



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

TAE

TransArterial Embolization

Marco Calandri/Torino



UNIVERSITÀ DEGLI STUDI DI TORINO
Scuola di Medicina
Dipartimento di Scienze Chirurgiche



A.O.U. Città della Salute e della Scienza di Torino
Dipartimento di Diagnostica per Immagini e Radioterapia
Radiologia 1 Universitaria



UNIVERSITA' DEGLI STUDI DI TORINO
Dipartimento di Scienze Chirurgiche

Transarterial or “Bland” Embolization

The goal of transarterial embolization (TAE) is induce ischemic necrosis by selective catheter-directed delivery of vaso-occlusive materials directly into the arteries supplying tumor, resulting in subsequent occlusion of the terminal arterioles and subsequent tumoral ischemia. While gelatin sponge, ethiodized oil, cyanoacrylate glue, polyvinyl alcohol (PVA), and microspheres have all been used historically, most current techniques aim to deliver 50 μm PVA or 40–120 μm microspheres in selective or superselective fashion to the small arteries supplying tumor to the endpoint of stasis or near-stasis of flow while preserving flow in the larger hepatic arterial branches [35, 36].

The dark side of the guidelines

TAE

“Embolizzazione superselettiva delle arterie che vascolarizzano il tumore, con occlusione delle arteriole terminali e conseguente ischemia tumorale”

Curr Oncol Rep (2017) 19:40
DOI 10.1007/s11912-017-0597-2



GASTROINTESTINAL CANCERS (J MEYER, SECTION EDITOR)

Update on Embolization Therapies for Hepatocellular Carcinoma

Sirish Kishore¹ · Tamir Friedman¹ · David C. Madoff¹

Transcatheter Occlusion of Abdominal Tumors¹

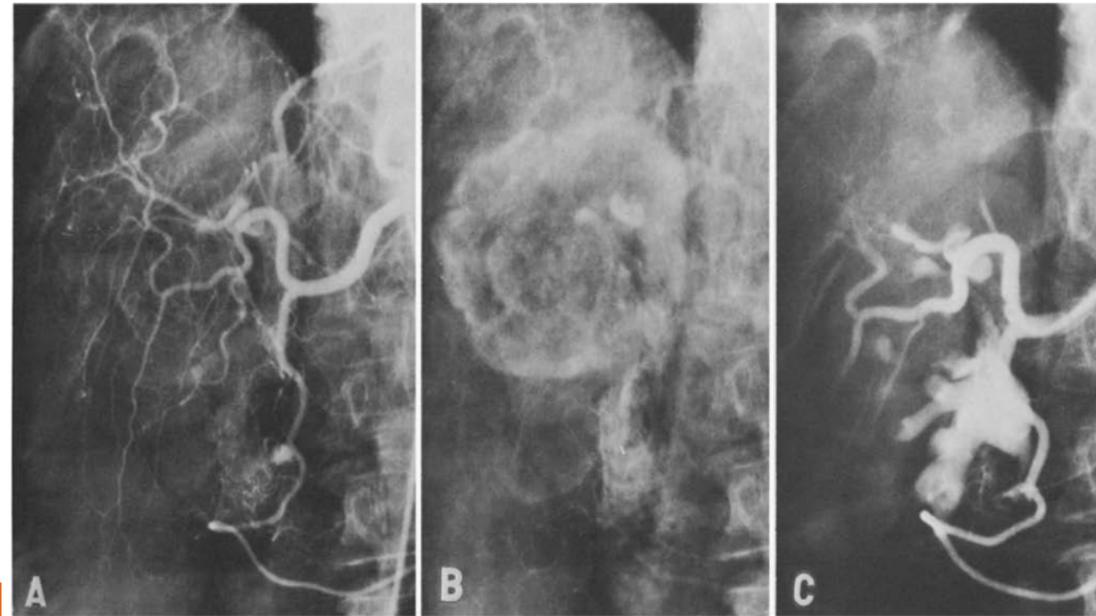
Harvey M. Goldstein, M.D., Sidney Wallace, M.D., James H. Anderson, Ph.D.,
Robert L. Bree, M.D., and Cesare Gianturco, M.D.

Radiological and clinical experience with transcatheter intravascular occlusion of abdominal and pelvic tumors in 55 patients is presented. Major indications include control of hemorrhage, palliation of local tumor symptoms, and preoperative management to facilitate surgery. Methods of occlusion included embolization (clot, subcutaneous tissue, and Gelfoam), introduction of a stainless steel coil into larger vessels, and balloon catheters. Hemorrhage was controlled in 8 of 12 patients with bleeding gastrointestinal and pelvic tumors. Experience in 36 patients with hypernephroma is discussed. Initial observations are presented, including occlusion of the hepatic artery for dearterialization of primary and secondary neoplasms and of the splenic artery for hypersplenism.

INDEX TERMS: Abdomen, hemorrhage (Multiple arteries, hemorrhage, 9.710) • Abdomen, neoplasms • Catheters and Catheterization • Embolism, therapeutic (Multiple arteries, therapeutic embolization, 9.129) • Gastrointestinal tract, hemorrhage, 95.710 • Genitourinary tract, hemorrhage, 96.710 • Hypernephroma • Pelvis, hemorrhage • Pelvis, neoplasms

Radiology 120:539-545, September 1976

*Clot,
Subcutaneous
tissue, Gelfoam*



C-TACE/Deb-TACE

Ischemia + chemotherapy

Level of evidence, grade of recommendation 1



IV Sessione Fegato - HCC

Moderatori: Rita Golfieri, Carlo Spreafico

- 8.30 Trattamenti ablativi: PEI, RF, MWA
- 8.50 TACE convenzionale e DEB - TACE
- 9.10 TAE
- 9.30 TARE
- 9.50 Trattamenti combinati: quando e come
- 10.10 *Casistica interattiva: casi difficili e controversi*

*Pierleone Lucatelli
Orsola Perrone
Marco Calandri
Matteo Renzulli
Andrea Contegiacomo*

Discussant: Irene Bargellini, Stefano Pieri

TAE

Ischemia

“Non molte” pubblicazioni



TARE

Radiation

Recente incremento di pubblicazioni e interesse



CLINICAL INVESTIGATION

Trends in Utilization of Transarterial Treatments for Hepatocellular Carcinoma: Results of a Survey by the Italian Society of Interventional Radiology

Irene Bargellini · Francesco Florio · Rita Golfieri ·
Maurizio Grosso · Dario Luca Lauretti · Roberto Cioni

of the guidelines



In un generale quadro di eterogeneità dei trattamenti, dei 78 Centri che hanno risposto al questionario, solo 1 ha dichiarato di effettuare solo (1,3%) trattamenti di “bland” embolization

12,6%

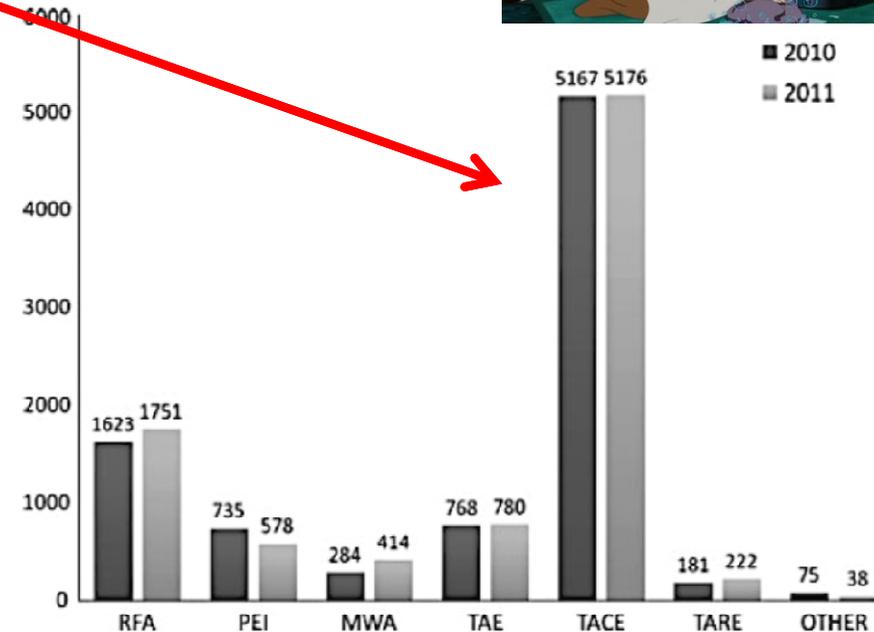


Fig. 1 Number of locoregional treatments performed in 2010 and 2011 by the 78 responding centers. *RFA* radiofrequency ablation, *PEI* percutaneous ethanol injection, *MWA* microwave ablation, *TAE* transarterial embolization, *TACE* transarterial chemoembolization, *TARE* transarterial Y90-radioembolization

E' davvero la cenerentola dei trattamenti transarteriosi? Quali indicazioni?

“Looking for the bright side of the
guidelines...”



Clinical Practice Guidelines

 **EASL** EUROPEAN ASSOCIATION FOR THE STUDY OF THE LIVER | **JOURNAL OF HEPATOLOGY**

2012 EASL–EORTC Clinical Practice Guidelines: Management of hepatocellular carcinoma

European Association for the Study of the Liver*,
European Organisation for Research and Treatment of Cancer

JSH Consensus-Based Clinical Practice Guidelines for the Management of Hepatocellular Carcinoma: 2014 Update by the Liver Cancer Study Group of Japan

Masatoshi Kudo^a Osamu Matsui^b Namiki Izumi^c Hiroko Iijima^d
Masumi Kadoya^e Yasuharu Imai^f Takuji Okusaka^g Shiro Miyayama^h
Kaoru Tsuchiya^c Kazuomi Ueshima^a Atsushi Hiraokaⁱ Masafumi Ikeda^j
Sadahisa Ogasawara^k Tatsuya Yamashita^l Tetsuya Minami^m
Koichiro Yamakadoⁿ on behalf of the Liver Cancer Study Group of Japan

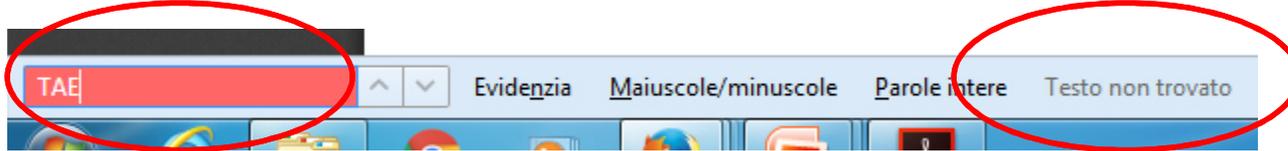
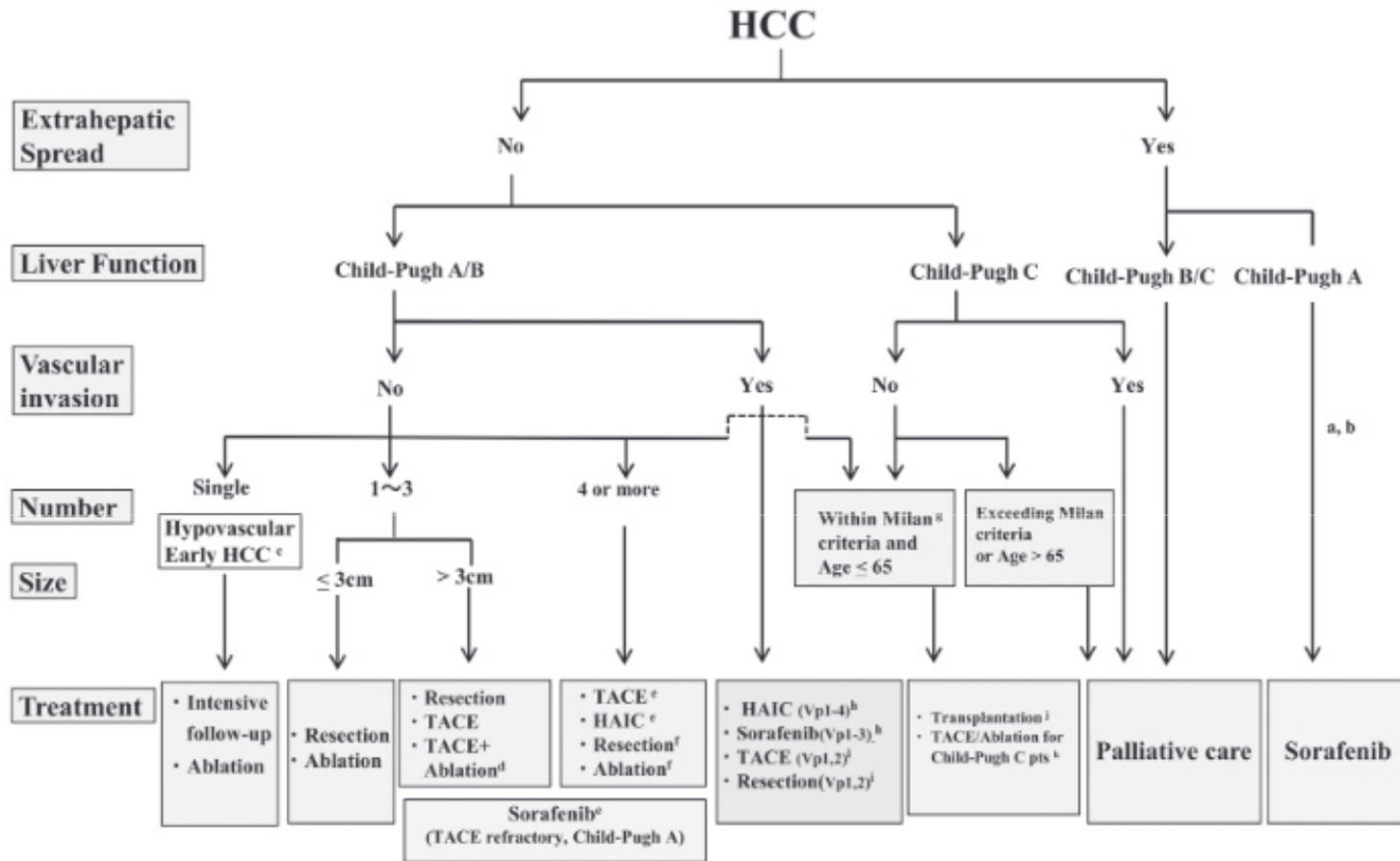
Hepatology. 2017 Jan 28. doi: 10.1002/hep.29086. [Epub ahead of print]

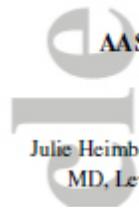
Aasld guidelines for the treatment of hepatocellular carcinoma.

Heimbach J, Kulik LM, Finn R, Sirlin CB, Abecassis M, Roberts LR, Zhu A, Murad MH, Marrero J.

PMID: 28130846 DOI: [10.1002/hep.29086](https://doi.org/10.1002/hep.29086)

JSH Consensus based clinical practice guidelines





AASLD GUIDELINES FOR THE TREATMENT OF HEPATOCELLULAR CARCINOMA

Julie Heimbach, MD, Laura M. Kulik, MD, Richard Finn, MD, Claude B. Sirlin, MD, Michael Abecassis, MD, Lewis R. Roberts, MD, and Andrew Zhu, MD, PhD, M. Hassan Murad, Jorge Marrero, MD

The dark side of the guidelines

2017

- 10 Key questions : nessuna di queste riguarda la scelta del tipo di trattamento transarterioso.
- Gli autori, nel valutare l'efficacia del trattamento transarterioso nei confronti del best supportive care o terapia sistemica, si affidano alla review di Oliveri dove 9 RCT vengono inclusi (6 TACE e 3 TAE) e trattati insieme.
- Non apparenti differenze vengono evidenziate né tra i due trattamenti e neppure con il BSC...



**Cochrane
Library**

Cochrane Database of Sysⁱ

Transarterial (chemo)embolisation for unresectable hepatocellular carcinoma (Review)

Oliveri RS, Wetterslev J, Gluud C

AASLD GUIDELINES FOR THE TREATMENT OF HEPATOCELLULAR CARCINOMA

Julie Heimbach, MD, Laura M. Kulik, MD, Richard Finn, MD, Claude B. Sirlin, MD, Michael Abecassis, MD, Lewis R. Roberts, MD, and Andrew Zhu, MD, PhD, M. Hassan Murad, Jorge Marrero, MD

Q 7: Should adults with cirrhosis awaiting liver transplantation and HCC (OPTN T2) undergo transplant alone or transplant with bridging therapy while waiting?

The dark side of the guidelines

	Outcomes	No. of participants (studies) Follow-up	Overall quality of evidence	OR (95% CI)
Any bridging therapy	Dropout due to progression	2	⊕○○○ VERY LOW*†	0.321 (0.056-1.851)
	Dropout from all causes	3	⊕○○○ VERY LOW*†‡	0.378 (0.060-2.370)
	All-cause mortality (post-LT)	5	⊕○○○ VERY LOW*†	1.028 (0.752-1.404)
	Recurrence (post-LT)	10	⊕○○○ VERY LOW*	1.445 (0.0911-2.29)
	3-year survival (post-LT)	5	⊕○○○ VERY LOW*†	1.010 (0.890-1.147)
	5-year survival (post-LT)	5	⊕○○○ VERY LOW*†	0.879 (0.762-1.014)
	1-year survival (post-LT)	3	⊕○○○ VERY LOW*†	1.008 (0.945-1.076)
	5-year recurrence-free survival (post-LT)	3	⊕○○○ VERY LOW*†‡	0.920 (0.75-1.127)
	1-year recurrence-free survival (post-LT)	2	⊕○○○ VERY LOW*†	1.007 (0.944-1.075)
	3-year recurrence-free survival (post-LT)	2	⊕○○○ VERY LOW*†	1.072 (0.965-1.198)
TACE	Dropout because of progression	1	⊕○○○ VERY LOW*†	0.371 (0.043-3.185)
	Dropout from all causes	1	⊕○○○ VERY LOW*†	0.212 (0.027-1.650)
	All-cause mortality (post-LT)	1	⊕○○○ VERY LOW*†	1.000 (0.270-3.705)
	Recurrence (post-LT)	3	⊕○○○ VERY LOW*†	1.74 (0.43-6.15)
TACE and RFA	Dropout from all causes	1	⊕○○○ VERY LOW*†	0.929 (0.717-1.203)
	All-cause mortality (post-LT)	1	⊕○○○ VERY LOW*†	0.888 (0.534-1.475)
	Recurrence (post-LT)	1	⊕○○○ VERY LOW*†	1.036 (0.871-1.231)
	Dropout from all causes	1	⊕○○○ VERY LOW*†	0.799 (0.667-0.956)
TAE	Dropout from all causes	1	⊕○○○ VERY LOW*†	0.72 (0.018-2.91)
	All-cause mortality (post-LT)	1	⊕○○○ VERY LOW*†	1.124 (0.675-1.873)
Multitherapies	Dropout from all causes	1	⊕○○○ VERY LOW*†	2.374 (0.609-9.232)
	Recurrence (post-LT)	1	⊕○○○ VERY LOW*†	0.131 (0.028-0.440)

7B. The AASLD does not recommend one form of liver-directed therapy over another for the purposes of bridging to liver transplantation for patients within OPTN T2 (Milan) criteria.

Chemoembolization

Chemoembolization (TACE) is the most widely used primary treatment for unresectable HCC [160,165,194], and the recommended first line-therapy for patients at intermediate stage of the disease [56,139,149]. HCC exhibits intense neo-angiogenic activity during its progression. The rationale for TACE is that the intra-arterial infusion of a cytotoxic agent followed by embolization of the tumor-feeding blood vessels will result in a strong cytotoxic and ischemic effect. TACE should be distinguished from chemo-lipiodolization – delivery of an emulsion of chemotherapy mixed with lipiodol –, bland transcatheter embolization (TAE), where no chemotherapeutic agent is delivered, and intra-arterial chemotherapy, where no embolization is performed. Details on the distinct types and definitions of image-guided transcatheter embolization have been reviewed elsewhere [285,286].

C-TACE
DEB-TACE
TARE



- Chemoembolization is recommended for patients with BCLC stage B, multinodular asymptomatic tumors without vascular invasion or extra hepatic spread (**evidence 1iiA; recommendation 1A**)
The use of drug-eluting beads has shown similar response rates than gelfoam-lipiodol particles associated with less systemic adverse events (**evidence 1D; recommendation 2B**)
Chemoembolization is discouraged in patients with decompensated liver disease, advanced liver dysfunction, macroscopic invasion or extrahepatic spread (**evidence 1iiA; recommendation 1B**)
Bland embolization is not recommended
- Internal radiation with ¹²⁵I or ⁹⁰Y glass beads has shown promising anti-tumoral results with a safe profile, but cannot be recommended as standard therapy. Further research trials are needed to establish a competitive efficacy role in this population (**evidence 2A; recommendation 2B**)

J Vasc Interv Radiol. 2009 Jul;20(7 Suppl):S377-90. doi: 10.1016/j.jvir.2009.04.011.

Image-guided tumor ablation: standardization of terminology and reporting criteria.

Goldberg SN¹, Grassi CJ, Cardella JF, Charboneau JW, Dodd GD 3rd, Dupuy DE, Gervais DA, Gillams AR, Kane RA, Lee FT Jr, Livraghi T, McGahan J, Phillips DA, Rhim H, Silverman SG, Solbiati L, Voql TJ, Wood BJ, Vedantham S, Sacks D; Society of Interventional Radiology Technology Assessment Committee and the International Working Group on Image-guided Tumor Ablation.

arterial chemotherapy or lipiodolization ended for the management of HCC (**recommendation 2B**)

dimensional conformal radiotherapy is under investigation, and there is no evidence to support this therapeutic approach in the management of HCC (**evidence 3A; recommendation 2C**)

Chemoembolization for Hepatocellular Carcinoma

JORDI BRUIX,* MARGARITA SALA,* and JOSEP M. LLOVET*†

*BCLC Group, Liver Unit, Digestive Disease Institute, Institut d'Investigacions Biomèdiques August Pi i Sunyer, Hospital Clinic, University of Barcelona, Catalonia, Spain; and †Division of Liver Diseases and Recanati Miller Transplantation Institute, Mount Sinai School of Medicine, New York, New York

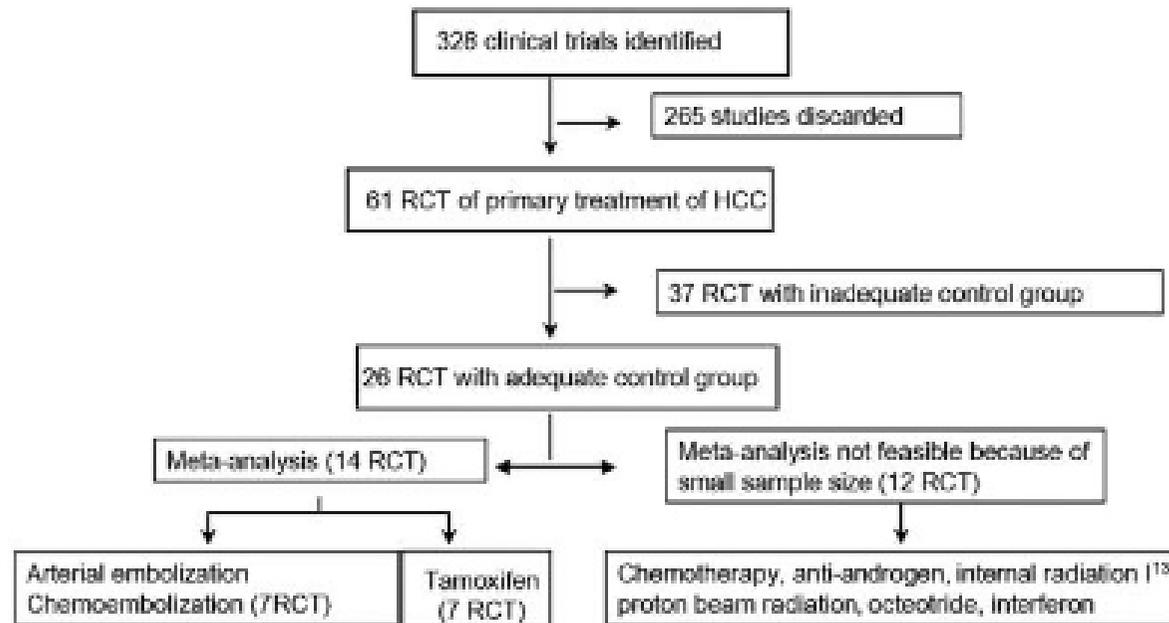


Figure 1. Study flowchart for the systematic review of RCTs for unresectable HCC (1978–2002). Reprinted with permission.¹¹

Llovet JM, Bruix J. Systematic review of randomized trials for unresectable hepatocellular carcinoma: chemoembolization improves survival. *Hepatology* 2003;37:429 – 442.

Riassumendo...

- JHS non affronta la questione TAE (HIAC...)
- AASLD (2017) rispondono a key questions maggiormente cliniche e quando si riferiscono alle evidenze di letteratura dei trattamenti embolizzanti basano le loro analisi sulla più recente Cochrane che include entrambi i trattamenti arteriosi (TAE e TACE), peraltro fallendo nel dimostrare non solo differenza nei due trattamenti ma anche superiorità rispetto al placebo nell'OS...

Le EASL guidelines affermano che il dibattito su quale trattamento arterioso scegliere è stato affrontato su altre pubblicazioni (in sostanza la metanalisi di Bruix del 2003) ma, in ogni caso non raccomanda l'utilizzo della TAE (senza evidence o recommendation!!)



- Chemoembolization is recommended for patients with BCLC stage B, multinodular asymptomatic tumors without vascular invasion or extra hepatic spread (evidence 1iiA; recommendation 1A)
The use of drug-eluting beads has shown similar response rates than gelfoam-lipiodol particles associated with less systemic adverse events (evidence 1D; recommendation 2B)
Chemoembolization is discouraged in patients with decompensated liver disease, advanced liver dysfunction, macroscopic invasion or extrahepatic spread (evidence 1iiA; recommendation 1B)
Bland embolization is not recommended
- Internal radiation with ^{131}I or ^{90}Y glass beads has shown promising anti-tumoral results with a safe profile, but cannot be recommended as standard therapy. Further research trials are needed to establish a competitive efficacy role in this population (evidence 2A; recommendation 2B)
- Selective intra-arterial chemotherapy or lipiodolization are not recommended for the management of HCC (evidence 2A; recommendation 2B)
- External three-dimensional conformal radiotherapy is under investigation, and there is no evidence to support this therapeutic approach in the management of HCC (evidence 3A; recommendation 2C)

Speravamo nel bright side...
piuttosto dark invece...

2) In uno dei due studi randomizzati che hanno dimostrato la superiorità della cTACE rispetto al placebo in termini di sopravvivenza, l'embolizzazione arteriosa transcatetere senza uso di chemioterapico (TAE) non è risultata vantaggiosa rispetto al placebo [141]. Invece, una meta-analisi ha dimostrato l'utilità, rispetto al non trattamento sia di cTACE e TAE [142], non trovando differenze significative fra le due tecniche. In una successiva meta-analisi, comprendente 3 studi randomizzati, la superiorità della cTACE rispetto alla TAE risultava ai limiti della significatività statistica ($P=0.052$) [143].

Integrata del paziente con Epatocarcinoma

COMITATO DELL'HCC	
Interventi	Adattamenti AISF
	Nessun adattamento rispetto all'affermazione originale. (S,D).

3 studi randomizzati, la superiorità della cTACE rispetto alla TAE risultava ai limiti della significatività statistica ($P=0.052$) [143].

Anche se la cTACE è la terapia transarteriosa dell'HCC più largamente utilizzata nella pratica clinica (in quanto concettualmente dotata di un maggiore effetto tumoricida), il Comitato non ritiene che vi siano sufficienti evidenze per sancire definitivamente la superiorità della cTACE sulla TAE, in termini di sopravvivenza dei pazienti (1a, A).



Ai
Iscritta nell'Elenco

Raccomanda
int

Pertanto, in assenza di studi randomizzati primariamente dimensionati e disegnati per confrontare TACE e TAE, evidenze indirette derivate da meta-analisi suggerirebbero l'assenza di differenze significative, in termini di sopravvivenza, tra le due tecniche.

tra le due tecniche.

Arterial embolisation or chemoembolisation versus symptomatic treatment in patients with unresectable hepatocellular carcinoma: a randomised controlled trial

Josep M Llovet, Maria Isabel Real, Xavier Montaña, Ramon Planas, Susana Coll, John Aponte, Carmen Ayuso, Margarita Sala, Jordi Muchart, Ricard Solà, Joan Rodés, Jordi Bruix, for the Barcelona Clinic Liver Cancer Group*

141

- Three arms study
- The trial was stopped when the ninth sequential inspection showed that chemoembolisation had survival benefits compared with conservative treatment (hazard ratio of death 0·47 [95% CI 0·25–0·91], $p=0\cdot025$).
- Survival probabilities at 1 year and 2 years were 75% and 50% for embolisation; 82% and 63% for chemoembolisation, and 63% and 27% for control (chemoembolisation *vs control* $p=0\cdot009$).
- *Chemoembolisation* induced objective responses sustained for at least 6 months in 35% (14) of cases, and was associated with a significantly lower rate of portal-vein invasion than conservative treatment.

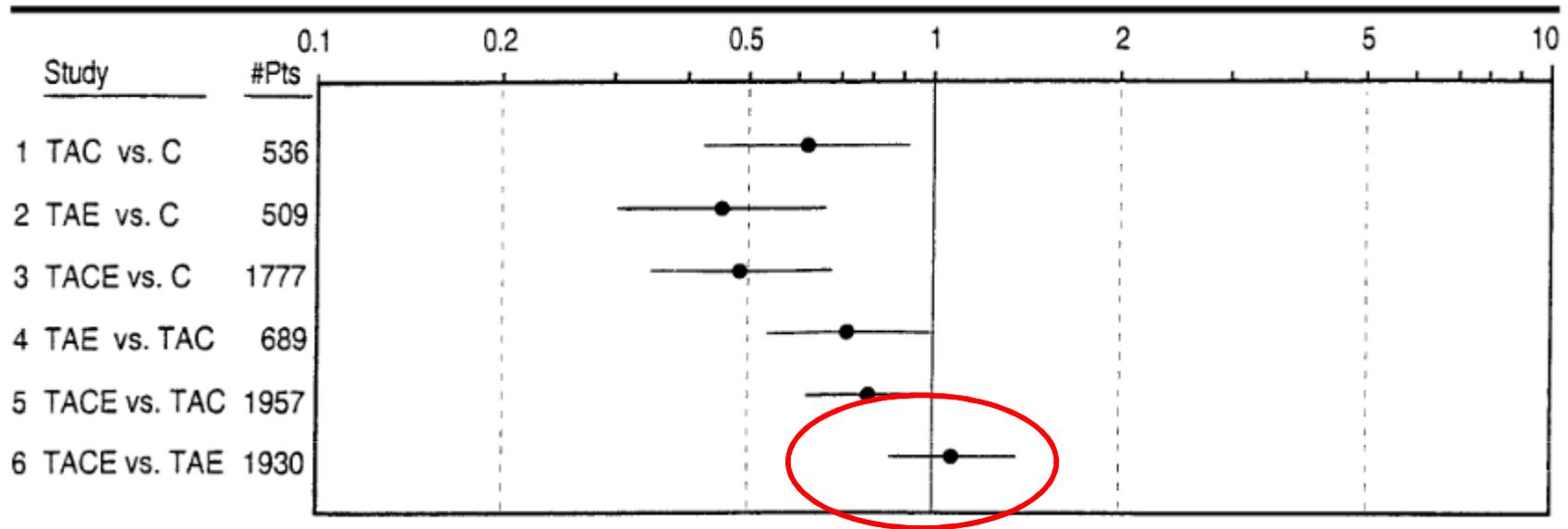
Arterial embolisation or chemoembolisation versus symptomatic treatment in patients with unresectable hepatocellular carcinoma: a randomised controlled trial

Josep M Llovet, Maria Isabel Real, Xavier Montaña, Ramon Planas, Susana Coll, John Aponte, Carmen Ayuso, Margarita Sala, Jordi Muchart, Ricard Solà, Joan Rodés, Jordi Bruix, for the Barcelona Clinic Liver Cancer Group*



- Lo studio non ha dimostrato la superiorità del braccio TAE nei confronti del best supportive care (BSC)... **ma neppure il contrario**
- **Utilizzato gelfoam: embolizzante temporaneo e normalmente determinante occlusione prossimale**
- Ciononostante discreti risultati del braccio TAE (OS 75% al primo anno e 50% al secondo anno)!

Overall 2-year mortality odds ratios (ORs) of different embolization procedures



[Radiology](#). 2002 Jul;224(1):47-54.

Transarterial chemoembolization for unresectable hepatocellular carcinoma: meta-analysis of randomized controlled trials.

[Cammà C¹](#), [Schepis F](#), [Orlando A](#), [Albanese M](#), [Shahied L](#), [Trevisani F](#), [Andreone P](#), [Craxi A](#), [Cottone M](#).

142

TACE versus TAE: pooled 18 studies involving 1.930 patients and found no difference in 2-year mortality rates. TACE not more effective than TAE.

TAE vs TACE: meta-analysis with three RCTs (412 patients)

- No statistical difference between therapies, with 2 of 3 trials favoring TAE, and one favoring TACE.
- However, although there was no statistical heterogeneity, this was close to statistical significance ($p = 0.052$). Further RCTs needed.



CardioVascular and Interventional Radiology

© Springer Science+Business Media, Inc. 2006
Published Online: 13 November 2006

Cardiovasc Intervent Radiol (2007) 30:6–25
DOI: 10.1007/s00271-006-0062-3

REVIEWS

Transarterial Therapy for Hepatocellular Carcinoma: Which Technique Is More Effective? A Systematic Review of Cohort and Randomized Studies

Laura Marelli,¹ Rosa Stigliano,¹ Christos Triantos,¹ Marco Senzolo,¹ Evangelos Cholongitas,¹ Neil Davies,² Jonathan Tibballs,³ Tim Meyer,³ David W. Patch,¹ Andrew K. Burroughs¹

¹Liver Transplantation and Hepatobiliary Medicine Unit, Royal Free Hospital, Pond Street, NW3 2QG, London, UK
²Department of Radiology, Royal Free Hospital, Pond Street, NW3 2QG, London, UK
³Department of Oncology, Royal Free Hospital, Pond Street, NW3 2QG, London, UK

The dark side of the guidelines

European Journal of Cancer (2013) 49, 1509–1510



Available at www.sciencedirect.com

SciVerse ScienceDirect

journal homepage: www.ejcancer.info



Letter to the Editor

Transarterial chemoembolisation is not superior to embolisation alone: The recent European Association for the Study of the Liver (EASL)–European Organisation for Research and Treatment of Cancer (EORTC) guidelines

Emmanuel Tsochatzis^a, Tim Meyer^b, James O’Beirne^a, Andrew K. Burroughs^{a,*}

The recent European Association for the Study of the Liver (EASL)–European Organisation for Research and Treatment of Cancer (EORTC) guidelines on hepatocellular carcinoma (HCC) state that transarterial chemoembolisation (TACE) is superior to transarterial embolisation (TAE) and should be considered as the therapy of choice.¹ Interestingly and unlike other recommendations, this was not given any grade of evidence.

However evidence exists which suggests that TACE and TAE have similar therapeutic efficacy, whilst the lat-

(evidence 1iiA; recommendation 1B)

Bland embolization is not recommended

- Internal radiation with ¹³¹I or ⁹⁰Y glass beads has shown

2013

BJC

British Journal of Cancer (2013) 108, 1252–1259 | doi: 10.1038/bjc.2013.85

Keywords: hepatocellular cancer; TACE; TAE; embolisation; RECIST

A randomised phase II/III trial of 3-weekly cisplatin-based sequential transarterial chemoembolisation vs embolisation alone for hepatocellular carcinoma

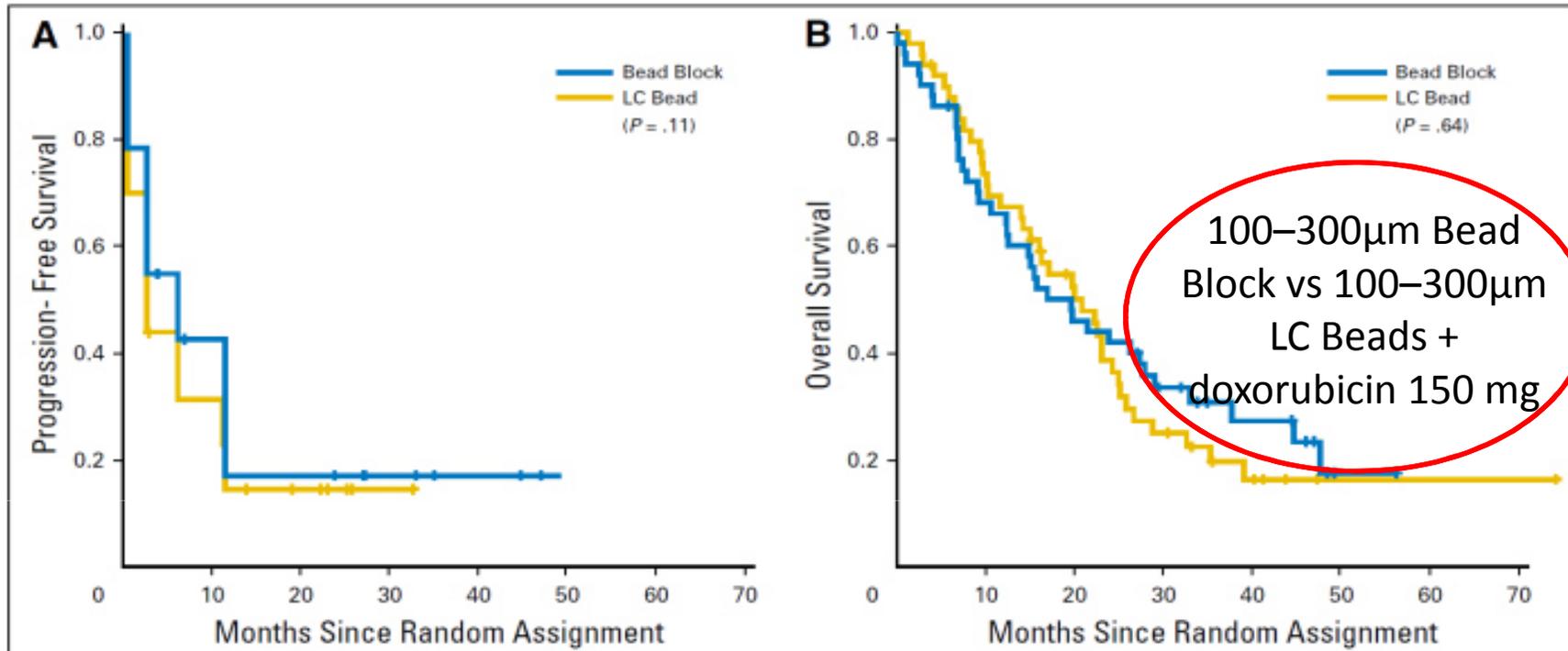
T Meyer^{*1,2}, A Kirkwood³, M Roughton³, S Beare³, E Tsochatzis⁴, D Yu⁵, N Davies⁵, E Williams³, S P Pereira⁶, D Hochhauser², A Mayer¹, R Gillmore¹, J O’Beirne⁴, D Patch⁴ and A K Burroughs⁴

¹Department of Oncology, UCL Medical School, Royal Free Campus, London NW3 2QG, UK; ²UCL Cancer Institute, 72 Huntley

The median overall survival was 16.2 versus 15.9 months in the TAE and TACE groups, respectively **without significant difference in survival, and neither in time to progression.**

Randomized phase II trial.

101 patients enrolled between December 2007 and April 2012



Conclusion

There was no apparent difference between the treatment arms. These results challenge the use of doxorubicin-eluting beads for chemoembolization of HCC.



2nd Interventional Radiologist under 40 Meeting
Interventional Oncology

JOURNAL OF CLINICAL ONCOLOGY

ORIGINAL REPORT

Randomized Trial of Hepatic Artery Embolization for Hepatocellular Carcinoma Using Doxorubicin-Eluting Microspheres Compared With Embolization With Microspheres Alone

Karen T. Brown, Richard K. Do, Mithat Gonen, Anne M. Covey, George J. Getrajdman, Constantinos T. Sofocleous, William R. Jarnagin, Michael I. D'Angelica, Peter J. Allen, Joseph P. Erinjeri, Lynn A. Brody, Gerald P. O'Neill, Kristian N. Johnson, Alessandra R. Garcia, Christopher Beattie, Binsheng Zhao, Stephen B. Solomon, Lawrence H. Schwartz, Ronald DeMatteo, and Ghassan K. Abou-Alfa



ELSEVIER

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.JournalofSurgicalResearch.com



Transarterial bland versus chemoembolization for hepatocellular carcinoma: rethinking a gold standard

Nader N. Massarweh, MD, MPH,^{a,b,*} Jessica A. Davila, PhD,^{a,c}
Hashem B. El-Serag, MD, MPH,^{a,c,d} Zhigang Duan, MD, MS,^a
Sarah Temple, BA,^a Sarah May, MS,^a Yvonne H. Sada, MD, MPH,^{a,e}
and Daniel A. Anaya, MD^f

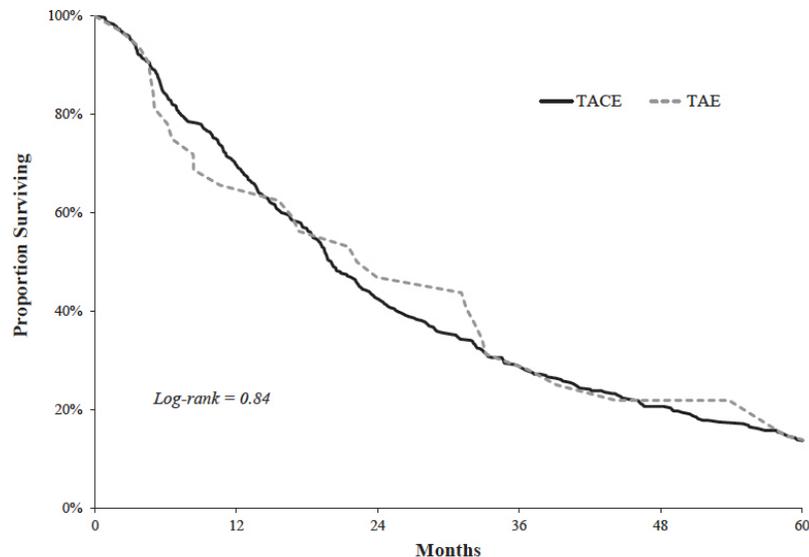


Fig. 1 – Overall survival in HCC patients by embolization type (n = 405).

A nationwide, retrospective cohort study of 405 HCC patients treated with first-line TACE or TAE within the Veterans Affairs health care system (2005-2012) was performed

Conclusions: no clear benefit associated with chemotherapy infusion over bland embolization for HCC treatment. Considering the added costs associated with TACE compared to TAE, future work comparing these competing management strategies is needed.

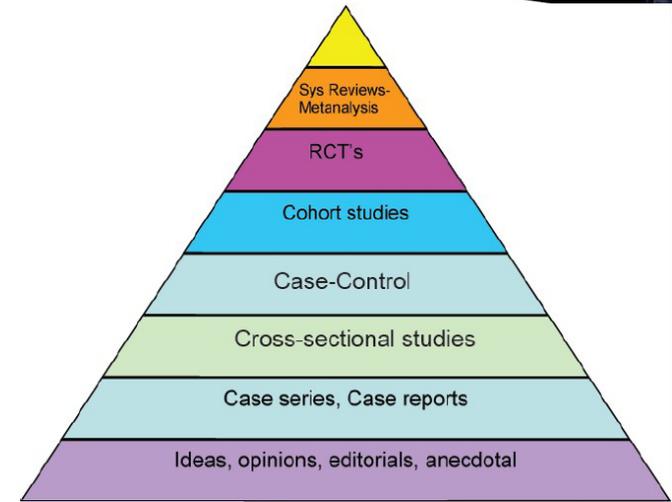
Riassumendo...

The dark side of the guidelines

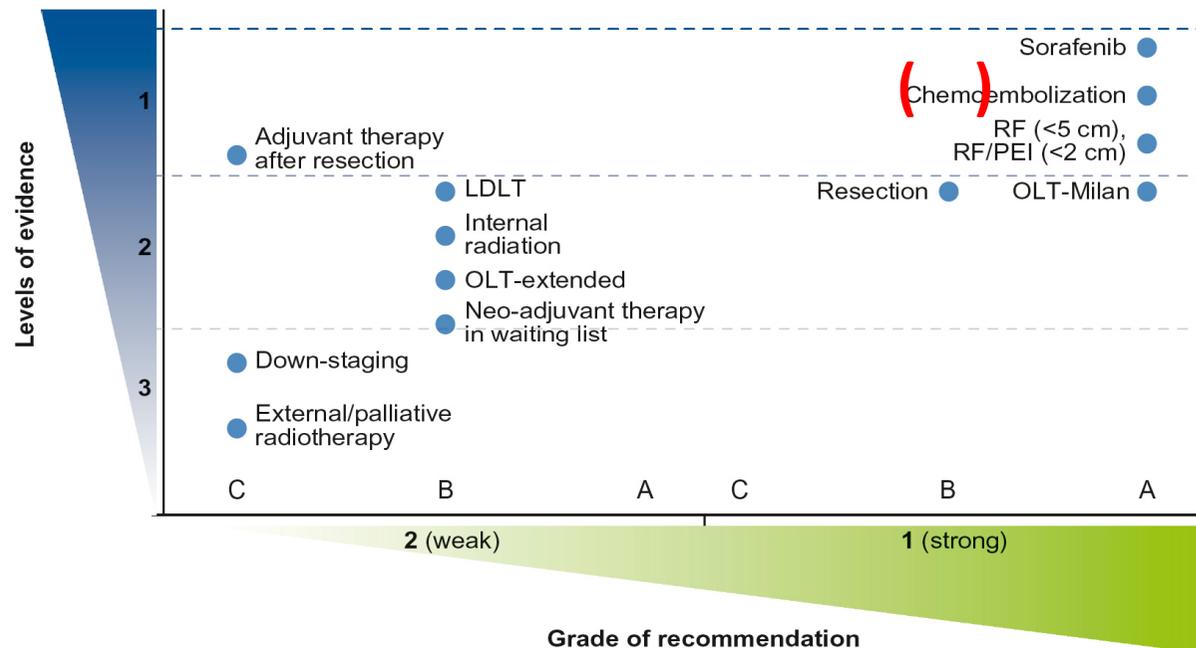
Le linee guida:

- 1) non si occupano dell'argomento (JHS 2014)
- 2) non lo affrontano direttamente (AASLD 2017)
- 3) hanno un approccio che potrebbe essere fuorviante (EASL 2012).

Almeno due metanalisi miste e due trial specifici di fase II-II/III non hanno dimostrato differenze tra i due trattamenti né in termini di LTP né OS



Non è mai stata dimostrata una inferiorità in termini di OS e LTP della TAE: quindi?



Pro TACE

Effetto sinergico tra chemioterapico ed embolizzazione
Il chemoterapico è espulso dalle pompe di membrana iperespresse nei tumori p53 driven, l'ischemia blocca il funzionamento della membrana

Pro TAE

L'insulto ischemico riduce la divisione cellulare e la sintesi di DNA che è però l'obiettivo principale della chemioterapia.

La somma di chemioterapico e agente embolizzante selezionerebbe gli epatociti maggiormente sdifferenziati, che sopportano maggiormente tempi prolungati di ischemia e sono maggiormente p53 driven

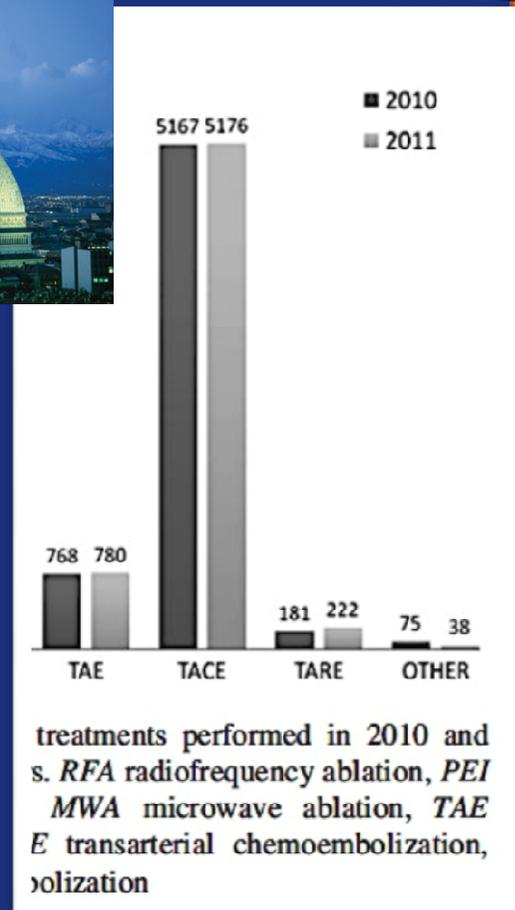
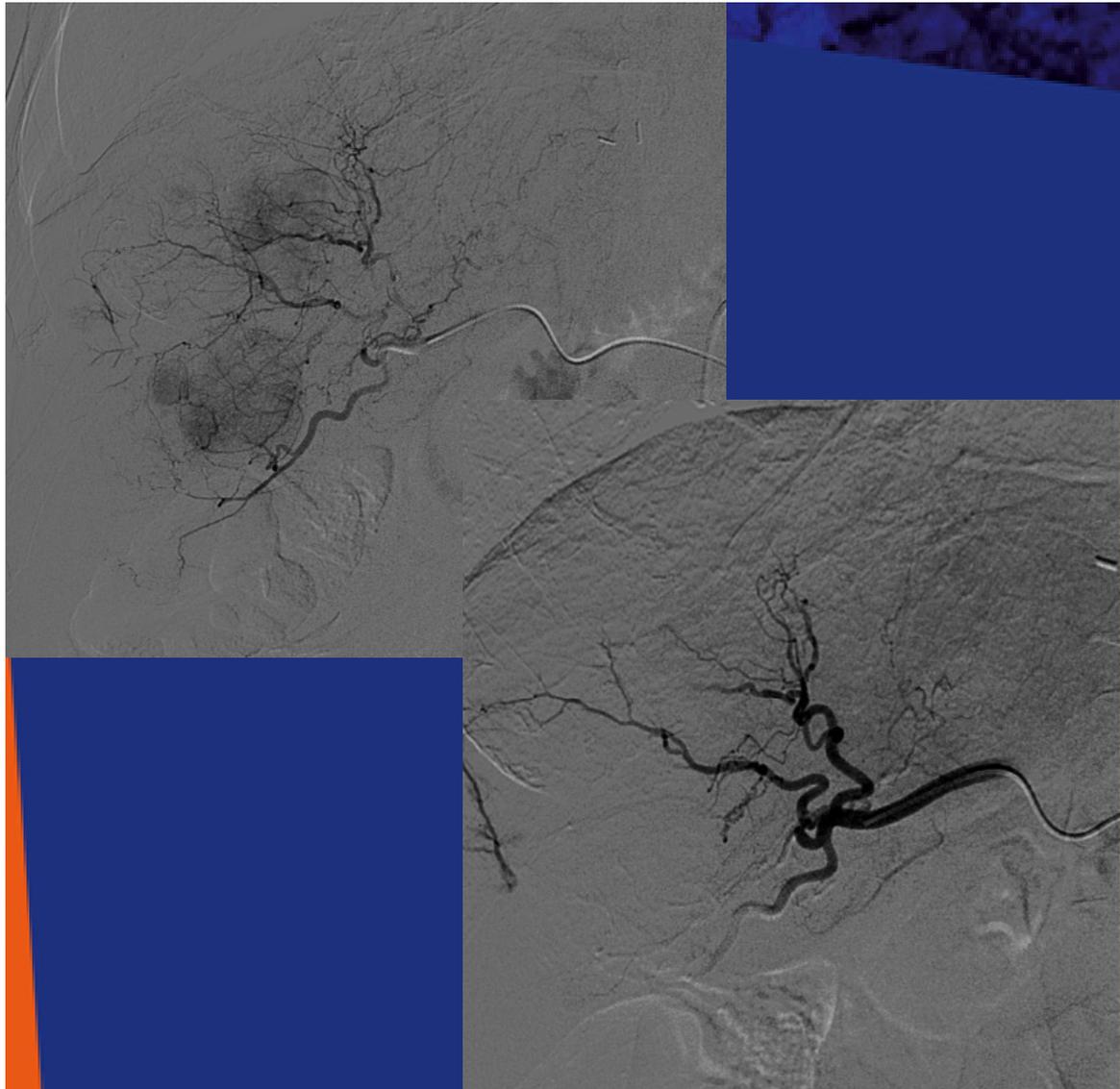
Nella somministrazione di chemoterapico una infusione un tantum senza vero ciclo o cadenza ha dal punto di vista oncologico dei limiti.



Una corretta tecnica di esecuzione e le dimensioni ridotte e omogenee delle particelle, permettono una migliore embolizzazione distale sino ai sinusoidi portali, via preferenziale per satellitosi e invasione portale

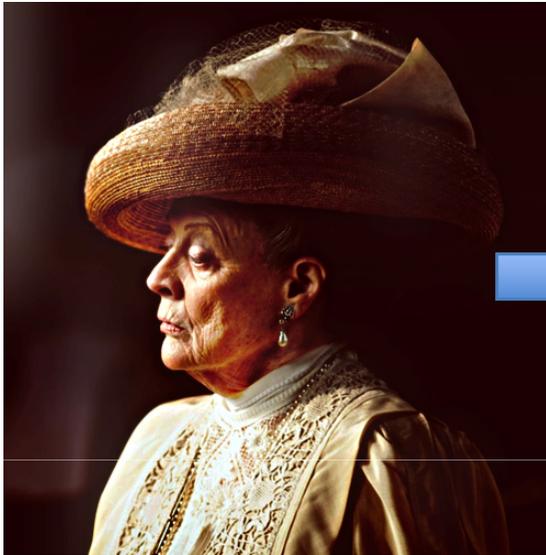
Humanas actiones non ridere, non lugere, neque detestari, sed intelligere" le azioni umane non vanno derise, compiante o detestate, ma capite ***B. Spinoza***

The dark side of the guidelines



Humanas actiones non ridere, non lugere, neque detestari, sed intelligere" le azioni umane non vanno derise, compiante o detestate, ma capite **B. Spinoza**

In conclusion...



Further RCTs needed...



The dark side of the guidelines

la linea guida

*“Non chiedete cosa il ~~vostro paese~~ può fare per voi,
chiedete cosa potete fare voi per il ~~vostro paese~~”*

la linea gui

2nd Interventional Radiologist under 40 Meeting
Interventional Oncology

The dark side of the guidelines
2nd Interventional Radiology under 40 Meeting
Interventional Oncology

UNDER 40

OVER 40

Bologna
8-10 Maggio 2017
Società Medica Chirurgica - Palazzo dell'Archiginnasio

Save the date

The dark side of the guidelines

