Hepatocellular Carcinoma Clinical Pathways

The following pathways have been developed through multidisciplinary efforts with physicians from the Mary Bird Perkins – Our Lady of the Lake Cancer Center Hepatobiliary/Upper GI MDC team.

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Disclaimer: This algorithm has been developed for Mary Bird Perkins – Our Lady of the Lake Cancer Center using a multidisciplinary approach and taking into consideration circumstances particular to our institution. Furthermore, this algorithm is not intended to replace the independent medical or professional judgment of physicians or other health care providers.
1. Pathway development is intended to reduce variation in care and ensure that HPB/UGI Cancer treatment is delivered in a safe, consistent manner at MBP – OLOL.

2. Pathways are not meant as a substitute for clinical judgment, but should be adhered to within 75% of patients diagnosed and treated within the system.

3. Pathways will be reviewed at a per-determined interval to ensure that the pathways are consistent with the latest clinical discovery and published literature.

4. In clinical decisions that are unsupported by the guidelines, MBP-OLOL physicians should commit to multi-disciplinary review and treatment planning.

5. Pathway compliance will not be measured in the event a patient chooses an alternate approach for their care.
Hepatocellular Carcinoma

**DIAGNOSTIC WORKUP**

1. H&P
2. Multidisciplinary Eval. (assess Liver & comorbid and staging.)
3. CBC/differential
4. Liver Function tests
5. Viral labs if not known (HBV core and surface Abs, HCV Ab, and RNA if Ab positive, HIV serology if HCV Ab positive or HBV core Ab positive)
6. AFP (alpha-fetoprotein)
7. Creatinine and Electrolytes
8. PT/INR
9. 3-Phase CT or MRI with IV contrast of Abdomen and pelvis
10. CT of chest or PET Scan
11. Lipid profile, Hemoglobin A1C and PET Scan
12. Bone Scan, if indicated

**CLINICAL ASSESSMENT**

- Unifocal disease
  - Childs Pugh A → Portal hypertension? → NO Adequate FLR?
  - Childs Pugh B/C → YES
  - Liver only disease 
     - ECOG status 0-1 
     - No Major vascular Invasion 
     - No Nodal disease

- Multifocal disease
  - Meets Milan criteria?
    - YES
    - NO

**Surgery Assessment**

Child Pugh A, B, No portal hypertension, Suitable tumor location, Adequate liver reserve, Suitable liver remnant, Milan Criteria for transplant eligibility
If patient is not eligible for resection, evaluate patient’s eligibility for transplant based on Milan Criteria:

**Milan Criteria for transplant eligibility:**
- Tumor less than or = to 5cm in diameter or 2-3 tumors less than or = 3cm each. No macrovascular involvement. No extrahepatic disease
- If ineligible for transplant: resection if feasible (preferred) or loco-regional therapy
- If unresectable: transplant candidate: refer to a transplant center or consider bridge therapy;
- If not a transplant candidate: loco-regional therapy (preferred), systemic therapy, clinical trial, best supportive care
Hepatocellular Carcinoma

Unresectable Tumors (consider non-operative strategies)

Performance status 0-2, CLIP0-3, and Child Pugh A, B

YES, Early/Intermediate Disease

STAGING

*If not a transplant candidate

- Up to 3 lesions ≤ 3 cm
- Single lesion > 3 cm
- Multiple lesions (up to 3-4 total)
- Overall tumor burden less than or = to 25%
- Single lesion 25%-50% tumor burden
- Multiple Lesions greater than 4
- Any Tumor Burden above Branch PV or HV Tumor Thrombus

TREATMENT

- Ablation
- TACE or TAE
- Yttrium 90
- Radiation Therapy
- Beam Therapy
- Systemic Therapy

Surveillance

Surveillance as per NCCN Guidelines for Hepatocellular Carcinoma

Follow steps on Page 6 for "No" to Isolated Metastasis

CLINICAL PRESENTATION
Hepatocellular Carcinoma

**DIAGNOSTIC WORKUP**

1. H&P
3. CBC/differential
4. Liver Function tests
5. Viral labs if not known *(HBV core and surface Abs, HCV Ab, and RNA if Ab positive, HIV serology if HCV Ab positive or HBV core Ab positive)*
6. AFP (alpha-fetoprotein)
7. Creatinine and Electrolytes
8. PT/INR
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**TREATMENT**

4. Metastatic Disease/Isolated Metastasis? *(consider biomarkers)*
   - YES
     - Treat isolated metastasis first; *Further treatment based on primary Liver lesions; consider biopsy to confirm metastatic disease*
   - NO
     - Performance status 0-2, CLIP0-3, and Child Pugh A, B
       - **OR**
       - Performance status greater than 2, CLIP 4-6 or Child C
         - Systemic Therapy *(Sorafenib)*
         - Best Supportive Care
2. MD Anderson Hepatocellular Carcinoma, Department of Clinical Effectiveness V5
5. HCC Consensus Guidelines (MBP – OLOL)
   • Tunp-Ping Poon, Tan-To Cheung, Tak-Wing Lai etc. 2015. Hong Kong Consensus Recommendations on the Management of Hepatocellular Carcinoma. Liver Cancer. P 51-69.