The role of surgery in the management of neuroendocrine liver metastases(NELM)

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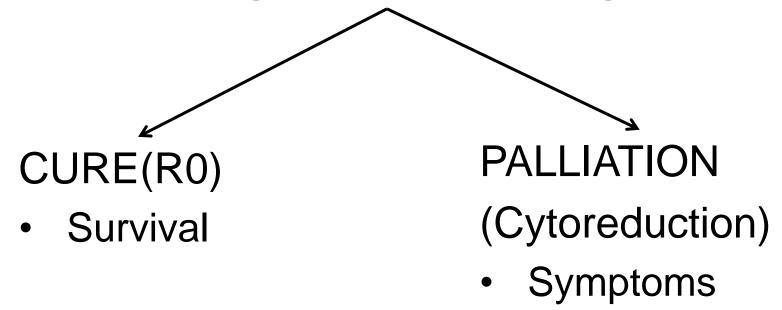
Management of NELM is challenging:

- Lack of prospective data
- No firm consensus

Unique features of NELM

- Protracted course(cancer in slow motion)
- Clinical syndrome
- Tumor markers
 - Diagnosis
 - Symptoms
 - Monitor
- Growth inhibition/symptomatic relief by specific blocking agents

The role of Surgery in the treatment of NELM signifies a paradigm shift



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Survival

Keep in mind:

- Slow growing nature of NELM makes them less responsive to conventional palliative treatment options
- Clinical syndrome directly related to tumor mass
- NET tend to metastasize to liver only (target organ)

Indications for surgery in NELM

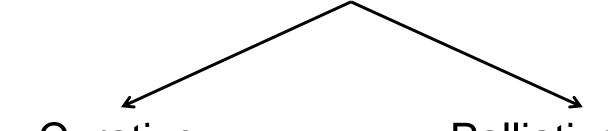
- Primary tumor can be controlled
- Limited mets outside the liver
- Reasonable performance status

*MAYO

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Surgery for NELM



- Curative
- R0 intent

- Palliative
- Less than R0

Surgery with curative intent(R0)

- Unresected NELM 5yr survival 20-40%
- Resected NELM 5yr survival46-86%
- Local recurrence at 5yr 40-70%
- 96 % recurrence in liver

Surgery with palliative intent

- Goals include:
 - Palliation of symptoms(Q.O.I.)
 - Prolong survival
- Caveat: Surgical outcomes must justify operative intervention
- Definition of palliative surgery- remove at least 90% of gross disease!
- 96% symptomatic relief post surgery
- 56% recurrence rate of symptoms at 5 yr
- 83% 3yr survival rate (positive spin-off)

THE ROLE OF LTX

- Theoretical advantages:
 - Remove all tumor burden
 - Remove most common site of recurrence
- Factors that may preclude OLT as an option:
 - Early disease recurrence
 - Significant M M
 - Shortage of donor organs
 - Financial implications
 - Absence of extensive experience
- Post transplant:
 - 5 yr survival 70%
 - 5 yr recurrence free survival 50 %
 - Mazzaferro criteria

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Conclusions

- Aggressive surgical approach can lead to:
- Long-term survival
- Significant long-term palliation
- Good Q.O.L.
- Cytoreductive surgery should be pursued whenever possible even if complete resection may not be possible!

Flow diagram *Milan criteria for suitability of Isolated neuroendocrine liver metastases neuroendocrine liver (imaging with CT, MRI, and somatostatin scintigraphic scans) metastases for transplantation Multidisciplinary Not resectable with meeting and discussion surgery alone Completely Unable to resectable by ablate all surgery alone Able to ablate all disease with disease combination of resection and RFA Resection with (1) < 70% of the live was involved by curative intent tumor Able to Unable to (Consider resect/ablate >= (2) No Evidence of unresectable resect/ablate cholecystectomy) 90% of hepatic extrahepatic tumour spread >= 90% of disease hepatic disease Cytoreductive resection +/-Candidate for Not candidate for Resection and RFA RFA for symptom transplant liver transplant* with curative relief/prolong survival intent (Consider cholecystectomy) Orthoptic (Consider cholecystectomy) liver Palliative transplant chemotherapy/TACE /octreotide

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