Manchester Cancer Colorectal Pathway Board: Guidelines for management of colorectal hepatic metastases

Date: April 2015

Date for review: April 2018

1. **Principles**
   - The recognised specialist HPB MDT for Greater Manchester is based at Central Manchester Foundation Trust.
   - All patients with known or suspected hepatic metastases with initial imaging suggestive of liver predominant metastatic disease from colorectal cancer should have their case and imaging reviewed at the specialist HPB MDT for opinion on suitability for radical treatment of the metastases.
   - In addition, patients with potentially resectable extra-hepatic recurrent disease in addition to hepatic metastases (in particular those with operable lung disease) should be referred to the HPB MDT.
   - All Greater Manchester Colorectal MDTs should have a named surgical member of the specialist HPB MDT as part of their extended MDT.
   - The referring Colorectal MDT retains responsibility for the long-term care and follow-up of their colorectal cancer patients who are referred to the HPB MDT for treatment of hepatic metastases. However, the HPB MDT assumes responsibility for the case whilst they are treating the patient’s hepatic disease. Responsibility is transferred back to the referring Colorectal MDT after treatment of hepatic disease when the HPB surgeon formally discharges the patient from the HPB unit back to the referring team.

2. **Referral process**

Refer to Section 4.6 Greater Manchester and Cheshire HPB Unit Guidelines for the Assessment & Management of Hepatobiliary and Pancreatic Disease (December 2014).

Referral is made by completion of the electronic proforma available to all NHS provider Trusts (https://cmftreferrals.cmft.nhs.uk/) which contains items essential for case discussion eg. performance status, comorbidities. The HPB sMDT complies with IOG guidance for discussion of all patients with a newly diagnosed or suspected HPB malignancy.
3. **Staging of liver metastases**

Staging requires a CT scan of chest, abdomen, pelvis, MRI liver and PET-CT. Refer to section 5.1 and 5.8 Greater Manchester and Cheshire HPB Unit Guidelines for the Assessment & Management of Hepatobiliary and Pancreatic Disease (December 2014) for staging process and radiological reporting standards for colorectal liver metastases.

**CRLM (Metachronous)**

**MDT staging**
- CT chest/abdomen/pelvis
- MRI liver
- PET-CT

**Likely Never Resectable**
Includes unresectable extra-hepatic disease.

**Resectable**
The potential for complete resection with RO margins. The preservation of ≥ 2 segments with viable vascular inflow/outflow and biliary drainage. FLR >25%

**Potentially Resectable**
The potential to achieve the definition of *Resectable* with down sizing chemotherapy

See radiological protocols & reporting standards
4. **Treatment of metachronous hepatic metastases**

The treatment algorithm is reproduced below (Section 5.2 Greater Manchester and Cheshire HPB Unit Guidelines for the Assessment & Management of Hepatobiliary and Pancreatic Disease (December 2014)).
5. Treatment of synchronous hepatic metastases
The treatment algorithms are reproduced below (Section 5.3 Greater Manchester and Cheshire HPB Unit Guidelines for the Assessment & Management of Hepatobiliary and Pancreatic Disease (December 2014)).

- **Synchronous CRLM**
- **MDT staging (5.1)**

There is currently no standard of care for treating synchronous CRLM and no consensus reached on treatment order.

- **See CRLM treatment order algorithms agreed with the Christie Hospital clinical and medical oncologists**
Resectable CRLM with intact (resectable/non obstructions) colon primary

If immediately & easily resectable

Surgery (simultaneous/delayed)

If fit complete 6 months combination chemo+

Multiple LM or borderline resectability

≤3 months combination chemo

Surgery (simultaneous/delayed)

+ Irinotecan should not be used in ‘adjuvant’ setting
Resectable CRLM with intact (non obstructing) rectal primary

If immediately & easily resectable
- Upfront surgery (sequential/simultaneous)
- Rectum-consider pre op XRT
- Consider adjuvant chemo 6 months if fit

Multiple LM or borderline resectability
- ≤3 months combination chemo*

Primary CRM not threatened
- SCFXRT
  - Rectal surgery
  - Liver resection

Primary CRM threatened
- If fit complete to 6 months combination chemo+
- Chemo XRT rectum
  - Liver resection
  - Rectal surgery

*May add MAb if locally advanced rectal cancer NB: If using cetuximab consider irinotecan as partner + irinotecan should not be used in ‘adjuvant’ setting
Non resectable CRLM with intact (non-obstructing) rectal primary

≤3 months intensive chemo ± mAb*

Response

CRM not threatened

SCPXRT

Rectal surgery

Liver resection**

If fit complete 6 months chemo+

CRM threatened

Chemo XRT rectum

Liver resection

Rectal surgery**

*If using cetuximab consider irinotecan as partner ** Maybe preceded by further chemo + Irinotecan should not be used in ‘adjuvant’ setting

Non resectable CRLM with non obstructing colon primary

≤3 months intensive chemo* ± mAb

Response

Resection of primary and metastasis (simultaneous or delayed)**

Complete 6 months Chemo+

*If using cetuximab consider irinotecan as partner ** Maybe preceded by further chemo + Irinotecan should not be used in ‘adjuvant’ setting
Non resectable CRLM

≤3 months intensive chemo + mAb*

Resectable

Liver resection

≤3 Chemotherapy ± mAb
Assess for resectability

Non resectable

If fit complete 6 months chemo+

*If using cetuximab consider irinotecan as partner
+ Irinotecan should not be used in 'adjuvant' setting

Resectable CRLM
(primary already resected)

If immediately & easily
Resectable*

Surgery

≤3 months combination chemo**

Consider adjuvant combination chemo (total 6 months)

Multiple LM or borderline resectability

Surgery

* May consider chemotherapy if synchronous pres < 1 year or other features suggestive of adverse tumour biology
** Limit duration of neoadjuvant chemotherapy and 6 or 8 weekly imaging
Timing of treatment of synchronous hepatic metastases (Section 5.4 Greater Manchester and Cheshire HPB Unit Guidelines for the Assessment & Management of Hepatobiliary and Pancreatic Disease (December 2014)). Normally, colorectal cancer resection and liver resection would not be performed synchronously. However, management of accessible small metastases detected preoperatively should be discussed with the local liver centre for consideration of combined resection (see Table: Role of combined liver and colorectal surgery for synchronous CRLM). Lesions discovered at operation should not be biopsied or excised. Patients should be referred for consideration of liver resection after recovery from primary surgery. Patients with potentially resectable liver disease and who have undergone radical resection of the primary tumour should be considered for liver resection before consideration of chemotherapy. Patients with unfavourable primary pathology such as perforated primary tumour or extensive nodal involvement should be considered for adjuvant chemotherapy prior to liver resection and be restaged at three months.

Table: Role of combined liver and colorectal surgery for synchronous CRLM

<table>
<thead>
<tr>
<th>Liver</th>
<th>CRC</th>
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<tbody>
<tr>
<td>Major (≥3 segments)</td>
<td>Major (rectum) No</td>
</tr>
<tr>
<td>Minor (≤2 segments)</td>
<td>Minor (colon) Yes&gt;Yes</td>
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6. Resection of patients with extrahepatic disease (Section 5.5 Greater Manchester and Cheshire HPB Unit Guidelines for the Assessment & Management of Hepatobiliary and Pancreatic Disease (December 2014)).

Patients with extrahepatic disease that should be considered for liver resection include:

1) Resectable/ablatable pulmonary metastases;
2) Resectable/ablatable isolated extrahepatic sites – for example, spleen, adrenal, or resectable local recurrence; and
3) Local direct extension of liver metastases to, for example, diaphragm/adrenal that can be resected.

Normal contraindications to liver resection would include uncontrollable extrahepatic disease such as:

1) non treatable primary tumour;
2) widespread pulmonary disease;
3) locoregional recurrence
4) peritoneal disease
5) extensive nodal disease, such as retroperitoneal, mediastinal or portal nodes; and
6) bone or CNS metastases

7. **Follow-up after liver resection** (Section 5.8 and 5.10 Greater Manchester and Cheshire HPB Unit Guidelines for the Assessment & Management of Hepatobiliary and Pancreatic Disease (December 2014)).

To identify patients who might benefit from further intervention, follow-up such patients with:

- Clinical Examination
- CT chest, abdomen, pelvis
- Serum CEA levels

**Frequency:** 6 monthly for 2 years, then annually.

**Duration:** For at least 5 years or when the patient and the healthcare professional have discussed and agreed that the likely benefits no longer outweigh the risks of further tests or when the patient cannot tolerate further treatments.

Follow-up should be performed by the liver centre until the patient is referred back to the referring Colorectal MDT after which point follow-up investigations become the responsibility of the referring unit.

In patients who develop hepatic re-recurrence, it is appropriate to consider such lesions in the same way as the initial hepatic metastases, re-stage as Section 3 above, and re-refer to the Specialist HPB MDT.

**References**

- Greater Manchester and Cheshire HPB Unit Guidelines for the Assessment & Management of Hepatobiliary and Pancreatic Disease (December 2014).  
  http://manchestercancer.org/services/hepato-pancreato-biliary/
- Colorectal cancer. The diagnosis and management of colorectal cancer. NICE clinical guideline 131 (December 2014)
• GMCCN Colorectal Clinical Subgroup. Management of patients with known of suspected hepatic metastases from colorectal cancer (June 2012)