Diverticular Disease.

Figure 10. Effusion Of The Shoulder.

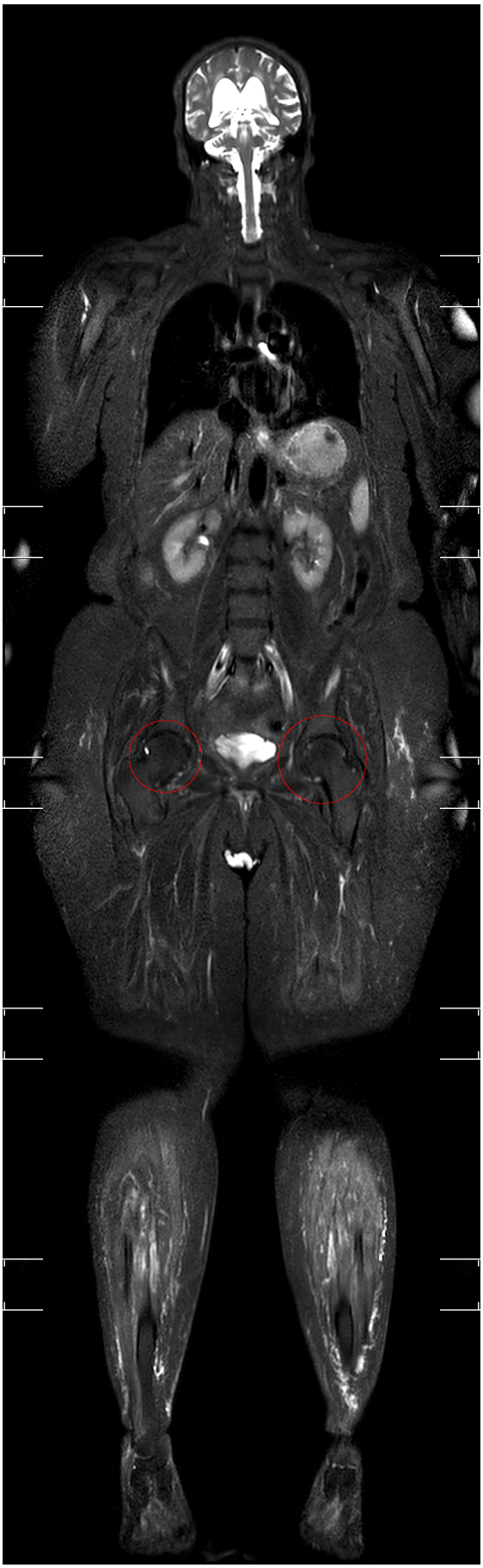

Figure 11. Bilateral effusion of the hips.

Figure 12. Knee Replacement.

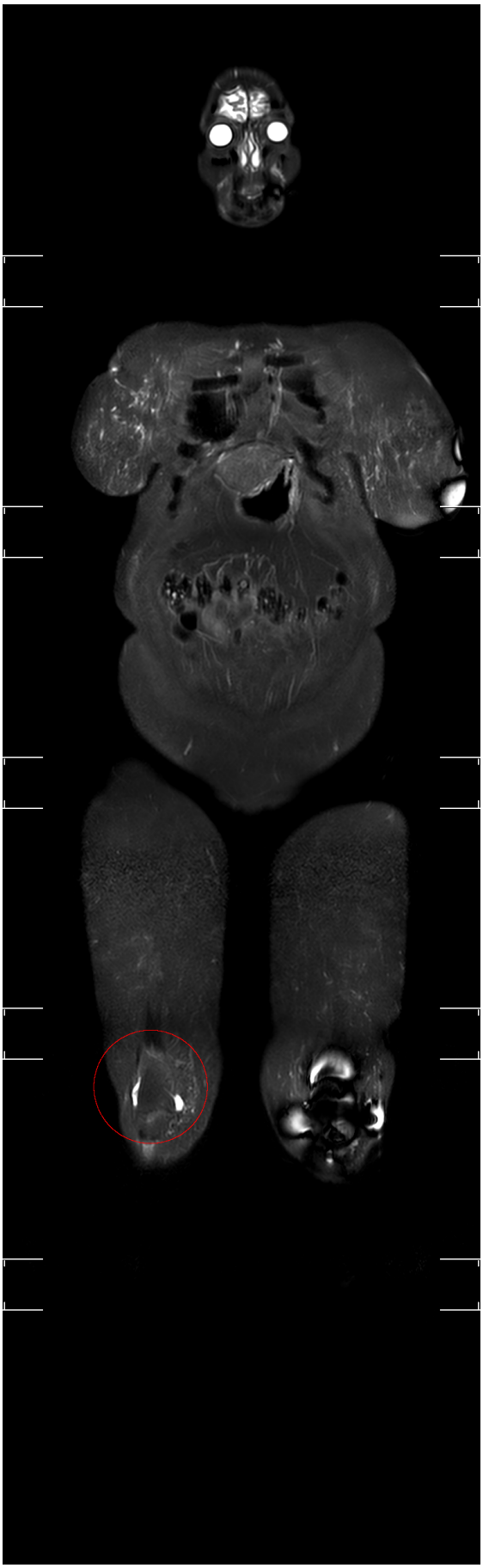

Figure 13. Effusion of the right knee.

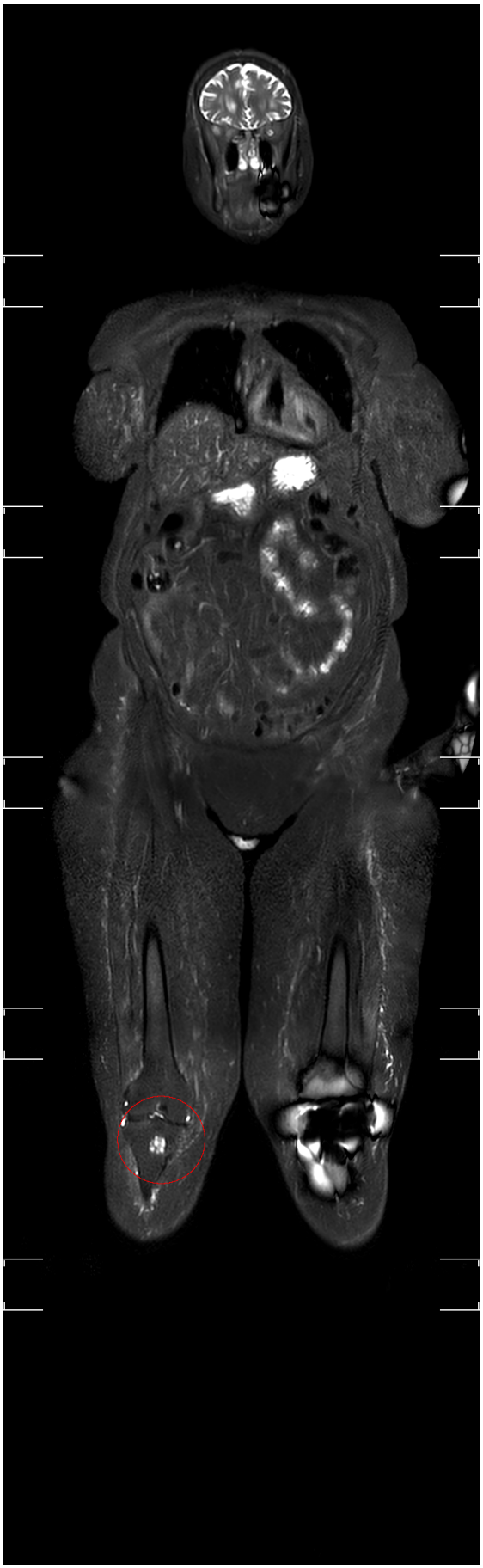

Figure 14. 2 cm right tibial metaphyseal lesion: enchondroma or bone infarct..

Figure 15. 2 cm macrolobulated left proximal humerus lesion: enchondroma or bone infarct..