Identifying Lesion Types
With Eovist Injection

Focal Liver Lesion Signal Patterns
The characterization of focal liver lesions is based on many different criteria. The most important are:

- In T1- and T2-weighted images: signal intensity
- In typical post-contrast perfusion phase images: homogeneity, size, circumspection, shape, and necrosis

To explain some typical signal intensities of focal lesions, a schematic representation of the most frequent benign and malignant lesions in non-cirrhotic or cirrhotic liver parenchyma is given in the Signal Patterns charts on the following pages. Please note that the depicted lesions represent the typical (or most frequently observed) characteristics—like in a student teaching manual—but in clinical routine many more variations and borderline cases exist.

The last column of the tables depicts the typical behavior of focal liver lesions during the hepatocyte phase, approximately 20 minutes after injection of Eovist. While reading the tables, please pay particular attention to this column. The hepatocyte phase provides an additional important criterion for the characterization of focal lesions: information about liver-specific enhancement of focal lesions is hepatocyte-selective and correlates with various histopathologic diagnoses regarding presence of certain hepatocytic functions.¹

Indication and Usage
Eovist® (gadoxetate disodium) injection is indicated for intravenous use in magnetic resonance imaging (MRI) of the liver to detect and characterize lesions in patients with known or suspected focal liver disease.

Important Safety Information

WARNING: NEPHROGENIC SYSTEM FIBROSIS (NSF)
Gadolinium-based contrast agents (GBCAs) increase the risk for NSF among patients with impaired elimination of the drugs. Avoid use of GBCAs in these patients unless the diagnostic information is essential and not available with non-contrasted MRI or other modalities. NSF may result in fatal or debilitating fibrosis affecting the skin, muscle and internal organs.

- The risk for NSF appears highest among patients with:
  - Chronic, severe kidney disease (GFR <30 mL/min/1.73m²), or
  - Acute kidney injury
- Screen patients for acute kidney injury and other conditions that may reduce renal function. For patients at risk for chronically reduced renal function (for example, age >60 years, hypertension or diabetes), estimate the glomerular filtration rate (GFR) through laboratory testing.
- For patients at highest risk for NSF, do not exceed the recommended EOVIST dose and allow a sufficient period of time for eliminating of the drug from the body prior to any re-administration.

Contraindication and Important Information about Hypersensitivity Reactions: Eovist® is contraindicated in patients with history of severe hypersensitivity reactions to Eovist®. Anaphylactic and other hypersensitivity reactions with cardiovascular, respiratory and cutaneous manifestations, ranging from mild to severe, including shock have uncommonly occurred following Eovist® administration. Before Eovist® administration, assess all patients for any history of a reaction to contrast media, bronchial asthma and allergic disorders. These patients may have an increased risk for a hypersensitivity reaction to Eovist®.

Acute Kidney Injury: In patients with chronic renal impairment, acute kidney injury sometimes requiring dialysis has been observed with the use of some GBCAs. The risk of acute kidney injury might be lower with Eovist® due to its dual excretory pathways. Do not exceed the recommended dose; the risk of acute kidney injury may increase with higher than recommended doses.

Please see additional Important Safety Information throughout this piece.

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Learn more about Eovist at eovist.com
## Identifying Lesions in the Non-cirrhotic Liver With Eovist

<table>
<thead>
<tr>
<th>Focal Lesion</th>
<th>T2-weighted Image</th>
<th>Pre-contrast&lt;sup&gt;1-2&lt;/sup&gt;</th>
<th>Arterial Phase (approx. 20 seconds after injection)</th>
<th>Portovenous Phase (approx. 60 seconds after injection)</th>
<th>Late Dynamic Phase (2–3 minutes after injection)</th>
<th>Hepatocyte Phase (approx. 20 minutes after injection)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Malignant</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liver Metastases&lt;sup&gt;1,2&lt;/sup&gt; (in case of hypovascular primary tumor)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Benign</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hemangioma&lt;sup&gt;*&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Focal Nodular Hyperplasia&lt;sup&gt;1,4&lt;/sup&gt;</td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Cyst&lt;sup&gt;5&lt;/sup&gt;</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adenoma&lt;sup&gt;1,4,6&lt;/sup&gt;</td>
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<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<sup>*</sup> Small or high-flow hemangiomas (so-called flash filling) may appear uniformly hyperintense on the arterial and portovenous phase images. Remember that the signal intensity in all hemangioma always follows blood signal characteristics throughout all phases.

Please note: These are typical signal patterns of the lesions shown above. Some lesions may not enhance as depicted.

This chart is provided for reference only and is not intended to diagnose or treat any condition. Actual diagnoses and treatment decisions should be made based on professional judgment and additional clinical data, as may be deemed necessary by appropriately trained medical personnel.

### Important Safety Information (continued)

**Extravasation and Injection Site Reactions:** Ensure catheter and venous patency before the injection of Eovist<sup>®</sup>. Extravasation into tissues during Eovist<sup>®</sup> administration may result in local tissue reactions. Strictly avoid intramuscular administration of Eovist<sup>®</sup> because it may cause myocyte necrosis and inflammation.

**Interference with Laboratory Tests:** Serum iron determination using complexometric methods (for example, ferrocene complexation method) may result in falsely high or low values for up to 24 hours after the examination with Eovist<sup>®</sup> because of the caloxetate trisodium excipients.

Please see additional Important Safety Information throughout this piece.

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Identifying Lesions in the Cirrhotic Liver With Eovist

<table>
<thead>
<tr>
<th>Focal Lesion</th>
<th>T2-weighted Image</th>
<th>T1-weighted Image</th>
<th>Dynamic Image</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-contrast</td>
<td>Arterial Phase</td>
<td>Portovenous Phase</td>
</tr>
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<td></td>
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</tbody>
</table>

**Malignant**

- Hepatocellular Carcinoma

**Benign**

- Dysplastic Nodule

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**Important Safety Information (continued)**

**Interference with Visualization of Liver Lesions:** Severe renal or hepatic failure may impair Eovist® imaging performance. In patients with end-stage renal failure, hepatic contrast was markedly reduced and was attributed to elevated serum ferritin levels. In patients with abnormally high (>3 mg/dL) serum bilirubin, reduced hepatic contrast was observed. If Eovist® is used in these patients, complete MRI no later than 60 minutes after Eovist® administration and use a paired non-contrast and contrast MRI set for diagnosis.

**Adverse Reactions:** The most frequent (≥0.5%) adverse reactions associated with Eovist® are nausea (1.1%), headache (1.1%), feeling hot (0.8%), dizziness (0.6%), and back pain (0.6%).

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