

# **Surgical options in the management of Cholangiocarcinoma (CCA)**

Johan van Beljon

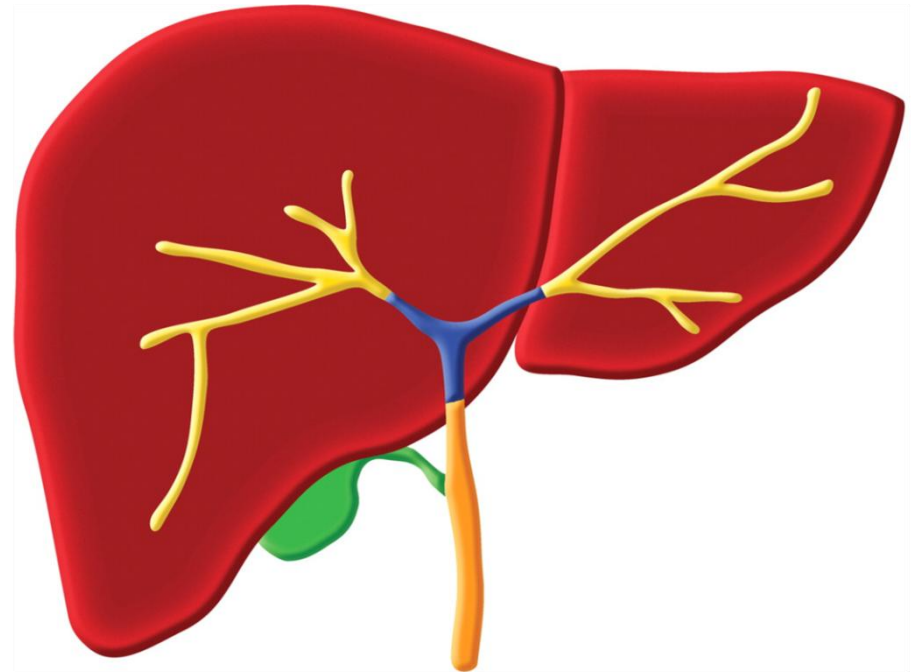
Surgeon

Montana Private Hospital

# Anatomically CCA can be classified as:

- Intrahepatic CCA
- Extra hepatic CCA
  - Hilar CCA(Klatskin)
  - Distal CCA

Figure 1. Drawing illustrates the locations of the three types of cholangiocarcinomas: intrahepatic (peripheral) (yellow), perihilar (blue), and extrahepatic (orange).



Sainani N I et al. Radiographics 2008;28:1263-1287

RadioGraphics

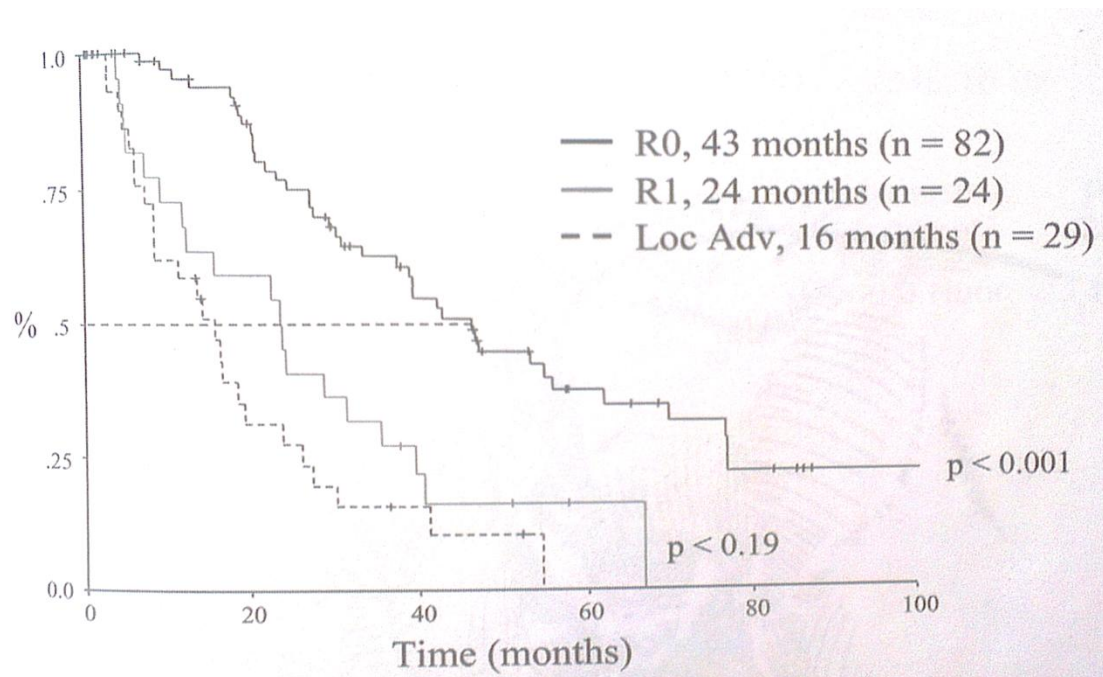
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# PROGNOSIS

Traditional nihilistic v/s Optimistic approach



\*Blumgart

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# **Key factors to take into account:**

1. Tumor extent
2. Extent of disease

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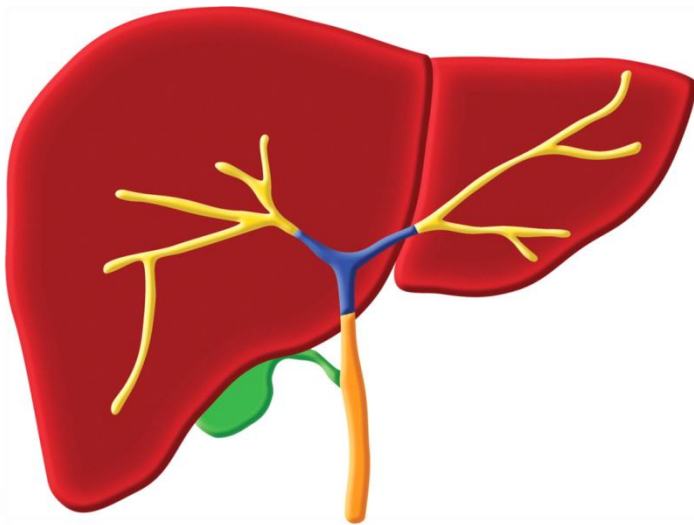
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# Extra Hepatic CCA

Hilar CCA

Middle and  
Distal CCA

Figure 1. Drawing illustrates the locations of the three types of cholangiocarcinomas: intrahepatic (peripheral) (yellow), perihilar (blue), and extrahepatic (orange).



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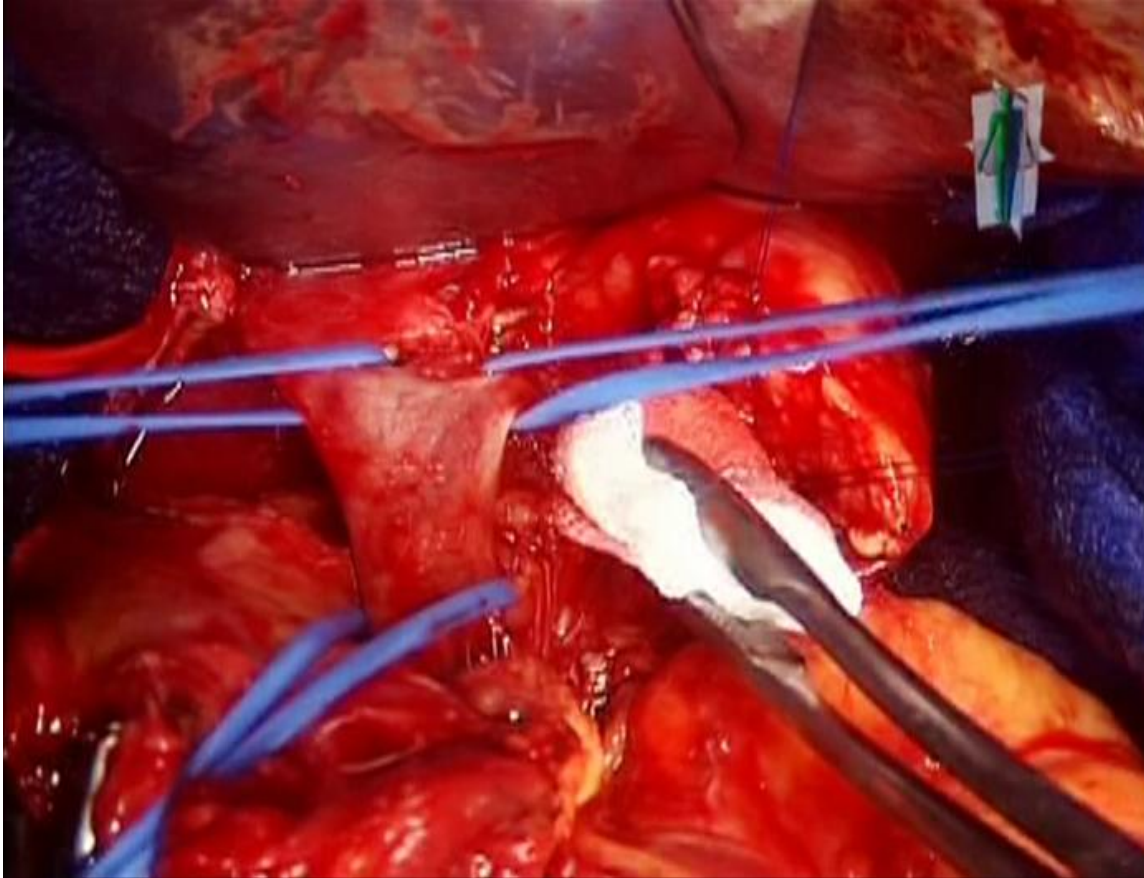
# Two surgical objectives:

1. Complete R0 resection of tumor
2. Restoration of Bilio-enteric continuity

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# Two main surgical problems:



1. Anatomic location
2. Invasive nature of Cholangiocarcinoma

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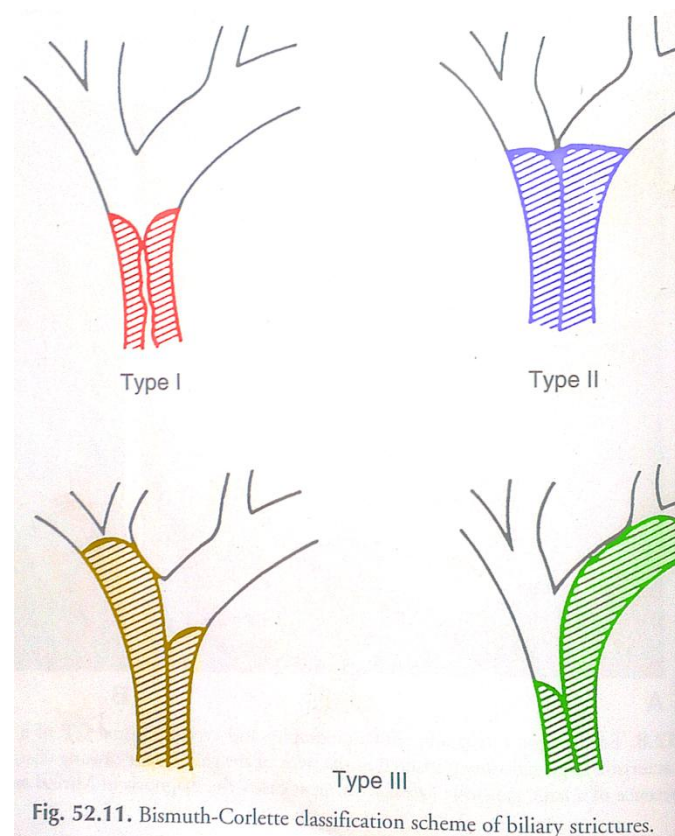
# Hilar CCA

1. Major surgical challenge
2. Need detailed info on: (clinical staging)
  - i. Cancer location
    - extent of tumor within the biliary tree
    - vascular involvement
    - Hepatic lobar atrophy
  - ii. Cancer spread(mets)
3. Complicated operative procedures



# Selection of surgical procedure

1. Tumor extent (Bismuth-Corlette)
2. Hepatic reserve



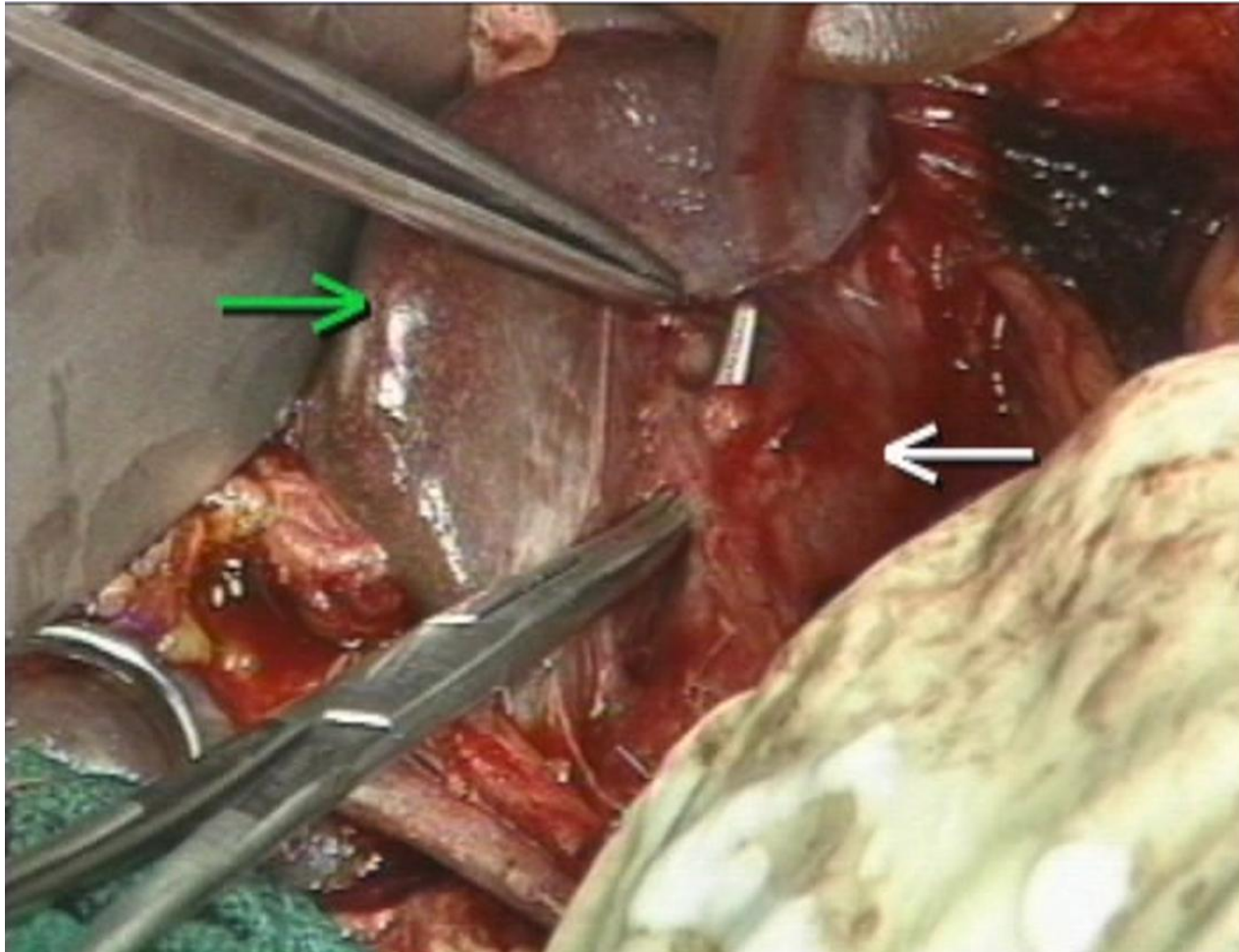
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# Various surgical options

- R0 resection of diseased biliary system. The type of liver resection needed for this R0 resection will be dictated by the proximal extent of the CCA. Segment 1 resection often included in left sided hepatectomy.

# Segment I Resection



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# Conclusion

- There has been a paradigm shift!
- Hilar CCA should be treated with a positive attitude.
- The shift has been brought about by increasing the radicality of our surgical approach.
- Hilar CCA should be treated with R0 resection which will usually include some form of liver resection as well as subhilar LN dissection.
- Ipsilateral vessel involvement is amendable to resection.

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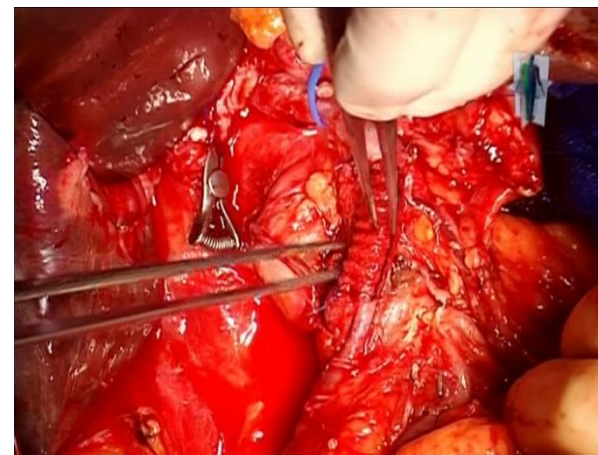
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# Middle and Distal CCA

Should be treated as all other periampullary cancers

Various options include:

- PPD(regional pancreatectomy)
- Segmental bile duct resections
- Major Hepatectomy with PDD
- Total pancreatectomy



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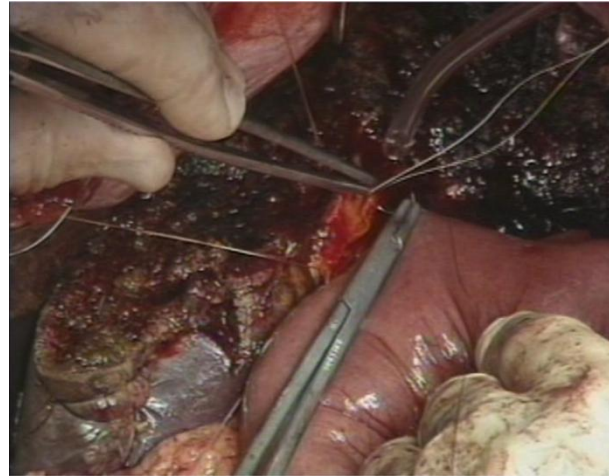
# Intrahepatic CCA

- Classified and staged as Hepatomas
- Treated with Liver resection according to specific location
- Segment 1 most common site of recurrence
- Segment 1 resection ? Standard practise ?
- LN dissection should be standard practise
- Liver transplant controversial

# Palliative surgery

When? What?

- Intrahepatic CCA
- Hilar CCA



- Distal CCA

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