



The dark side of the guidelines

2nd Interventional Radiologist under 40 Meeting

Interventional Oncology

8-10 Maggio 2017

Bologna

Società Medica Chirurgica - Palazzo dell'Archiginnasio



COLANGIOCARCINOMA INTRA-EPATICO

TRATTAMENTI ABLATIVI

Alberto Rebonato

Matthias Fischer, Daniele Maiettini, Stefano Mosca

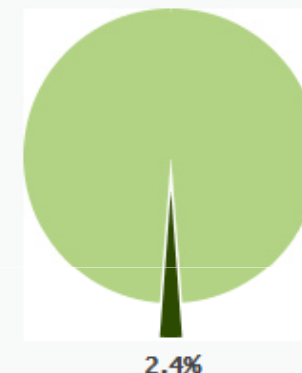
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| Common Types of Cancer | Estimated New Cases 2017 | Estimated Deaths 2017 |
|---|--------------------------|-----------------------|
| 1. Breast Cancer (Female) | 252,710 | 40,610 |
| 2. Lung and Bronchus Cancer | 222,500 | 155,870 |
| 3. Prostate Cancer | 161,360 | 26,730 |
| 4. Colon and Rectum Cancer | 135,430 | 50,260 |
| 5. Melanoma of the Skin | 87,110 | 9,730 |
| 6. Bladder Cancer | 79,030 | 16,870 |
| 7. Non-Hodgkin Lymphoma | 72,240 | 20,140 |
| 8. Kidney and Renal Pelvis Cancer | 63,990 | 14,400 |
| 9. Leukemia | 62,130 | 24,500 |
| 10. Endometrial Cancer | 61,380 | 10,920 |
| - | - | - |
| 13. Liver and Intrahepatic Bile Duct Cancer | 40,710 | 28,920 |

Liver and intrahepatic bile duct cancer represents 2.4% of all new cancer cases in the U.S.



Il colangiocarcinoma (CC) rappresenta la **seconda neoplasia primitiva del fegato**, rappresentandone il **20.6% dei casi**, e solo una minoranza dei CC è rappresentato da un colangiocarcinoma intraepatico (iCC)

| Guidelines | Approach | Content | Tumor | Evaluation measures |
|-------------------------------|---------------------|-------------|--------------|---|
| NCCN Guideline (2016) | Expert panel | D&T + E + F | CC, GBC, HCC | Consensus categories |
| SEOM Guideline (2015) | Literature analysis | D&T + E | CC, GBC | Evidence categories and recommendation grades |
| Japanese Guideline (2014) | Expert panel | D&T + E | CC, GBC, AC | Evidence categories and recommendation grades |
| Chinese Guideline 1 (2014) | Expert panel | D&T + E | CC | - |
| EASL Guideline (2014) | Expert panel | D&T + E | iCC | Evidence categories and recommendation grades |
| Asia-Pacific Guideline (2013) | Expert panel | D&T + E | pCC | Evidence categories and recommendation grades |
| Chinese Guideline 2 (2013) | Expert panel | D&T | pCC | Evidence categories and recommendation grades |
| BSG Guideline (2012) | Literature analysis | D&T + E + F | CC | Evidence categories and recommendation grades |
| Italian Guideline (2010) | Expert panel | D&T + E | CC | Evidence categories and recommendation grades |

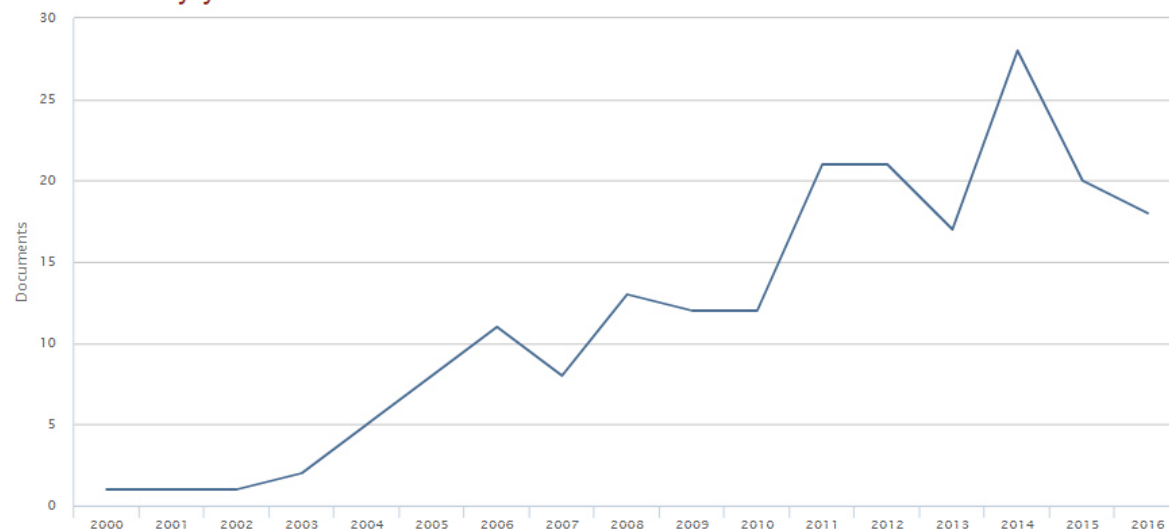
D&T, diagnosis and treatment; E, epidemiology; F, follow up. CC, cholangiocarcinoma; pCC, perihilar cholangiocarcinoma; iCC, intrahepatic cholangiocarcinoma; GBC, gallbladder carcinoma; AC, ampullary carcinoma; HCC, hepatocellular carcinoma.

Le **prime linee guida** sul trattamento dei CC risalgono al **2002** redatte dalla British Association for the Study of the Liver (BASL) in seguito al meeting annual del 2000 e in associazione con la the British Society of Gastroenterology (BSG)

PUBBLICAZIONI - ABLATION

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Documents by year

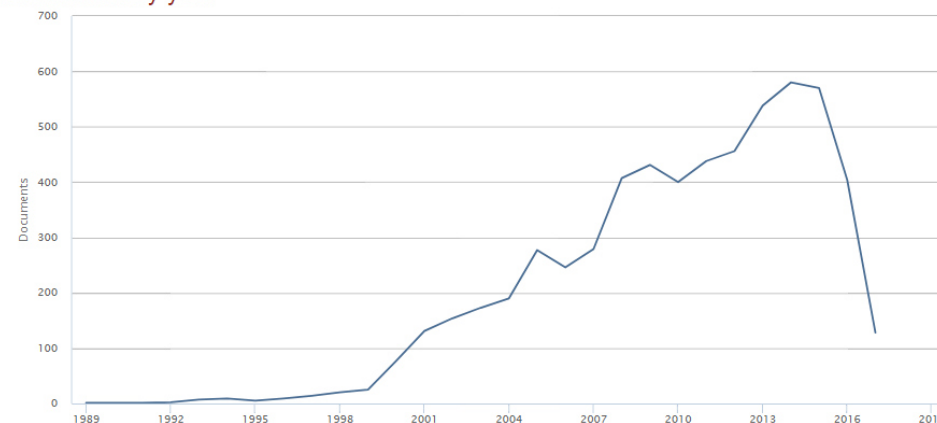


Ricerca SCOPUS con
«CC ablation»

..pochi clinical studies,
soprattutto linee guida,
review e negli ultimi 2-3
aa di «intraluminal
ablation»

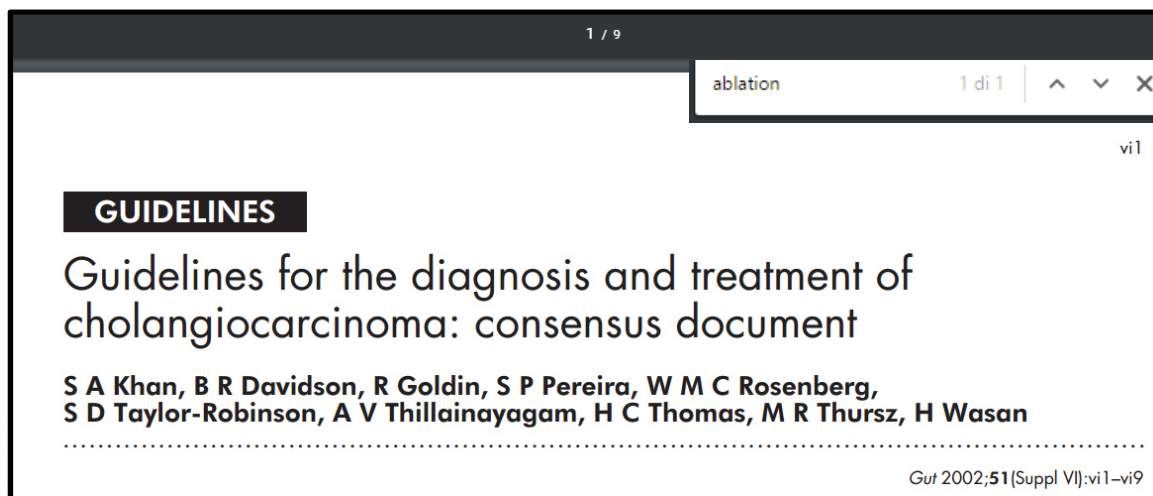
Per «HCC ablation»:
fine degli '80, + di 5000
lavori

Documents by year



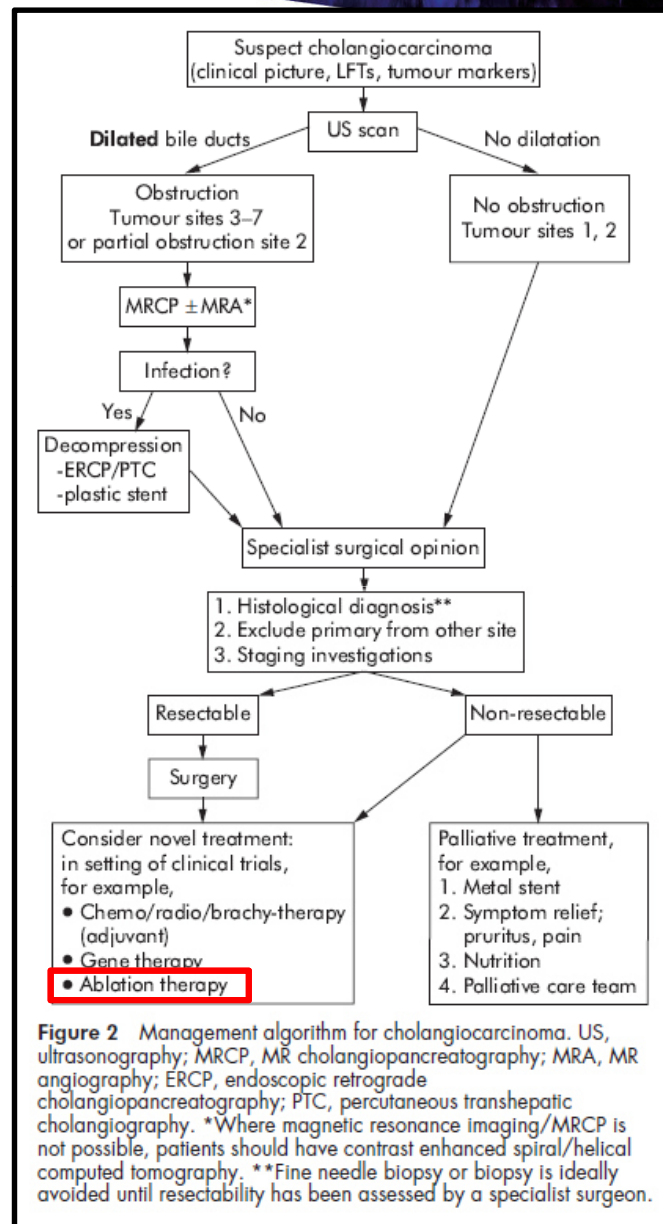
PRIME LINEEGUIDA 2002

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Un solo riferimento alle terapie ablative,
senza menzione di «terapie termoablative»

Siamo nel 2002 (RF '90 e MW 2000)



Digestive and Liver Disease 42 (2010) 831–838

Contents lists available at ScienceDirect

 **ELSEVIER**

Digestive and Liver Disease

journal homepage: www.elsevier.com/locate/dld



Progress Report

Cholangiocarcinoma: A position paper by the Italian Society of Gastroenterology (SIGE), the Italian Association of Hospital Gastroenterology (AIGO), the Italian Association of Medical Oncology (AIOM) and the Italian Association of Oncological Radiotherapy (AIRO)

Domenico Alvaro^{a,1}, Renato Cannizzaro^{b,1}, Roberto Labianca^{c,1}, Francesca Valvo^{d,1}, Fabio Farinati^{e,*}

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^b (for AIGO) Gastroenterology Unit, Centro di Riferimento Oncologico (CRO), Istituto Nazionale Tumori IRCCS, Aviano, Italy
^c (for AIOM) Medical Oncology Unit, Ospedali Riuniti, Bergamo, Italy
^d (for AIRO), Department of Radiation Therapy, Istituto Nazionale Tumori IRCCS, Milan, Italy
^e (for SIGE) Department of Surgical and Gastroenterological Sciences, University of Padua, Padua, Italy

Nessun riferimento a terapia ablativa (sia RFA che MW)
Concetto di resecabilità: Chirurgia - Chemio - Radioterapia

Guidelines for the diagnosis and treatment of cholangiocarcinoma: an update

Shahid A Khan,¹ Brian R Davidson,² Robert D Goldin,³ Nigel Heaton,⁴ John Karani,⁴ Stephen P Pereira,⁵ William M C Rosenberg,⁵ Paul Tait,⁶ Simon D Taylor-Robinson,¹ Andrew V Thillainayagam,¹ Howard C Thomas,¹ Harpreet Wasan⁷

¹Department of Hepatology and Gastroenterology Section, Imperial College London, London, UK

²Department of Hepatobiliary

ABSTRACT

The British Society of Gastroenterology guidelines on the management of cholangiocarcinoma were originally published in 2002. This is the first update since then and

C: level 4 studies *or* extrapolations from level 2 or 3 studies.

D: level 5 evidence *or* inconsistent or inconclusive studies of any level.

Nessun riferimento a terapia ablativa (sia RFA che MW)

Photodynamic therapy

In an early prospective open-label trial, 39 patients with unresectable CC were randomised to stenting alone or stenting and photodynamic therapy (PDT).¹⁰⁷ The PDT group had a significantly higher median survival (493 days vs 98 days).¹⁰⁷ PDT was further evaluated in the larger UK Photostent-02 trial in which 92 patients with histologically or cytologically confirmed biliary tract cancer (BTC) were randomised to receive either PDT plus stenting or stenting alone.¹⁰⁸ Overall survival was 5.6 months for PDT plus stenting and 8.5 months for stenting alone (HR 1.8, $p=0.027$). Nine patients (20%) in the PDT/stenting arm and 19 (41%) in the stenting alone arm received subsequent chemotherapy. Although overall survival was significantly improved among those who had chemotherapy compared with those who did not (11.1 vs 4.8 months, $p=0.001$), adjusting for this only reduced the PDT/stenting HR from 1.8 to 1.6, suggesting that failure to receive subsequent chemotherapy did not completely explain the excess risk from PDT.¹⁰⁸

LOCAL ABLATION

EVIDENCES IN 2012

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| Study | RFA/MW | Number PT/lesions/ ϕ_c m | Median Recurrence Free Survival (months) | Median OS (months) | Complication |
|------------------|----------|-------------------------------|--|--------------------|--------------|
| Chiou 2005 | RF | 10/1/3.4 | NA | 14 | 1 bilioma |
| Carrafiello 2010 | RF | 6/1/3.5 | NA | 20 | 0 |
| Kim 2011 | RF | 13/1-3/3.0 | 32.2 | 38.5 | 1 abscess |
| Yu 2011 | MW | 15/1-2-/4.4 | 10 | 24 (60%) | 2 abscess |
| Xu 2012 | 12RF/6MW | 18/1-4/3.2 | 4 | 8.8 | 5.5% |
| Fu 2012 | RF | 17/1-multi/4.4 | 17 | 33 | 3.6% |
| Haidu 2011 | RF | 11/1-multi/3.0 | 24.3 | 60 | 13% |
| Giorgio 2011 | RF | 10/1/3.2 | 30 | 60 (83%) | 0 |
| Kamphues 2010 | RF | 13/1-multi/ | 14 | 51 | 7.6% |
| Livraghi 2012 | MW | **27 (su736 pz) | NA | NA | no |

In effetti scarsissima evidenza scientifica
Totale assenza di lavori oltre *case series*

EASL GUIDELINES 2014

The dark side of the guidelines

Journal of Hepatology 2014 vol. 60 , 1268–1289

Guidelines



JOURNAL OF HEPATOLOGY

Guidelines for the diagnosis and management of intrahepatic cholangiocarcinoma

John Bridgewater¹, Peter R. Galle², Shahid A. Khan³, Josep M. Llovet^{4,5}, Joong-Won Park⁶, Tushar Patel⁷, Timothy M. Pawlik⁸, Gregory J. Gores^{9,*}

Recommendations

- Ablation approaches may be considered for small, single lesions <3 cm if surgery is not an option, but additional clinical trials are needed to establish its role in this population
Recommendation C2

Suggestions for future studies

- Randomized controlled trials are recommended to establish first-line local-regional treatment options for patients with unresectable iCCA

Guidelines

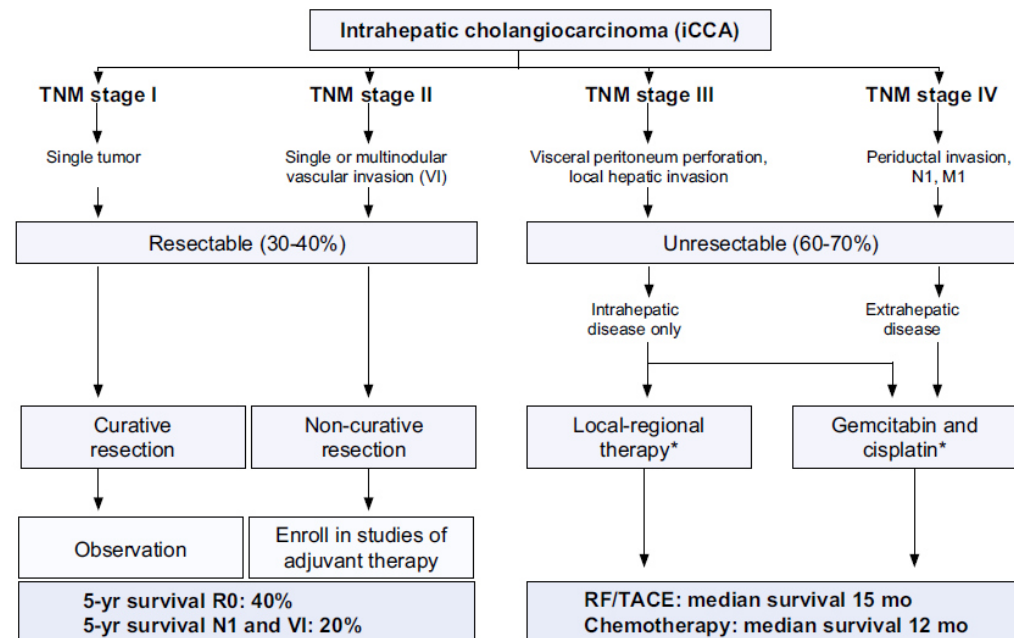


Fig. 3. A suggested treatment algorithm for patients with iCCA.* These are standard of practice recommendations. Larger and appropriate studies are required to provide evidence for standard of care guidelines.



EASL GUIDELINES 2014

The dark side of the guidelines

| Study | RFA/MW | Number PT/lesions/Øcm | Median Recurrence Free Survival (months) | Median OS (months) | Complication |
|------------------|--------|-----------------------|--|--------------------|--------------|
| Chiou 2005 | RF | 10/1/3.4 | NA | 14 | 1 bilioma |
| Carrafiello 2010 | | | | | 0 |
| Kim 2011 | | | | | 1 abscess |
| Yu 2011 | | | | | 2 abscess |
| Xu 2012 | | | | | 5.5% |
| Fu 2012 | | | | | 3.6% |
| Haidu 2011 | | | | | 13% |
| Giorgio 2011 | RF | 10/1/3.2 | 30 | 60 (83%) | 0 |
| Kamphues 2010 | RF | 13/1-multi/ | 14 | 51 | 7.6% |
| Livraghi 2012 | MW | **27 (su736 pz) | NA | NA | no |

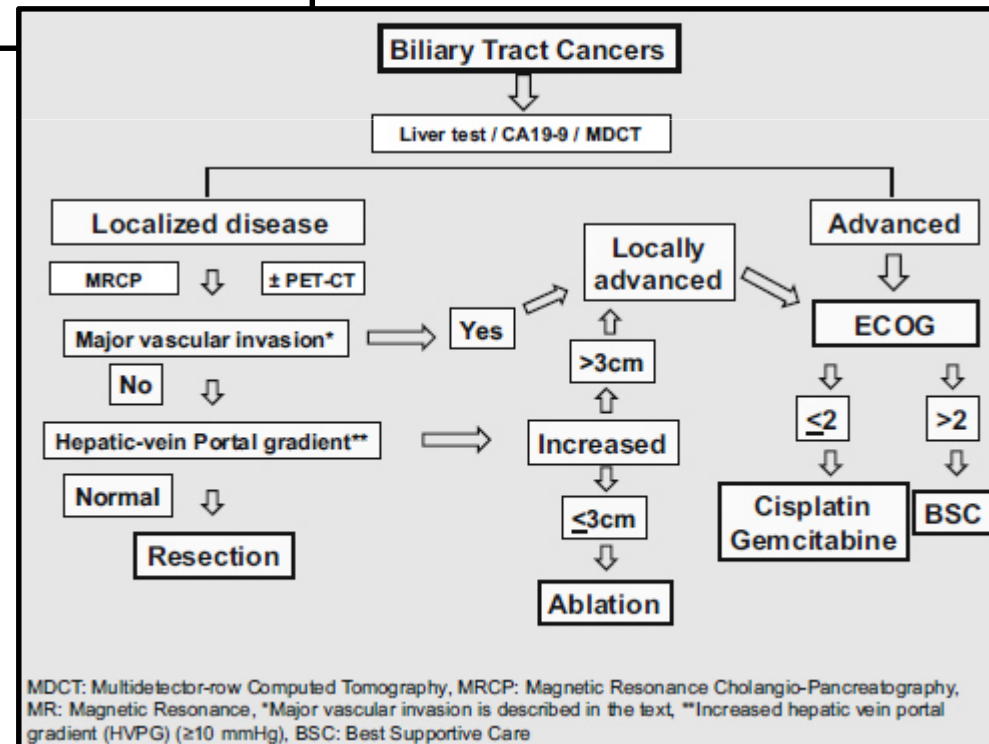
La bibliografia utilizzata dall'EASL era presente già nel 2012, cioè non vi sono nuovi articoli nel biennio 2013-14....quindi come mai gli autori della linea guida del 2012 non hanno citato le ablazioni? (dark side of guide lines...)

Clin Transl Oncol (2015) 17:982–987
DOI 10.1007/s12094-015-1436-2

CLINICAL GUIDES IN ONCOLOGY

Biliary tract cancers: SEOM clinical guidelines

M. Benavides¹ · A. Antón² · J. Gallego³ · M. A. Gómez⁴ ·
A. Jiménez-Gordo⁵ · A. La Casta⁶ · B. Laquente⁷ · T. Macarulla⁸ ·
J. R. Rodríguez-Mowbray⁹ · J. Maurel¹⁰



Surgery

Gallbladder cancer GBC is suspected preoperatively in only 30–40 % and in 60–70 % is discovered incidentally after cholecystectomy for other reasons, on pathologic review. Patients with T1b, T2, T3 disease that are incidentally identified in a cholecystectomy specimen should undergo re-resection which includes adequate lymphadenectomy including regional nodes and a goal recovery of at least 6 nodes.

Intra and extrahepatic cholangiocarcinoma Surgical resection is the only strategy with the potential for cure. The extent of liver resection depends of the function of remnant liver. Partial hepatectomy remains the mainstay of curative treatment for iCC and patients with potentially resectable tumors with ≤ 3 cm of diameter but without adequate liver function for hepatic resection, can be considered for ablation. The role of routine lymphadenectomy is not defined. For eCC, resection should include extrahepatic bile duct, regional lymphadenectomy and hepatectomy of the right or left lobe (Level of Evidence IIa, Grade of Recommendation A).

Locally advanced disease

BTCs are often diagnosed at an advanced stage defined as unresectable disease (metastatic or locally advanced) due to their non-specific symptomatology. Locoregional therapies for unresectable iCC have been evaluated in small studies including strategies such as radiofrequency ablation, transarterial chemoembolization, drug-eluting bead, and transarterial radioembolization. There are also studies evaluating the role of chemoradiation in advanced BTC. Nevertheless the magnitude of benefit of all these options vs systemic chemotherapy is currently unknown (Level of Evidence IIb, Grade of Recommendation C).

NCCN GUIDELINES 2016

NATIONAL COMPREHENSIVE CANCER NETWORK

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HHS Public Access

Author manuscript

J Natl Compr Canc Netw. Author manuscript; available in PMC 2015 June 09.

Published in final edited form as:

J Natl Compr Canc Netw. 2009 April ; 7(4): 350–391.

Hepatobiliary Cancers:

Clinical Practice Guidelines in Oncology™

Al B. Benson III, MD, Thomas A. Abrams, MD, Edgar Ben-Josef, MD, P. Mark Bloomston, MD, Jean F. Botha, MB, BCh, Bryan M. Clary, MD, Anne Covey, MD, Steven A. Curley, MD, Michael I. D'Angelica, MD, Rene Davila, MD, William D. Ensminger, MD, PhD, John F. Gibbs, MD, Daniel Laheru, MD, Mokenge P. Malafa, MD, Jorge Marrero, MD, Steven G. Meranze, MD, Sean J. Mulvihill, MD, James O. Park, MD, James A. Posey, MD, Jasjit Sachdev, MD, Riad Salem, MD, MBA, Elin R. Sigurdson, MD, PhD, Constantinos Sofocleous, MD, PhD, Jean-Nicolas Vauthey, MD, Alan P. Venook, MD, Laura Williams Goff, MD, Yun Yen, MD, PhD, and Andrew X. Zhu, MD, PhD

Patients who have undergone an R0 resection with or without ablation may be followed up with observation alone. Adjuvant chemotherapy can be administered if appropriate clinical trials are available.

For patients found to have microscopic positive tumor margins (R1) or residual local disease (R2) after resection, a **multidisciplinary team** must review the available options on an individual basis. Although the optimal treatment strategy has not been determined, options include 1) additional resection, 2) **ablative therapy**, 3) fluoropyrimidine chemoradiation, or 4) fluoropyrimidine- or gemcitabine-based chemotherapy

INDICAZIONI

The dark side of the guidelines

Review Article on Intrahepatic Cholangiocarcinoma

Ablative therapies for intrahepatic cholangiocarcinoma

Junichi Shindoh

Hepatobiliary-Pancreatic Surgery Division, Department of Gastroenterological Surgery, Toranomon Hospital, Tokyo, Japan

Table 1 Reported clinical outcomes of radiofrequency ablation for intrahepatic cholangiocarcinoma

| Authors | Country | Study period | Year | N | Size (cm) | Indication | Approach | Mortality (%) | Technical success rate (%) | Technical effectiveness (%) | Major complication (%) | Survival (%) | | |
|---------------------------|---------|--------------|------|----|-----------|--------------------------------|----------------------------|---------------|----------------------------|-----------------------------|------------------------|--------------|--------|--------|
| | | | | | | | | | | | | 1-year | 3-year | 5-year |
| Chiou <i>et al.</i> | Taiwan | 2002–2004 | 2005 | 10 | 1.9–6.8 | Unresectable ICC | Percutaneous RFA | 0 | ND | 80.0 | 0 | ND | – | – |
| Carratiello <i>et al.</i> | Italy | 2004–2008 | 2010 | 6 | 1.0–5.8 | Unresectable ICC | Percutaneous RFA | 0 | ND | 66.0 | 0 | ND | – | – |
| Kamphues <i>et al.</i> | Germany | 2002–2008 | 2010 | 13 | ND | Recurrent ICC | Stereotactic RFA | 0 | ND | ND | ND | 92 | 52 | – |
| Kim <i>et al.</i> | Korea | 2000–2009 | 2011 | 13 | 0.8–8.0 | Unresectable ICC | Percutaneous RFA | 0 | 88.0 | 88.0 | 8.0 | 85 | 51 | 15 |
| Giorgio <i>et al.</i> | Italy | 2003–2010 | 2011 | 10 | 2.4–5.5 | Unresectable ICC | Percutaneous RFA | 0 | ND | ND | 0 | 100 | 83 | 83 |
| Kim <i>et al.</i> | Korea | 1999–2009 | 2011 | 20 | 0.7–4.4 | Recurrent ICC | Percutaneous RFA | 0 | ND | 95.0 | 10.0 | 70 | 21 | – |
| Yu <i>et al.</i> | China | 2006–2010 | 2011 | 15 | 1.3–9.9 | Unresectable ICC | Percutaneous microwave | 0 | 91.7 | 87.5 | 13.0 | 60 | – | – |
| Xu <i>et al.</i> | China | 1998–2010 | 2012 | 18 | 1.4–6.9 | Unresectable ICC/recurrent ICC | Percutaneous RFA/microwave | 0 | 92.0 | 92.0 | 5.0 | 36 | 30 | 30 |
| Fu <i>et al.</i> | China | 2000–2010 | 2012 | 17 | 2.1–6.8 | Unresectable ICC/recurrent ICC | Percutaneous RFA | 0 | 96.2 | 96.2 | 6.0 | 85 | 43 | 29 |
| Haidu <i>et al.</i> | Austria | 2004–2010 | 2012 | 11 | 2.0–10.0 | Unresectable ICC/recurrent ICC | Stereotactic RFA | 0 | 100.0 | 92.0 | 27.0 | 91 | 71 | – |
| Zhang <i>et al.</i> | China | 2007–2011 | 2013 | 77 | ND | Recurrent ICC | Percutaneous RFA/microwave | 0 | 100.0 | 94.7 | 3.9 | 70 | 21 | – |
| Butros <i>et al.</i> | USA | 1998–2011 | 2014 | 7 | 1.3–3.3 | Unresectable ICC/recurrent ICC | Percutaneous RFA | 0 | 100.0 | 89.0 | 0 | 100 | 60 | 20 |

ICC, intrahepatic cholangiocarcinoma; RFA, radiofrequency ablation; ND, no data.

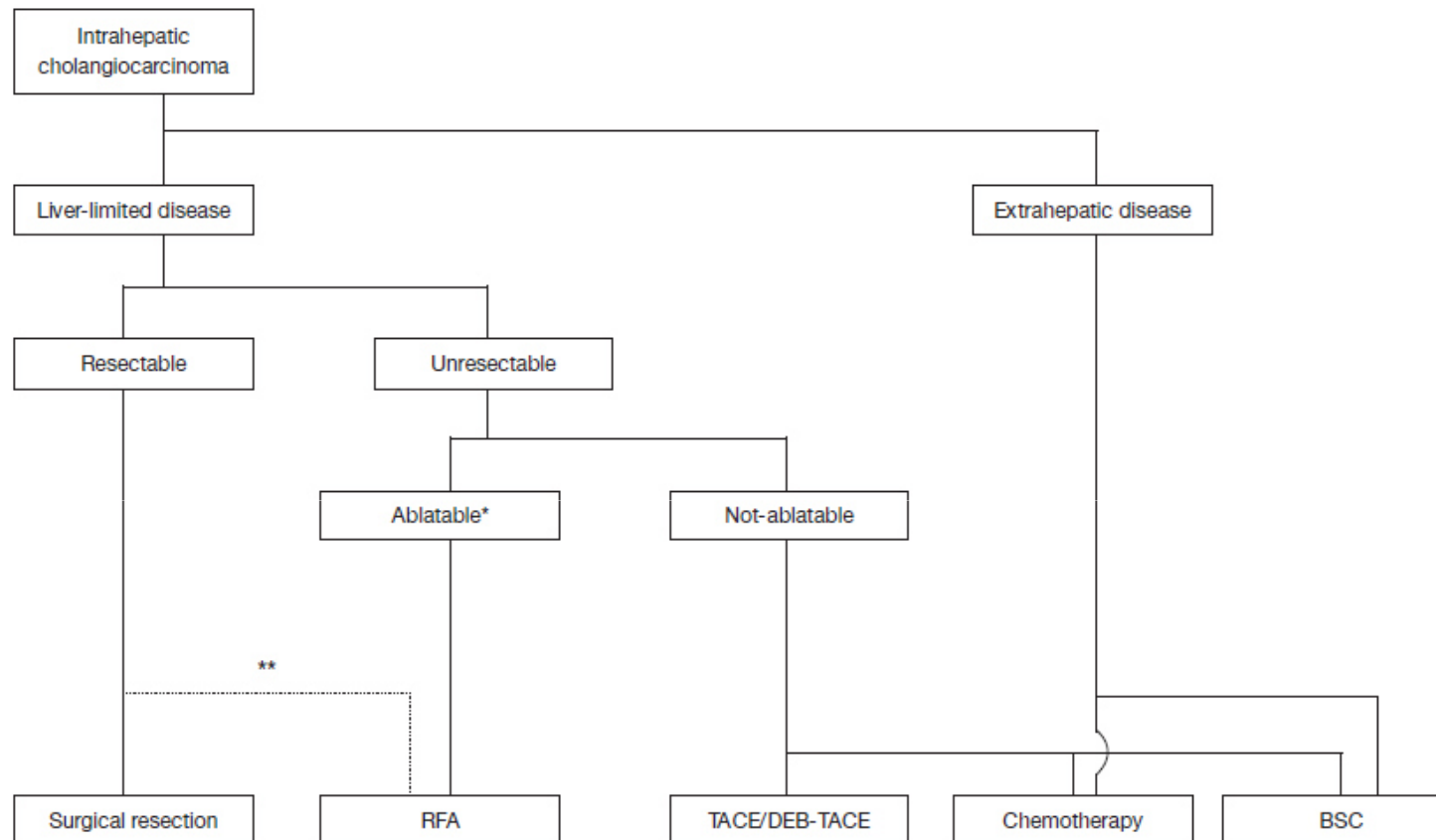


Figure 1 Algorithm for the selection of treatment for intrahepatic cholangiocarcinoma at Toranomon Hospital. *, possibility of complete ablation should be determined according to the local expertise and equipment; **, RFA can be used as a second choice for tumors up to 3 cm in diameter. RFA, radiofrequency ablation; TACE, transarterial chemoembolization; DEB-TACE, transarterial chemoembolization with drug-eluting beads; BSC, best supportive care.

- Non resecabile e recidive < 3 cm
- Ottimale < 3cm (+ infissioni o + antenne se > 4cm)

In multivariate analyses in previous studies **Tumor Size** is the main factor predicting the effectiveness of RFA as well as the survival after RFA

In recurrent ICC after surgery , the ablation (RFA or MW) has an overall **efficacy similar** to that repeated hepatic resection especially in lesions up to 3 cm.

Compared to surgery the ablation has obvious advantage :

- Hospital recovery
- Major complication (3,9% RFA vs 47% surgery)

- Safety halo almeno di 1cm («because the ICC has a tendency to spread diffusely along Glisson's sheath in a radial fashion from the original spherical tumor»)
- Termocoppie per prevenire complicazioni in sedi a rischio (colecisti, dotti biliari, anse)
- Antibiotico terapia e drenaggio nel trattamento dell'ascesso (complicanza più frequente)

INDICAZIONI E TIPS

The dark side of the guidelines

Standards of Practice

Practice Guideline for Adult Antibiotic Prophylaxis during Vascular and Interventional Radiology Procedures

Aradhana M. Venkatesan, MD, Sanjoy Kundu, MD, David Sacks, MD, Michael J. Wallace, MD, Joan C. Wojak, MD, Steven C. Rose, MD, Timothy W.I. Clark, MD, MSc, B. Janne d'Othee, MD, MPH, Maxim Itkin, MD, Robert S. Jones, DO, MSc, FACP, Donald L. Miller, MD, Charles A. Owens, MD, Dheeraj K. Rajan, MD, LeAnn S. Stokes, MD, Timothy L. Swan, MD, Richard B. Towbin, MD, and John F. Cardella, MD

J Vasc Interv Radiol 2010; 21:1611-1630

Abbreviations: AHA = American Heart Association, GI = gastrointestinal, GU = genitourinary, IE = infective endocarditis, IR = interventional radiology, IV = intravenous, IVC = inferior vena cava, RF = radiofrequency, SIR = Society of Interventional Radiology, TIPS = transjugular intrahepatic portosystemic shunt, UAE = uterine artery embolization



Profilassi antibiotica:

Non evidenze sulle indicazioni

Diversione bilio digestiva, stent o drenaggi biliari o sfinterotomia sono fattori di rischio

Procedure classification (site-dependent):
clean; clean-contaminated (eg, bilioenteric anastomosis/bypass)

Organisms encountered (organ-dependent): generally *S aureus*, *S epidermidis*, *Streptococcus* species with or without *E coli*; in cases of previous bilioenteric anastomosis, consider organisms similar to those for liver/biliary intervention, eg, *E coli*, *Proteus* species, *Klebsiella* species, and *Enterococcus* species

Routine prophylaxis recommended: no consensus

First-choice antibiotic agent: no consensus

Common antibiotic choices: (i) 1.5 g ampicillin/sulbactam IV (liver); (ii) 1 g ceftriaxone IV (renal); (iii) 1 g cefazolin IV (bone); alternate choices (site-dependent), (iv) if penicillin-allergic, can substitute vancomycin or clindamycin for Gram-positive coverage; aminoglycoside for Gram-negative coverage

Level of evidence: 8

Level of evidence 8: Rational conjecture (common sense); common practices accepted before evidence-based guidelines

RFA - EVIDENZE

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J VascIntervRadiol2015;26:943–948

REVIEW ARTICLE

Radiofrequency Ablation in the Treatment of Unresectable Intrahepatic Cholangiocarcinoma: Systematic Review and Meta-Analysis

Kichang Han, MD, Heung Kyu Ko, PhD, Kyung Won Kim, MD, Hyung Jin Won, MD, Yong Moon Shin, MD, and Pyo Nyun Kim, MD

Table 1. Summary of Published Studies Available for Analysis

| Study | Affiliation (Study Period) | No. Patients | No. Tumors | Tumor Size (cm) | Follow-up (mo) (Range) | EHD (%) | Technical Success (%) | Technical Effectiveness (%) | Major Complication |
|------------------------------|---|-----------------------------|------------|-----------------|------------------------|---------|-----------------------|-----------------------------|--------------------|
| Butros et al, 2014 (17) | Massachusetts General Hospital (1998–2011) | 7; 1 primary, 6 recurrent | 9 | 1.3–3.3 | 31 (NA) | 0 | 100 | 89 | 0 |
| Fu et al, 2012 (18) | Peking University Cancer Hospital (2000–2010) | 17; 7 primary, 10 recurrent | 26 | 2.1–6.8 | Median 29 (4–122) | 17.6 | 96.2 | 96.2 | 1 |
| Haidu et al, 2012 (23) | Medical University Innsbruck (2004–2010) | 11; 7 primary, 4 recurrent | 36 | 2.0–10.0 | Mean 35 (12–81) | 27.3 | 100 | 92 | 3 |
| Kim et al, 2011 (19) | Asan Medical Center (2000–2009) | 13; all primary | 17 | 0.8–8 | Median 19.5 (3.3–82.1) | 15.4 | 88 | 88 | 1 |
| Kim et al, 2011 (20) | Asan Medical Center (1999–2009) | 20; all recurrent | 29 | 0.7–4.4 | Median 12.8 (3.3–53.7) | 0 | NA | 95 | 2 |
| Carrafiello et al, 2010 (21) | University of Insubria (2004–2010) | 6; all primary | 6 | 1–5.8 | Mean 17.5 (13–21) | 0 | NA | 66 | 0 |
| Chiou et al, 2005 (22) | Taipei General Hospital (2002–2004) | 10; all primary | 10 | 1.9–6.8 | Mean 20 (4–38) | 0 | NA | 80 | 0 |

Table 3. Meta-Analytic Pooled Proportions for the Survival Rates and Local Tumor Progression Rate

| Outcome | No. Studies | No. Cases | Summary Estimate | | |
|-----------------|-------------|-----------|----------------------------|----------------------------|---------------------|
| | | | Pooled Proportion (95% CI) | P Value for Heterogeneity* | I ² (%)† |
| 1-year survival | 5 | 68 | 82% (72%–90%) | .38 | 4% |
| 3-year survival | 5 | 68 | 47% (28%–65%) | .05 | 57% |
| 5-year survival | 3 | 37 | 24% (11%–40%) | .75 | 0.0% |
| LTP | 7 | 84 | 21% (12%–30%) | .2 | 30% |

LTP = local tumor progression.

*P value by Cochran Q method to test the heterogeneity of the pooled data. Values < .10 indicate substantial heterogeneity.

†I² is the Higin index for heterogeneity, and values > 50% indicate substantial heterogeneity.



MWA - EVIDENZE

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- 15 Pz – 24 noduli
- 14 ablazioni in singola seduta (fino a 5 sedute)
- Ø lesioni 1,3 – 9,9 cm
- Successo tecnico 91,7% (2 casi ablazione incompleta a 4gg CEUS)
- OS 6-12-24 mesi (78,8-60-60%)
- 2 ascessi (3,5 e 13 mesi post MWA – complicazione?)

RFA NELLA RECIDIVA POST-CHIRURGIA

The dark side of the guidelines

European Journal of Radiology 80 (2011) e221–e225



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journal homepage: www.elsevier.com/locate/ejrad



Radiofrequency ablation for recurrent intrahepatic cholangiocarcinoma after curative resection

Jin Hyoung Kim^{a,*}, Hyung Jin Won^a, Yong Moon Shin^a, Pyo Nyun Kim^a, Sung-Gyu Lee^b, Shin Hwang^b

^a Radiology and Research Institute of Radiology, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Republic of Korea

^b Department of Surgery, Division of Hepatobiliary Surgery and Liver Transplantation, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Republic of Korea

- 20 Pz – 29 recidive
- Media 1,6 ablazioni (da 1 a 5 per lesione)
- Ø lesioni <5cm
- Successo tecnico 97% (1 pz 1 lesione trattamento incompleto)
- OS 6-12-24-36-48 mesi (95-70-60-21-21%)
- 1 ascesso (8gg dopo – trattato) – 1 stenosi della via biliare (DBTE)



RFA ED EMBOLIZZAZIONE

The dark side of the guidelines

OncoTargets and Therapy

Dovepress

open access to scientific and medical research

Open Access Full Text Article

ORIGINAL RESEARCH

Percutaneous microwave ablation combined with simultaneous transarterial chemoembolization for the treatment of advanced intrahepatic cholangiocarcinoma

This article was published in the following Dove Press journal:
OncoTargets and Therapy
26 May 2015
Number of times this article has been viewed

Guo-Wei Yang*
Qing Zhao*

Aim: To retrospectively evaluate the safety and efficacy of ultrasound-guided percutaneous microwave ablation (MWA) combined with simultaneous transarterial chemoembolization

OncoTargets and Therapy 2015:8 1245–1250

- 26 Pz – 39 lesioni
- Ø lesioni 3,6cm
- Successo tecnico 97% (1 pz 1 lesione trattamento incompleto)
- OS 6-12-24 mesi (88,5-69,2-61,5%)
- No complicazioni maggiori

ICC ABLATION TAKE-HOME MESSAGES

- Fattibile ed efficace
- Mancanza di RCT
- Pz inoperabili o con recidive (<3cm,)
- MW o RFA
- Abbondante safety halo
- Complicanze (ascesso)

BASICS OF ONCOLOGY

What IRs need to know

- The biology and natural history of the cancers most commonly treated by IRs
- The main surgical operations, usual time for recovery and main complications
- The main methods of radiation therapy, limitations and side effects
- Main chemotherapeutic agents, side effects and complications
 - Particular attention on effects on Hb, platelets and INR

MULTIDISCIPLINARY MEETINGS

IRs often not formally represented

- IR techniques not considered a mainstream option
- Advantages and limitations of IO options often inadequately understood and misrepresented
- Absence of clear paths for referral result in too few patients being considered for IO treatment

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