

Hepatic nodule

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Section: Abdominal imaging

Imaging Technique: CT

Imaging Technique: MR

Imaging Technique: MR

Case Type: Clinical Cases

Authors: M. Di Giulio, M. Corucci, D. Caramella

Patient: 49 years, female

Clinical History:

Asymptomatic. Previous use of oral contraceptives

Imaging Findings:

Incidental US finding of a large hepatic nodule in the right lobe.

Discussion:

Focal Nodular Hyperplasia: after the early contrast enhancement of the whole lesion, two zones can be recognized: a central zone ("scar") in which the enhancement has a longer duration, and a peripheral zone, whose MR signal behaviour closely resembles that of the normal liver parenchyma (3-5). However the scar is not always visible: its detection is reported in 20-31% of patients with CT and 35-69% of patients with MRI (2,4). The typical MR signal of the scar is not always present too, probably because of different degree of edema (5). In these cases a multimodality approach is essential for the correct diagnosis (1,4).

Differential Diagnosis List: Focal Nodular Hyperplasia

Final Diagnosis: Focal Nodular Hyperplasia

References:

Bartolozzi C, Lencioni R, Paolicchi A e Coll(1997)

Differentiation of hepatocellular adenoma and focal nodular hyperplasia of the liver: comparison of power Doppler imaging and conventional color Doppler sonography.

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Lee MJ, Saini S, Hamm B et al (1991)

Focal nodular hyperplasia of the liver: MR findings in 35 proved cases.

AJR 156: 317-20. (PMID: [1898806](#))

Mattison GR, Glazer GR, Quint LE e Coll (1987)

MR imaging of hepatic focal nodular hyperplasia: characterization and distinction from primary malignant hepatic tumors.

AJR 148: 711-15. (PMID: [3030082](#))

Shamsi K, Deschepper A, Degryse H, Deckers F (1993)

Focal nodular hyperplasia of the liver: radiologic findings.

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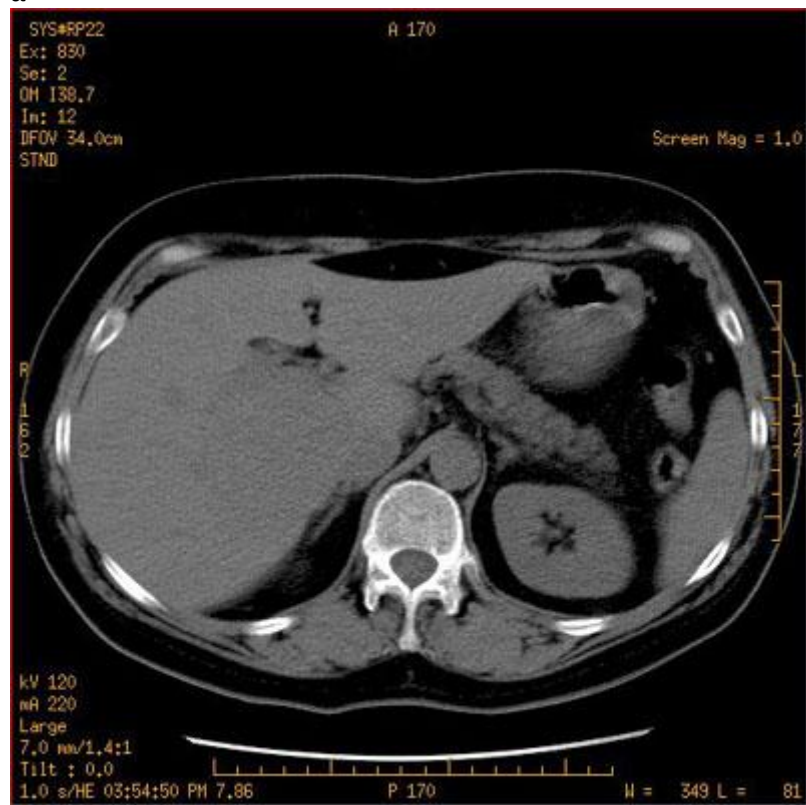
Vilgrain V, Flejou JF, Arrive L et al (1992)

Focal nodular hyperplasia of the liver: MR imaging and pathologic correlation in 37 patients.

Radiology 184: 699-703. (PMID: [1509052](#))

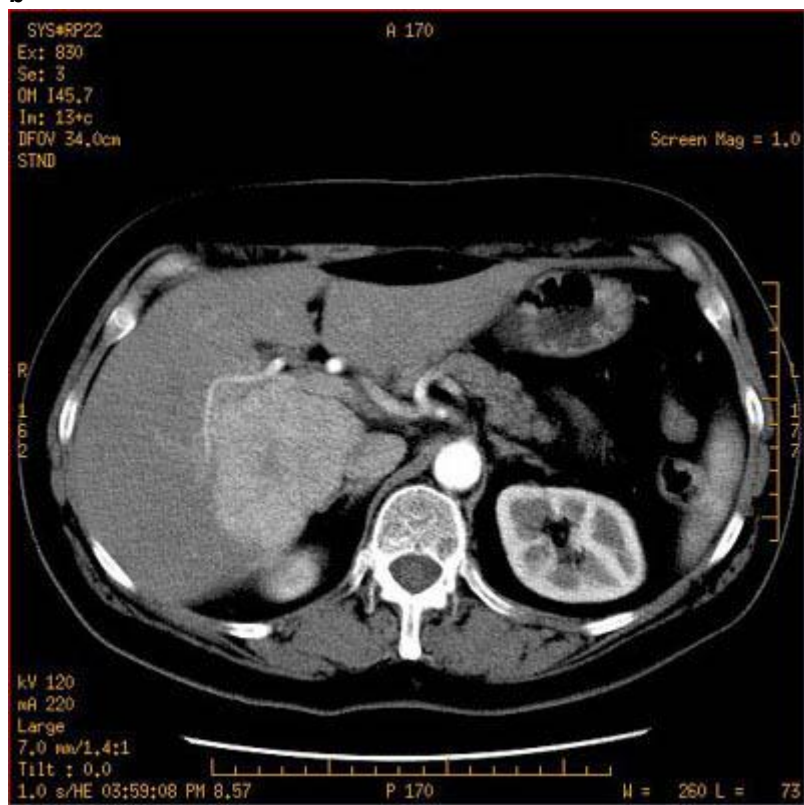
Figure 1

a



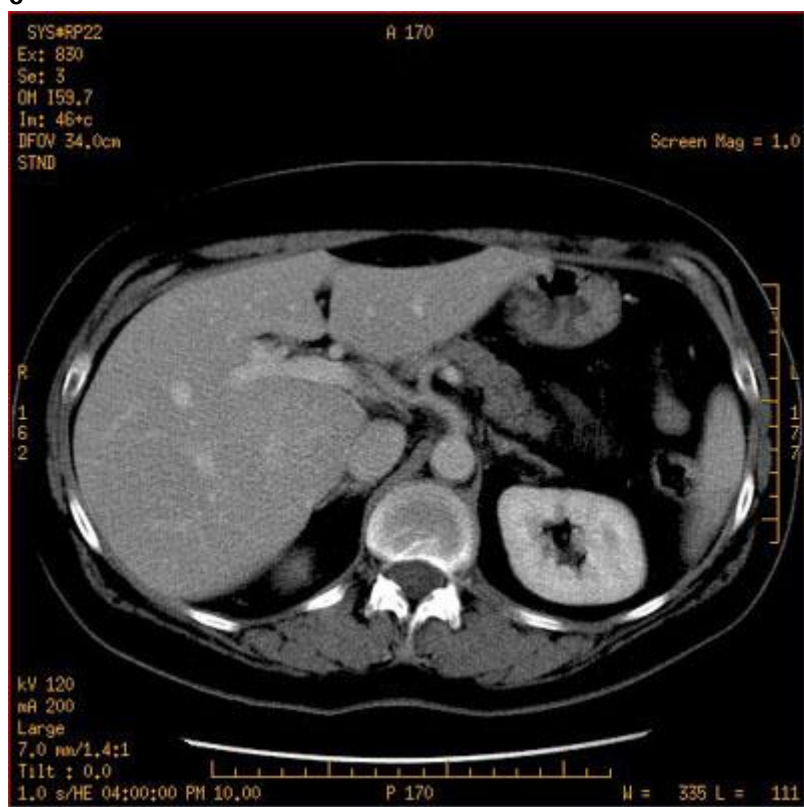
Description: No clear abnormality can be detected at the unenhanced scan **Origin:**

b



Description: Contrast-enhanced CT: arterial phase. A large enhancing lesion of the right hepatic lobe is visible. **Origin:**

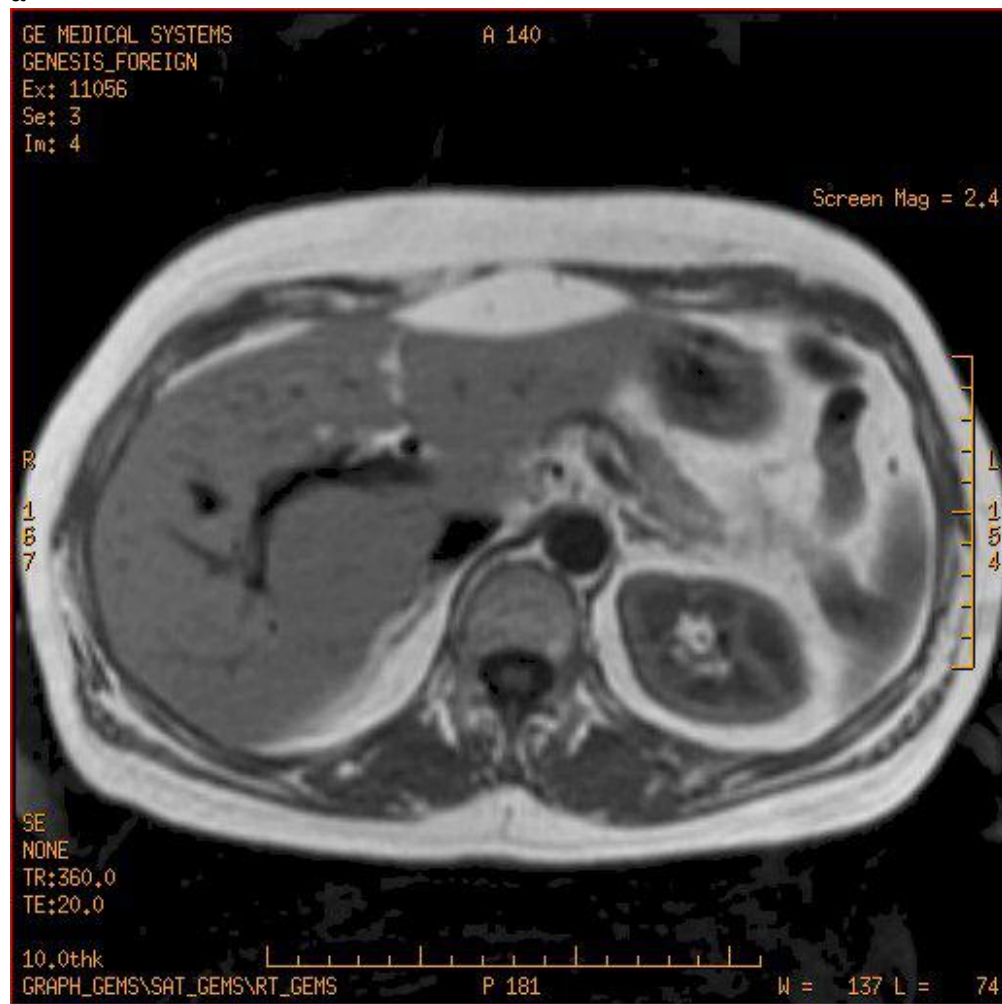
C



Description: Contrast-enhanced CT: portal phase. The lesion becomes isodense to the normal liver parenchyma. **Origin:**

Figure 2

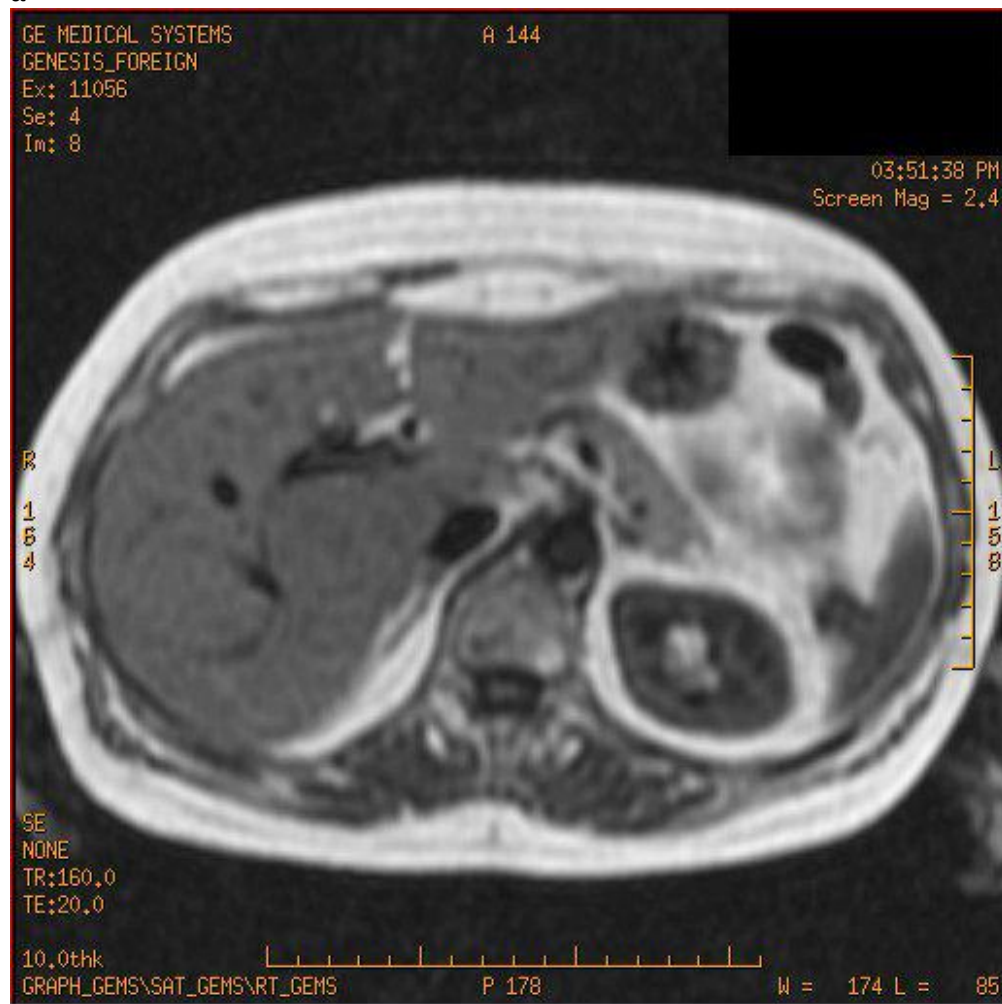
a



Description: Unenhanced SE T1 weighted MR image (0.5 T). No clear abnormality can be detected. The presence of a nodule can only be suspected on the basis of the displacement of the portal vein
Origin:

Figure 3

a



Description: Dynamic MR sequence (0.5 T): unenhanced T1 weighted image. The presence of a nodule can be suspected at the level of the 1st hepatic segment. **Origin:**

b



Description: Dynamic MR sequence (0.5 T): enhanced T1 weighted image: early arterial phase. The nodule shows marked enhancement with respect to the normal liver parenchyma. **Origin:**

C



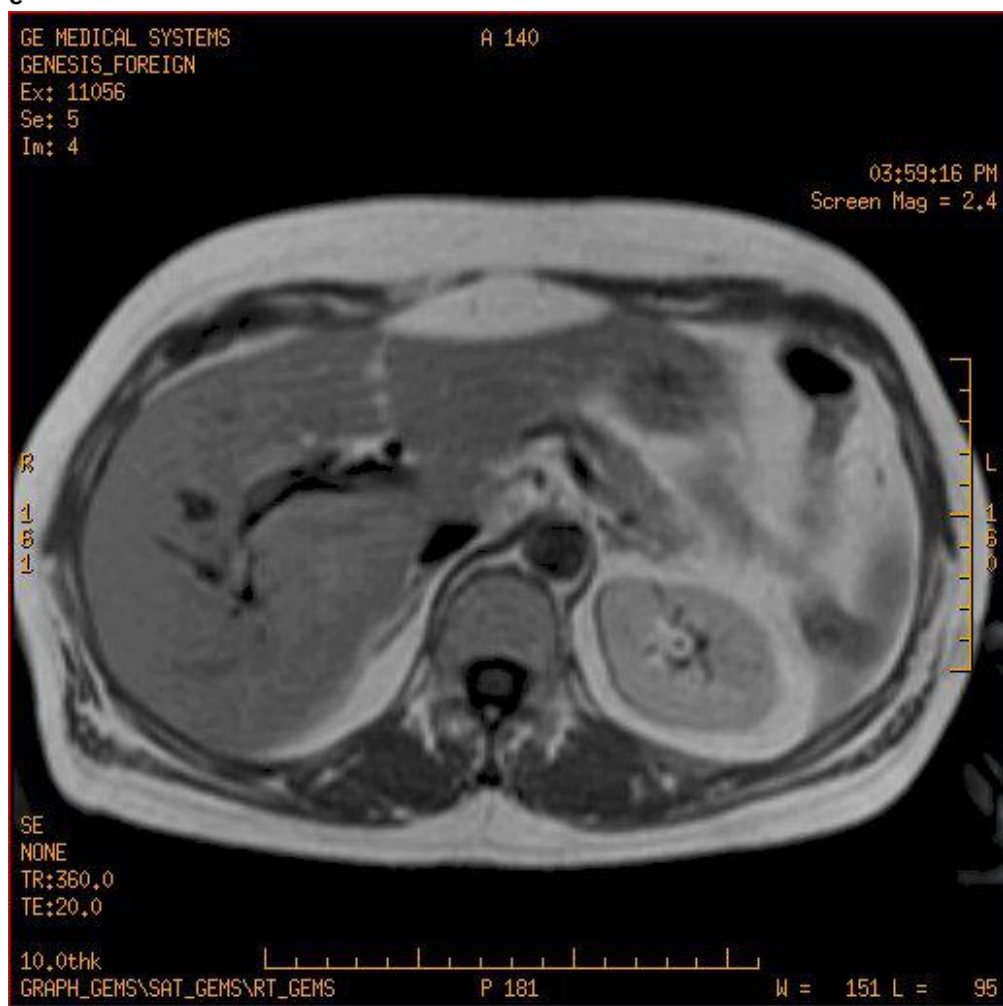
Description: Dynamic MR sequence (0.5 T): enhanced T1 weighted image: arterial phase. The central portion of the nodule is hyperintense to the peripheral zone. **Origin:**

d



Description: Dynamic MR sequence (0.5 T): enhanced T1 weighted image: portal phase. The central portion of the nodule is still slightly hyperintense with respect to the peripheral zone. **Origin:**

e



Description: Delayed SE T1 weighted image after contrast administration (0.5 T): the lesion is again isointense to the normal liver parenchyma **Origin:**