Organização
Dr. Hugo Gouveia – INCA - RIVOA
Dr. José Hugo Luz – INCA - RIVOA
Dr. Raphael Braz Levigard – RIVOA

31 mar e 1 abr
3º SRio 2023
Simpósio de Radiologia Intervencionista em Oncologia
Hotel Prodigy Santos Dumont • RJ

Controvérsias na metástase hepática colorretal

Ressecção em vigência de progressão

Orlando Jorge M. Torres
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Cirurgia do Aparelho Digestivo
Unidade Hepatopancreatobiliar
Universidade Federal do Maranhão - Brasil

52a, F, adenocarcinoma de reto superior/médio

Metástase hepática

KRAS mutado, EM

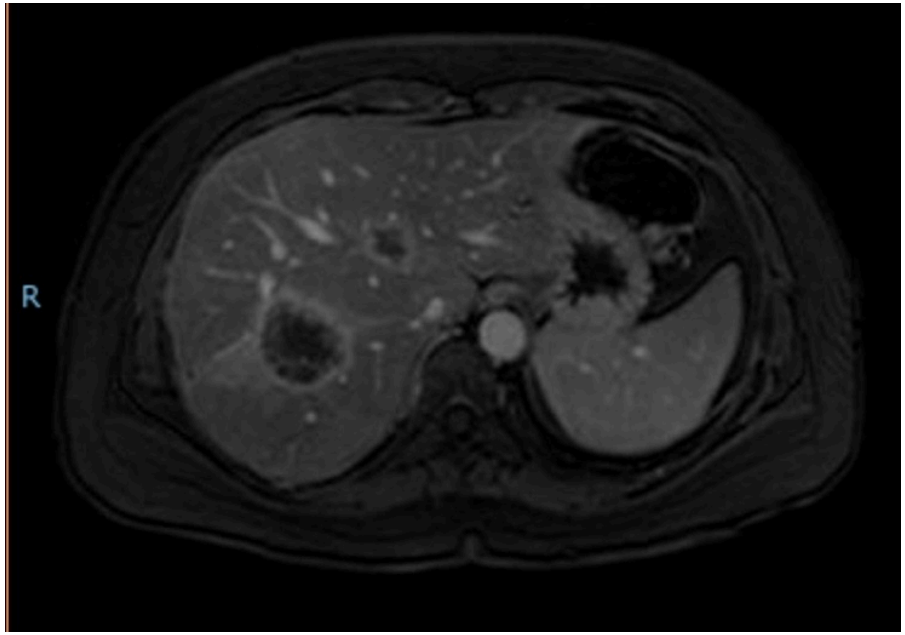
CEA 1.314; CA 19-9 1.608

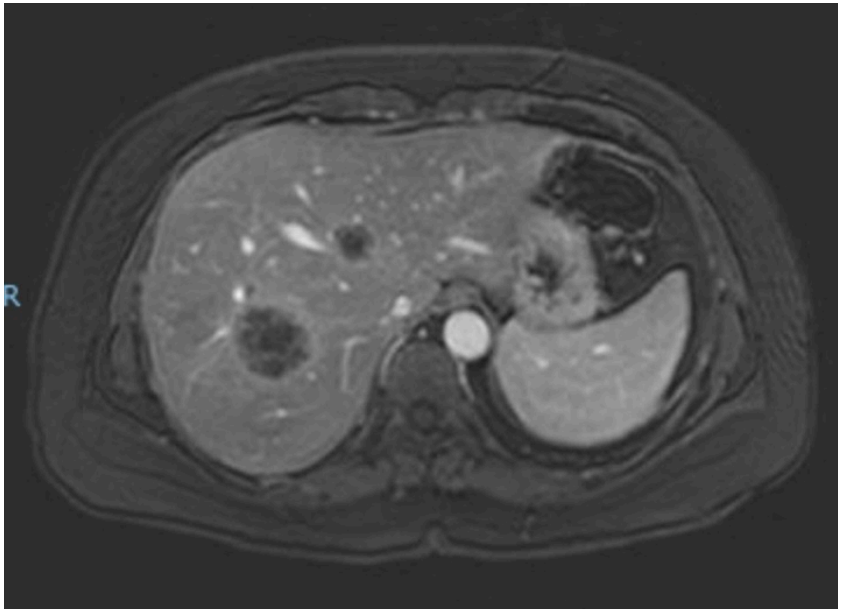
RNM (09/2019):

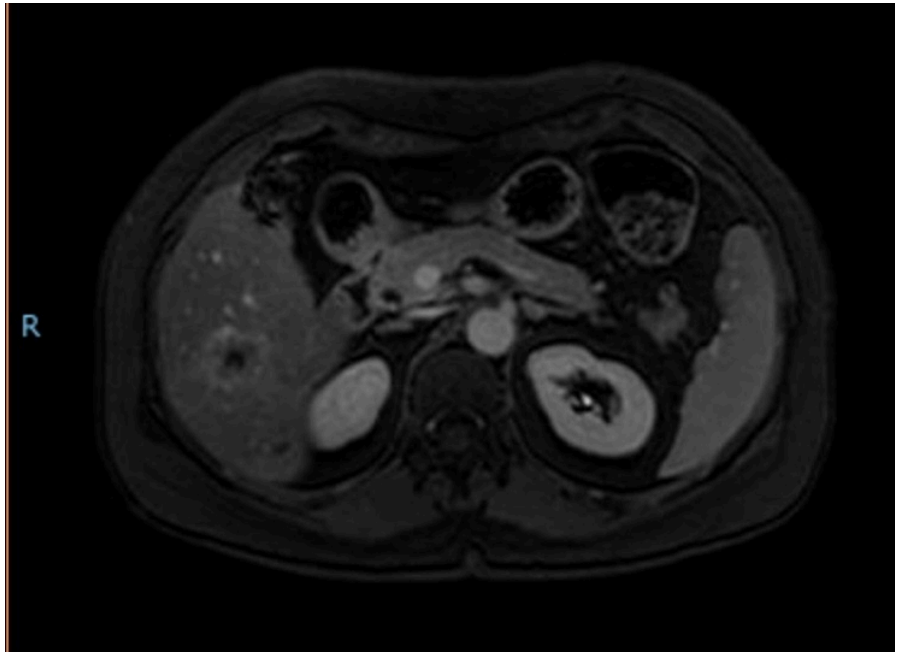
V/VI (3,0 cm)

VII (4,3 cm)

VIII/IV (2,0 cm)







Ressonância magnética (09/2019)

52a, F, adenocarcinoma de reto superior/médio

Quimioterapia:

2x FOLFOX (outro hospital)

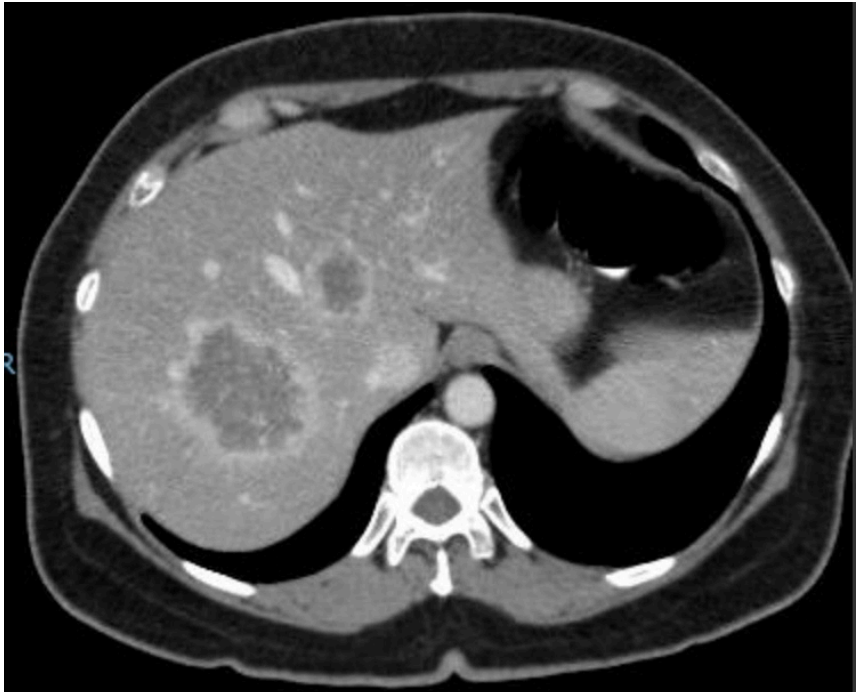
6x FOLFIRINOX + BEVACIZUMAB

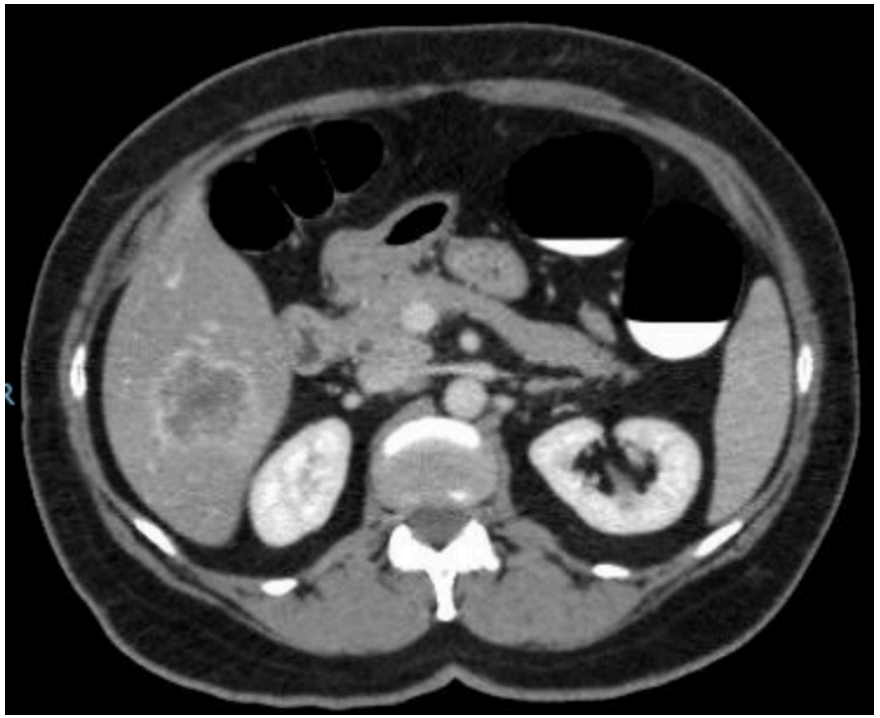
TC (12/19):

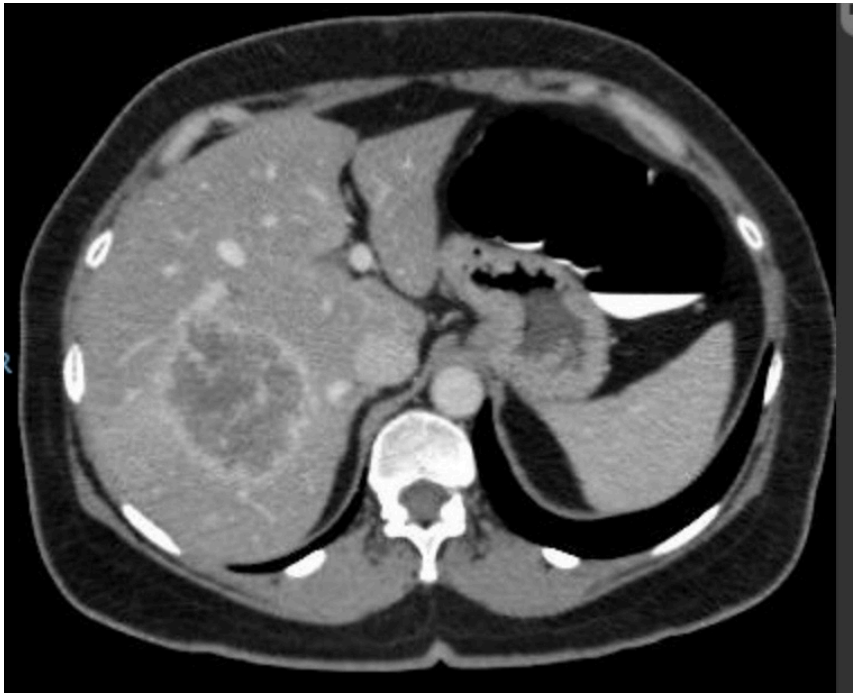
VI/VII (6,8x5,9cm)

VI(4,1x3,8cm)

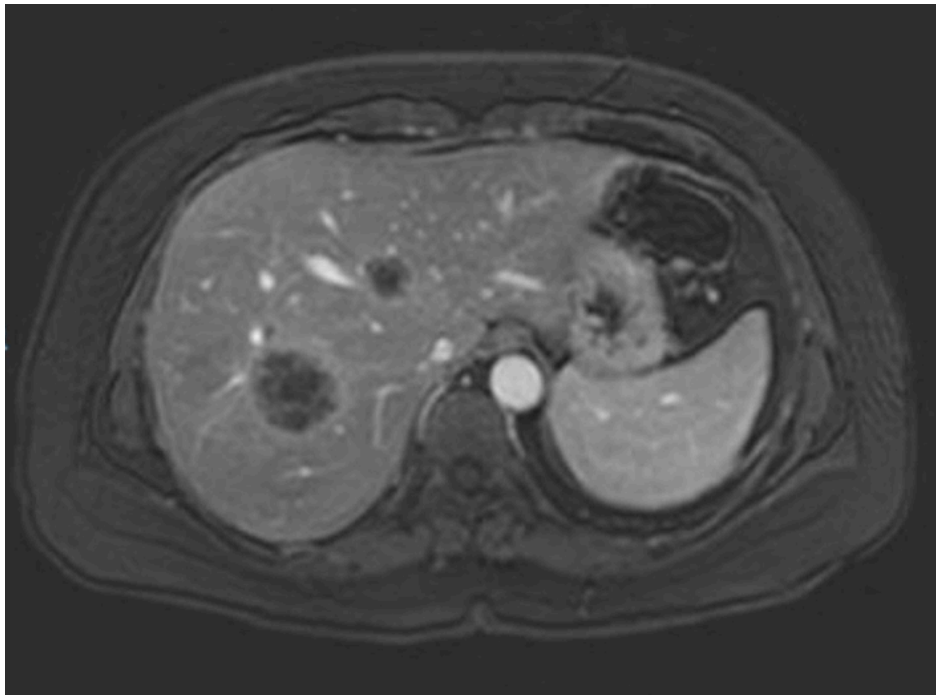
IV(3,5x2,6cm)



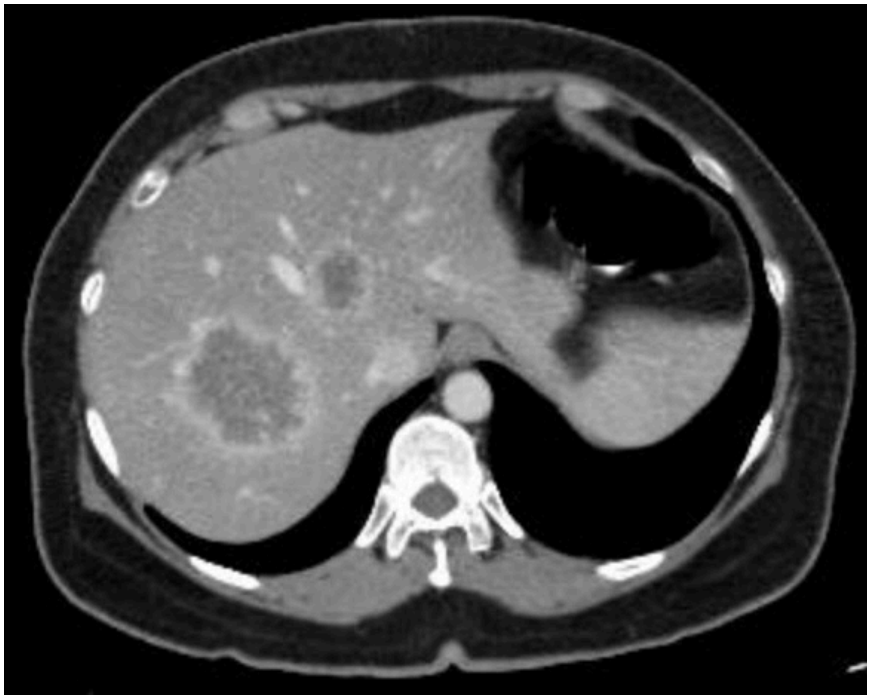




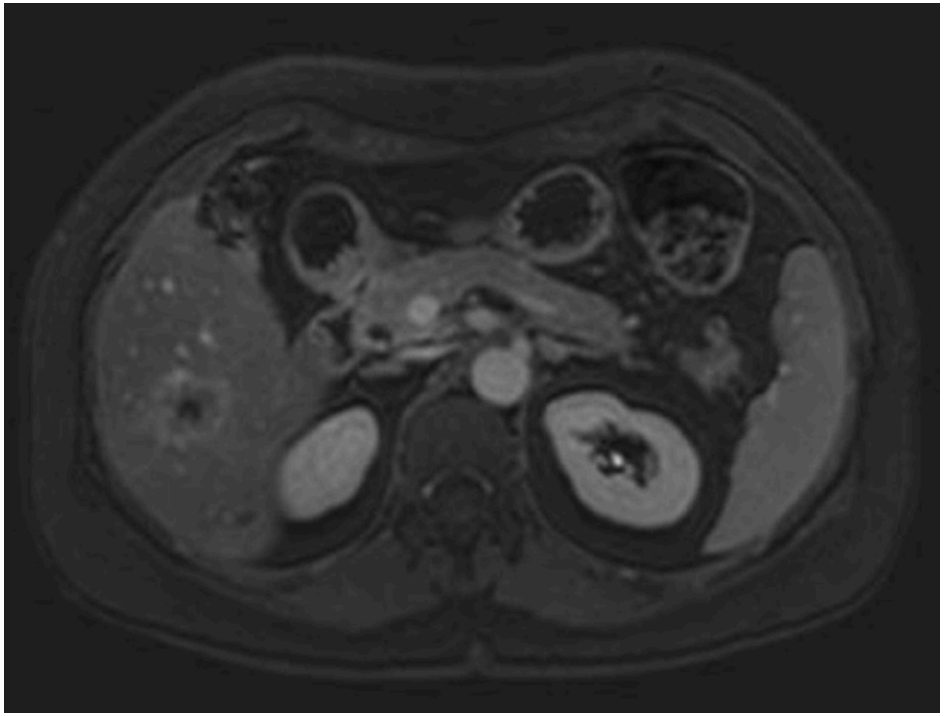
Tomografia (12/2019)



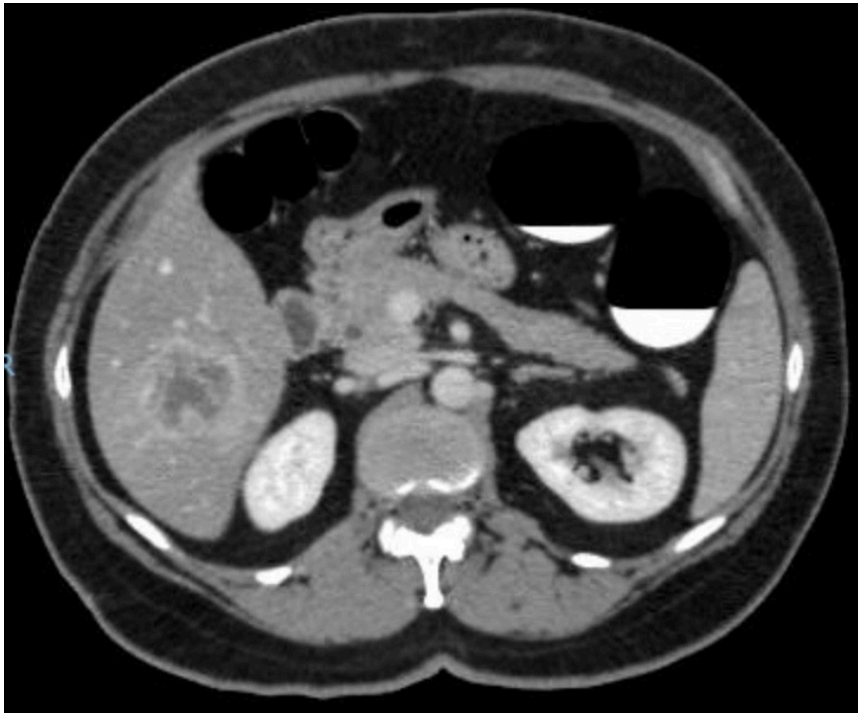
Ressonância magnética
(09/2019)



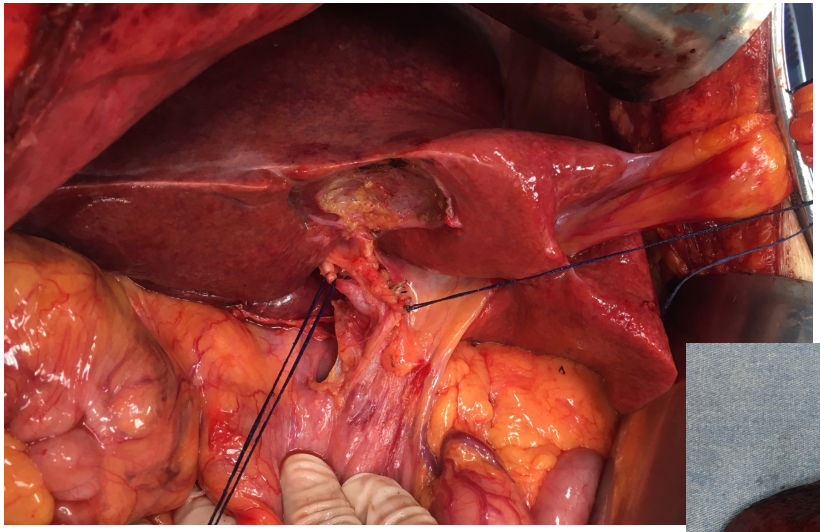
Tomografia
(12/2019)

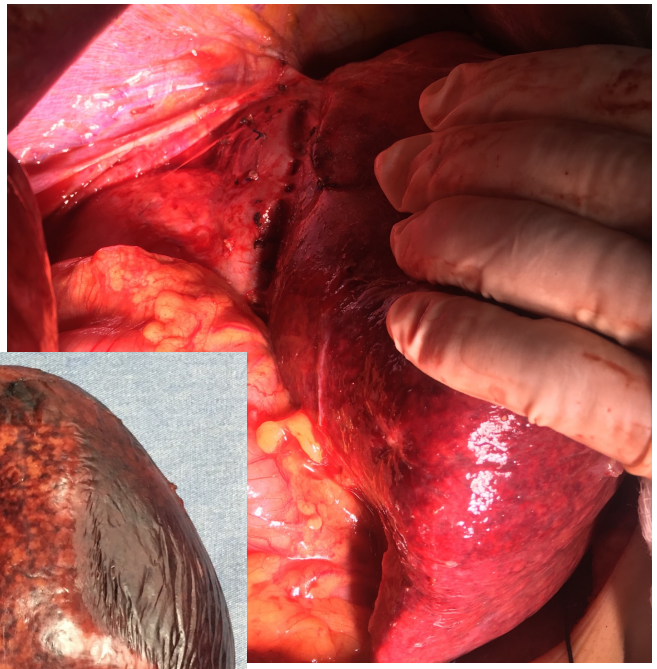


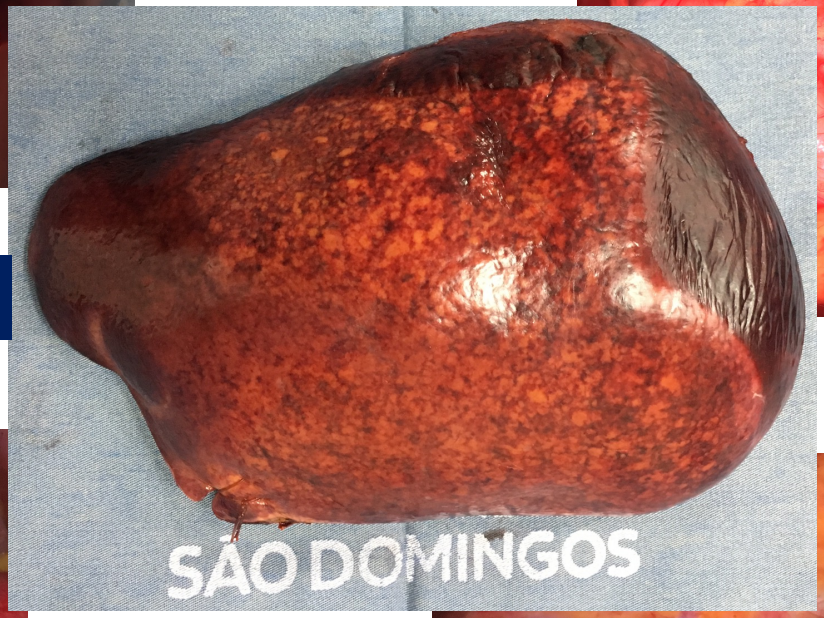
Ressonância magnética
(09/2019)



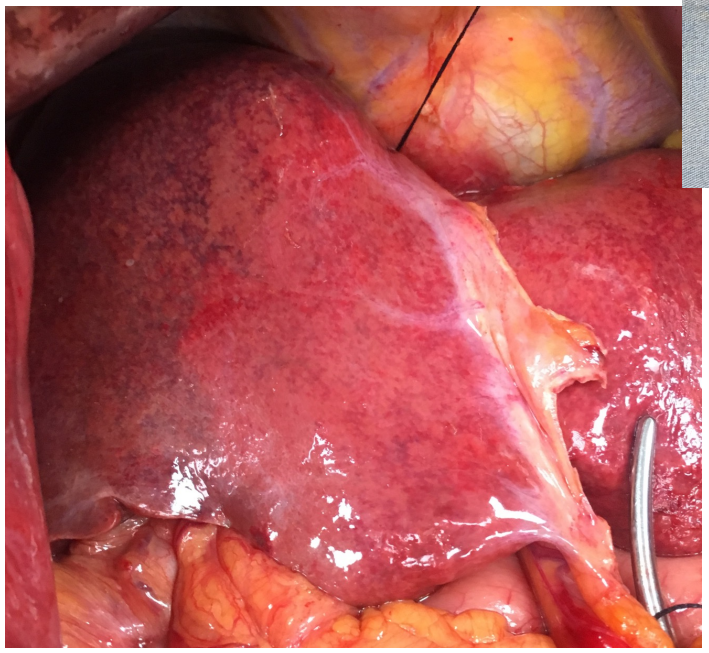
Tomografia
(12/2019)

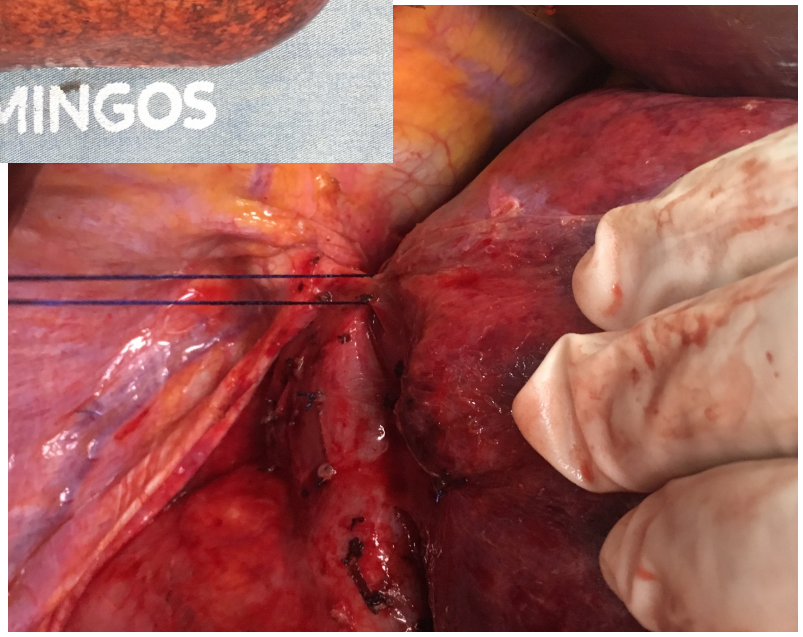






Hepatectomia 01/2020





52a, F, adenocarcinoma de reto superior/médio

Quimioterapia:

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6x FOLFIRINOX + BEVACIZUMAB

TC (12/19):

VI/VII (6,8x5,9cm)

VI(4,1x3,8cm)

IV(3,5x2,6cm)

Recidiva hepática

Doença pulmonar em 2021

Óbito em 9/2022

Editorial

Perioperative chemotherapy and hepatic resection for resectable colorectal liver metastases

- Vantagens:
  - Resposta à quimioterapia
  - Ação sobre as micrometástases
  - Reduzir o tamanho da lesão
- Desvantagens:
  - Progressão para irressecável
  - Toxicidade da quimioterapia
  - Lesões que desaparecem

Beppu T, et al. HepatoBiliary Surg Nutr 2015;4(1):72-75

Ono *et al. World Journal of Surgical Oncology* (2021) 19:97
https://doi.org/10.1186/s12957-021-02210-9

World Journal of Surgical Oncology

RESEARCH Open Access

Efficacy of upfront hepatectomy without neoadjuvant chemotherapy for resectable colorectal liver metastasis

Retrospectivo
88 pacientes
Quimioterapia: 58
Up front: 30

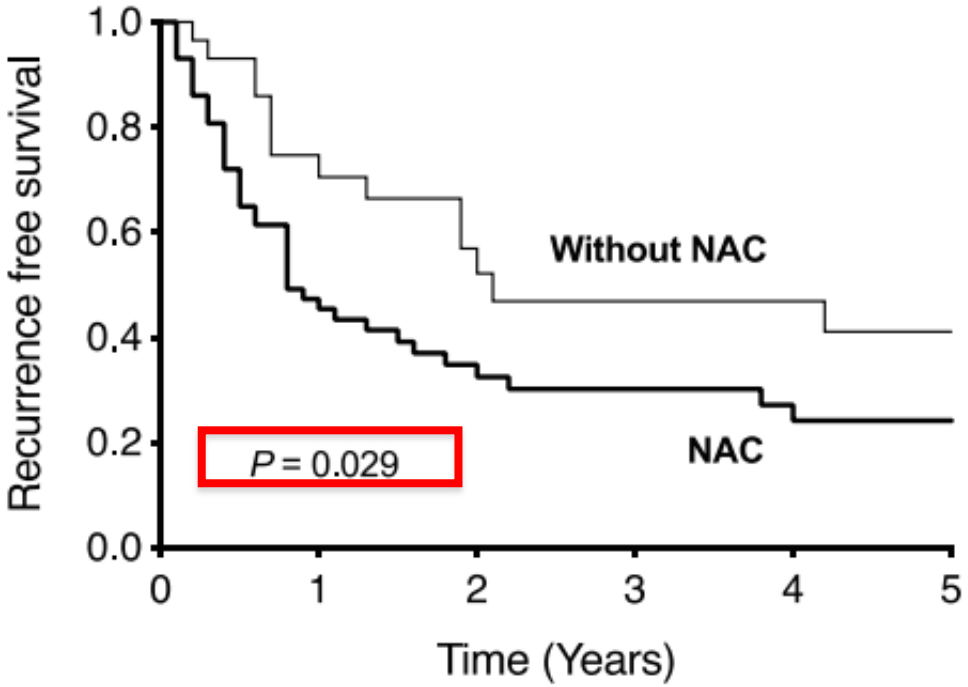
Ono K, et al. World J Surg Oncol 2021;19(1):97

Ono et al. World Journal of Surgical Oncology (2021) 19:97
https://doi.org/10.1186/s12957-021-02210-9

World Journal of Surgical Oncology

RESEARCH Open Access

Efficacy of upfront hepatectomy without neoadjuvant chemotherapy for resectable colorectal liver metastasis

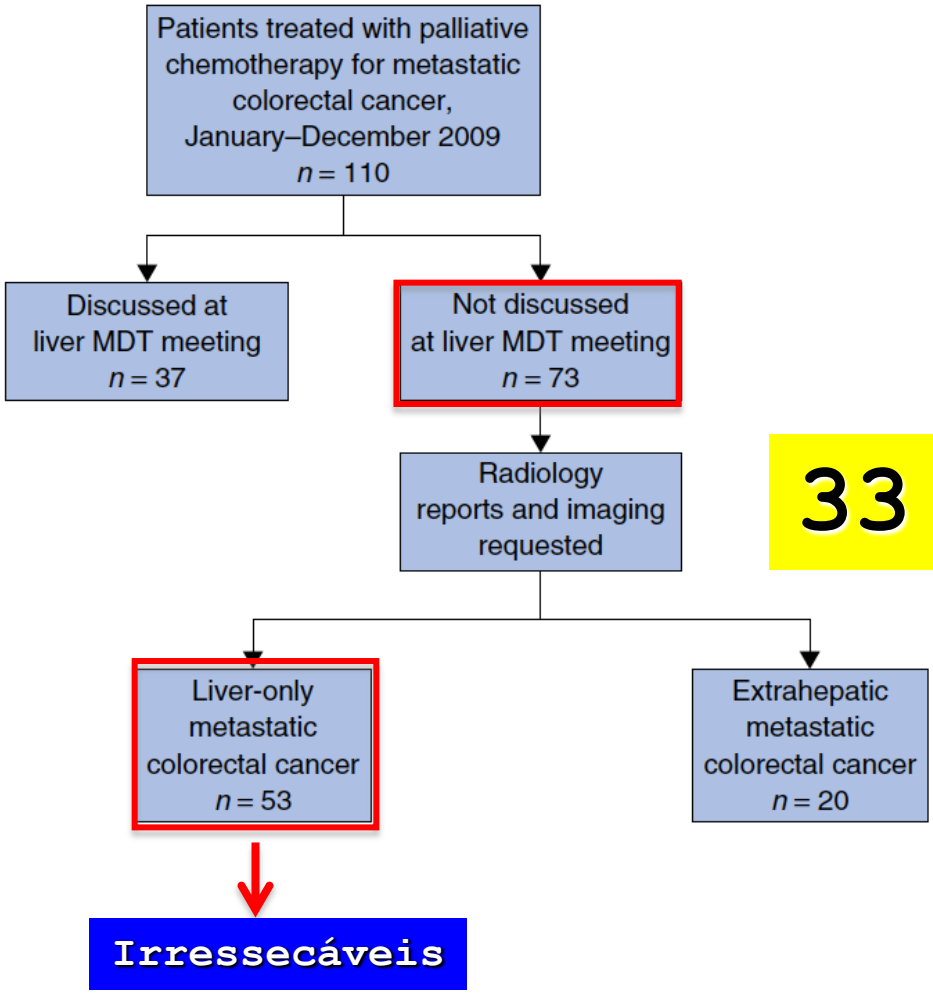


Conclusions: Our results show that upfront hepatectomy without neoadjuvant chemotherapy can be considered for resectable CRLM treatment.

Original article

AVALIAR RESSECABILIDADE

Effect of specialist decision-making on treatment strategies for colorectal liver metastases



52 pacientes

6 cirurgiões de fígado

33 (63%)

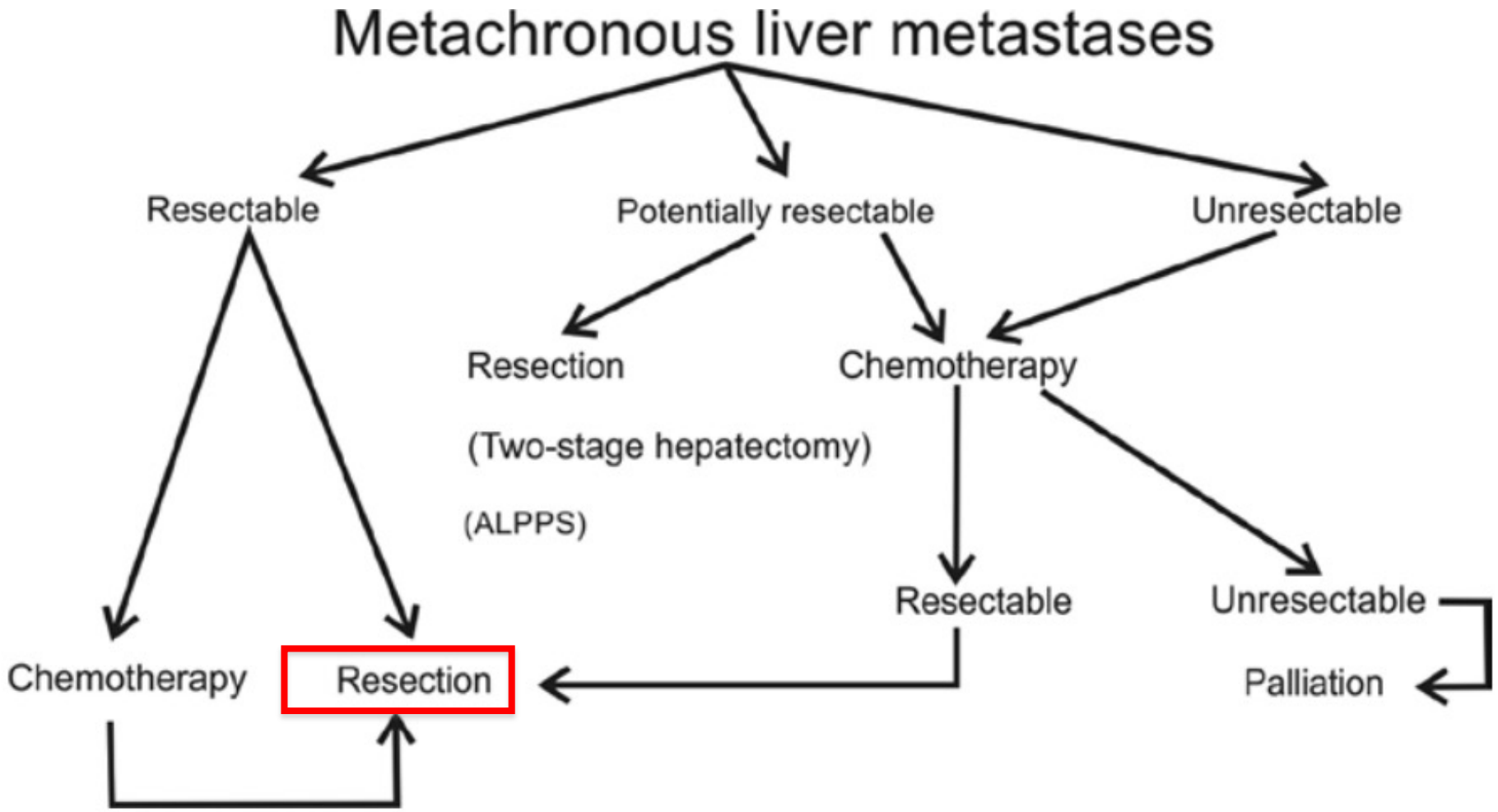
5 (10%)

Irressecáveis

RESSECÁVEIS

Jones RP, et al – Br J Surg 2012;99:1263–9

METÁSTASE METACRÔNICA



Torres OJ, et al. In Correa MM, Springer 2020

Choices of Therapeutic Strategies for Colorectal Liver Metastases Among Expert Liver Surgeons

A Throw of the Dice?

Povilas Ignatavicius, MD, Christian E. Oberkofler, MD,* William C. Chapman, MD,†*
Ronald P. DeMatteo, MD,‡ Bryan M. Clary, MD,§ Michael I. D'Angelica, MD,¶ Kenneth K. Tanabe, MD,||
*Johnny C. Hong, MD,** Thomas A. Aloia, MD,†† Timothy M. Pawlik, MD, MPH, PhD,‡‡*
Roberto Hernandez-Alejandro, MD,§§ Shimul A. Shah, MD,¶¶ Jean-Nicolas Vauthey, MD,††
*Guido Torzilli, MD,|||| Hauke Lang, MD,*** Pål-Dag Line, MD, PhD,††† Olivier Soubrane, MD,‡‡‡*
Hugo Pinto-Marques, MD,§§§ Ricardo Robles-Campos, MD,¶¶¶ Karim Boudjema, MD,||||||
*Peter Lodge, MD,**** René Adam, MD,†††† Christian Toso, MD,‡‡‡‡ Alejandro Serrablo, MD, PhD,§§§§*
Luca Aldrighetti, MD,¶¶¶¶ Michelle L. DeOliveira, MD, Philipp Dutkowski, MD,* Henrik Petrowsky, MD,**
Michael Linecker, MD, Cäcilia S. Reiner, MD,|||||||| Julia Braun, PhD,***** Ruslan Alikhanov, MD,†††††*
Giedrius Barauskas, MD,‡‡‡‡‡ Albert C. Y. Chan, MS,§§§§§ Jiahong Dong, MD,¶¶¶¶¶
*Norihiro Kokudo, MD,||||||||| Masakazu Yamamoto, MD,****** Koo Jeong Kang, MD,††††††*
Yuman Fong, MD,‡‡‡‡‡‡ Mohamed Rela, MD,§§§§§§ Xabier De Aretxabala, MD,¶¶¶¶¶¶
*Eduardo De Santibañes, MD, PhD,|||||||||| Miguel Ángel Mercado, MD,******* Oscar C. Andriani, MD,†††††††*
Orlando Jorge M. Torres, MD,‡‡‡‡‡‡‡ Antonio D. Pinna, MD,§§§§§§§ and Pierre-Alain Clavien, MD, PhD✉*

Ignatavicius P, et al — Ann Surg 2020;41:729–41

TABLE 1. Agreement (Percentage) Among Experts for Each Clinical Case

	1*	2*	3*	4*	5	6	7	8	9	10
Resectability (Yes/No)	100	100	100	100	95	95	97	84	89	63
Initial treatment (surgery, chemotherapy)	53	84	97	97	82	86	58	83	86	68
Approach (open, minimally invasive)	71	63	58	46	92	89	95	94	100	96
Portal vein embolization (Yes/No)	92	100	79	100	89	68	95	75	57	52
Preoperative volumetry (Yes/No)	71	97	66	95	79	57	84	56	81	67
Type of surgery (2-stage, 1-stage)	100	100	95	100	89	62	92	62	44	44
Type of resection (anatomical, parenchyma sparing)	47	82	47	61	81	49	51	56	79	60
Ablation in combination with resection (Yes/No)	97	97	76	92	50	62	55	51	65	56

*Low complexity cases.

Ignatavicius P, et al – Ann Surg 2020;41:729–41

Annals of Oncology

Annals of Oncology 27: 1386–1422, 2016
doi:10.1093/annonc/mdw235
Published online 5 July 2016

ESMO consensus guidelines for the management of patients with metastatic colorectal cancer

Table 2. Contraindications to hepatic resection in patients with CRC liver metastases (adapted from Adam et al. [148] with permission from AlphaMed Press)

Category	Contraindication
Technical (A)	
1. Absolute	Impossibility of R0 resection with ≥30% liver remnant
	Presence of unresectable extrahepatic disease
2. Relative	R0 resection possible only with complex procedure (portal vein embolisation, two-stage hepatectomy, hepatectomy combined with ablation[a])
	R1 resection
Oncological (B)	
1.	Concomitant extrahepatic disease (unresectable)
2.	Number of lesions >5
3.	Tumour progression

Patients should be categorised as A1 or A2/B1, B2 or B3.
[a]All methods, including radiofrequency ablation.

Cutsem EV, et al – Ann Oncol 2016;27: 1386–422

Original Communications

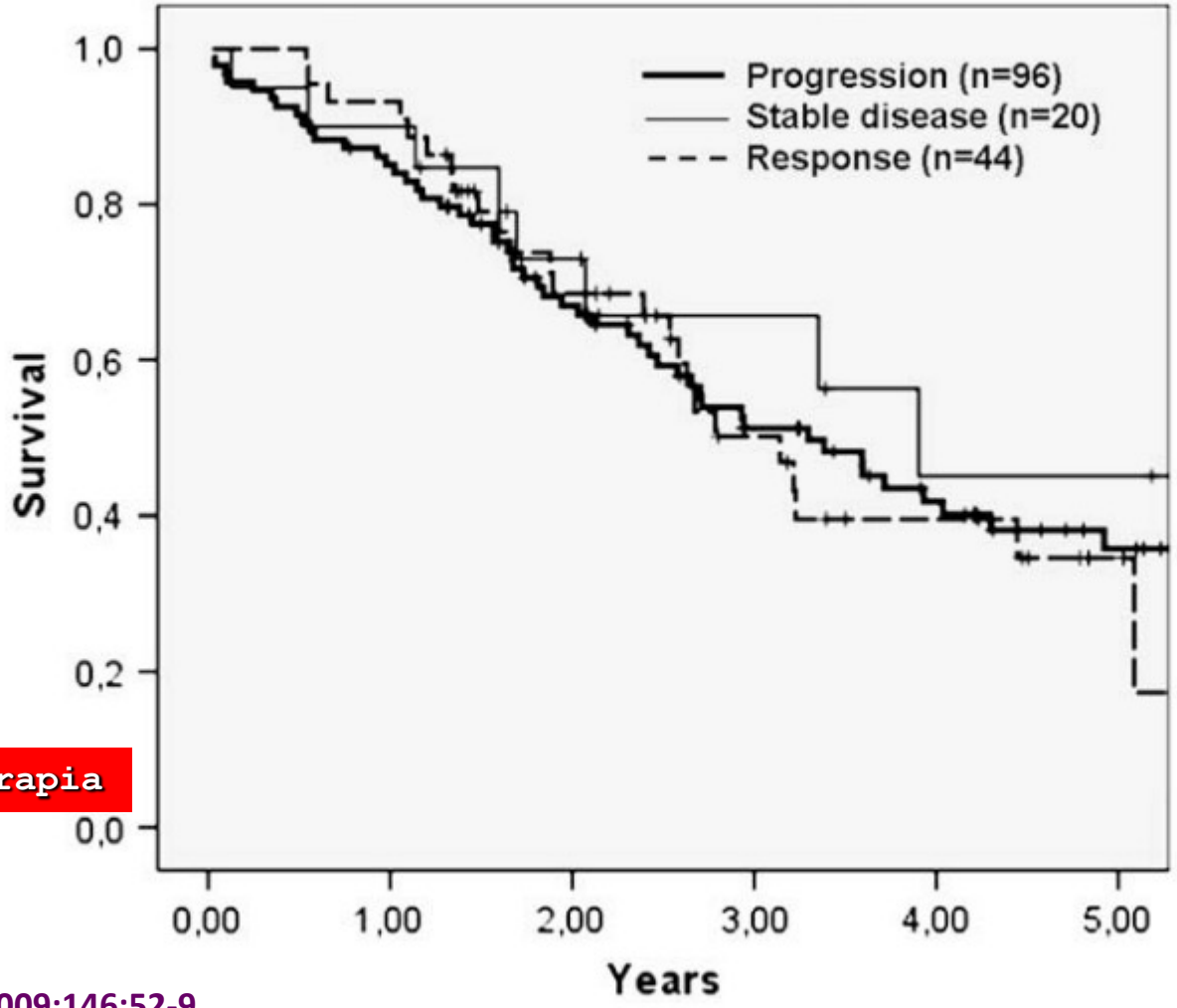
Nonresponse to pre-operative chemotherapy does not preclude long-term survival after liver resection in patients with colorectal liver metastases

Quimioterapia: 160 (FOLFOX, FOLFIRI, Terapia alvo)

Resposta	**44**	**(27,5%)**
Estável	**20**	**(12,5%)**
Progressão	**96**	**(60%)**

Neumann UP, et al. Surgery 2009;146:52-9.

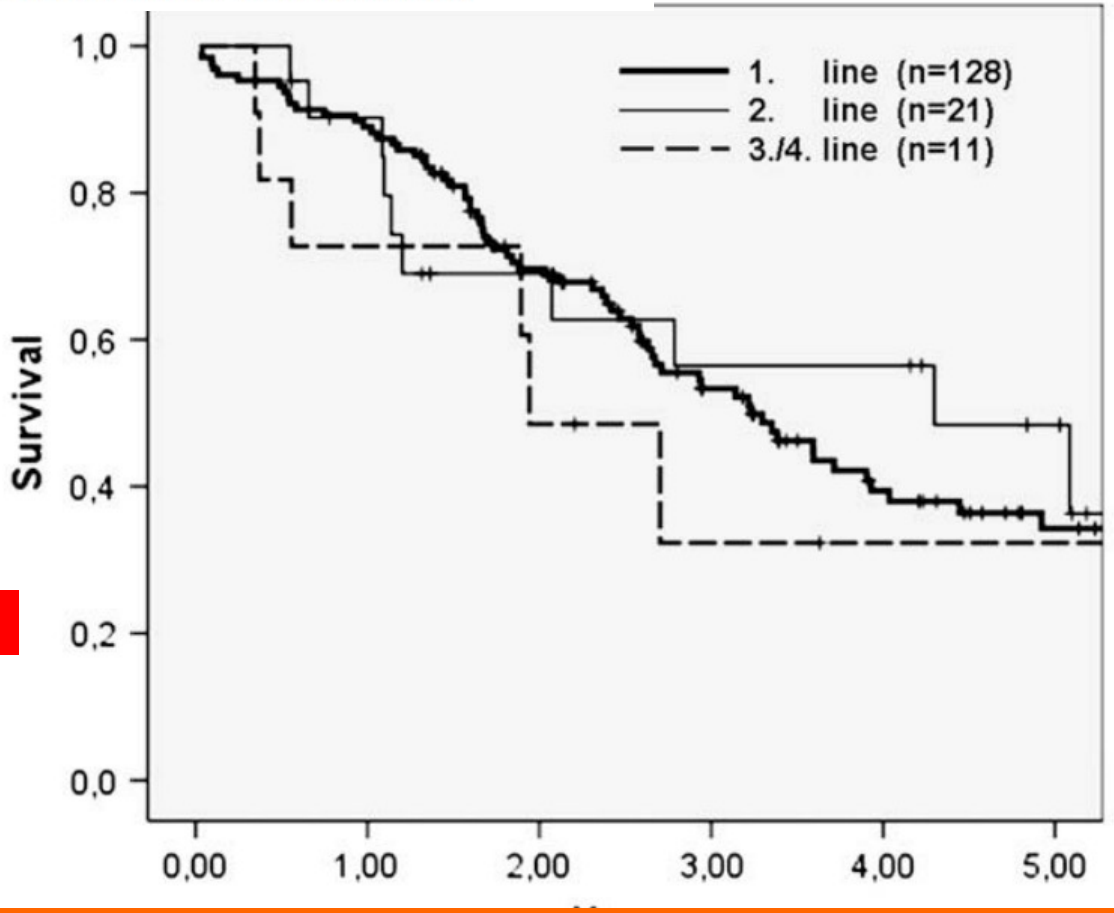
Nonresponse to pre-operative chemotherapy does not preclude long-term survival after liver resection in patients with colorectal liver metastases



❑Resposta à quimioterapia

Neumann UP, et al. Surgery 2009;146:52-9.

Nonresponse to pre-operative chemotherapy does not preclude long-term survival after liver resection in patients with colorectal liver metastases



- Tipo de quimioterapia

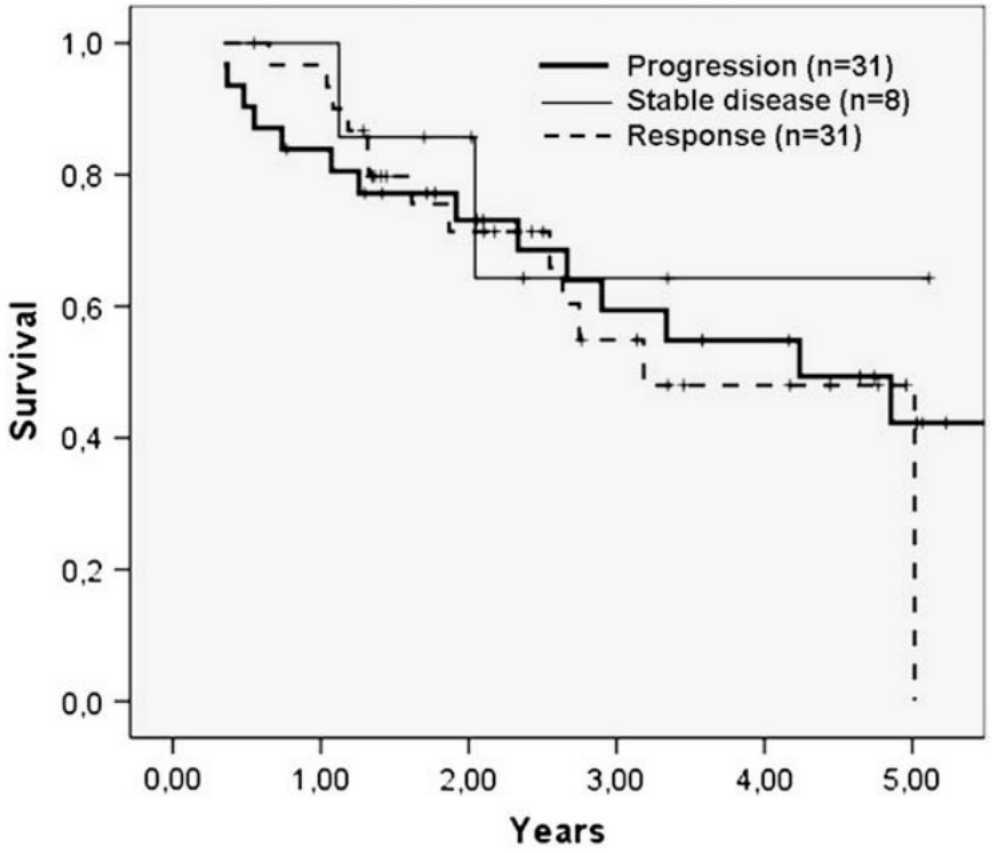
- Tumor progression while on chemotherapy had no influence on the long-term survival.

Neumann UP, et al. Surgery 2009;146:52-9.

Nonresponse to pre-operative chemotherapy does not preclude long-term survival after liver resection in patients with colorectal liver metastases

- Irinotecan
- Oxaliplatina
- Terapia alvo

- Tumor size > 50mm
- Positive margins
- Grading of the tumor
- Number of metastases
- CEA levels > 200 ng/mL



Conclusion. *Liver resection offers a long-term survival benefit for patients with CRM, even when tumor growth proceeds during pre-operative chemotherapy. (Surgery 2009;146:52-9.)*

Neumann UP, et al. Surgery 2009;146:52-9.

Is Resection of Colorectal Liver Metastases after a Second-Line Chemotherapy Regimen Justified?

Progressão

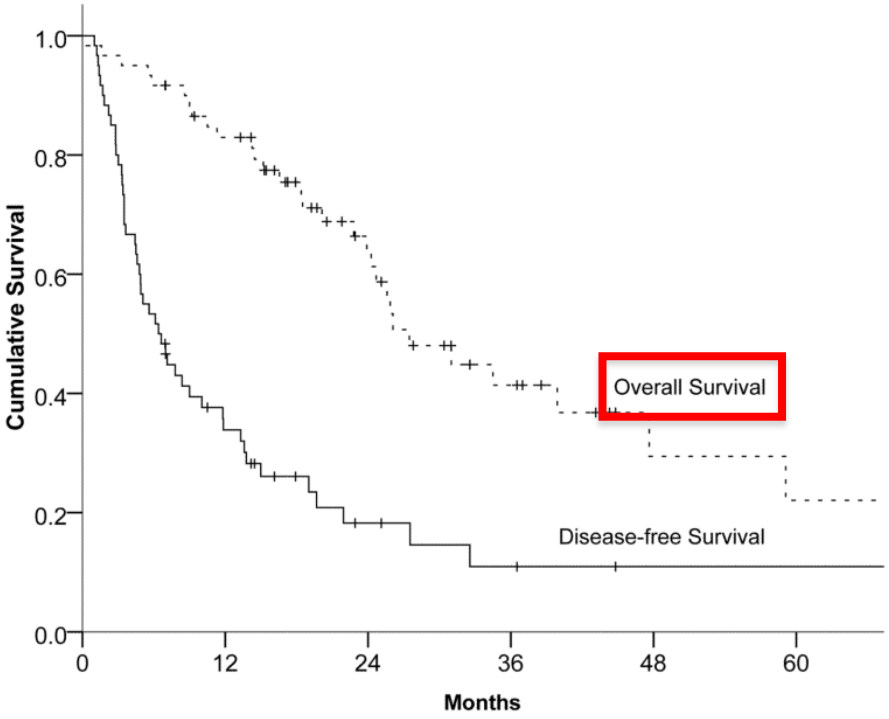
60 pacientes: 2 ou mais QT
- Oxaliplatina ou irinotecan
- Bevacizumab ou Cetuximab

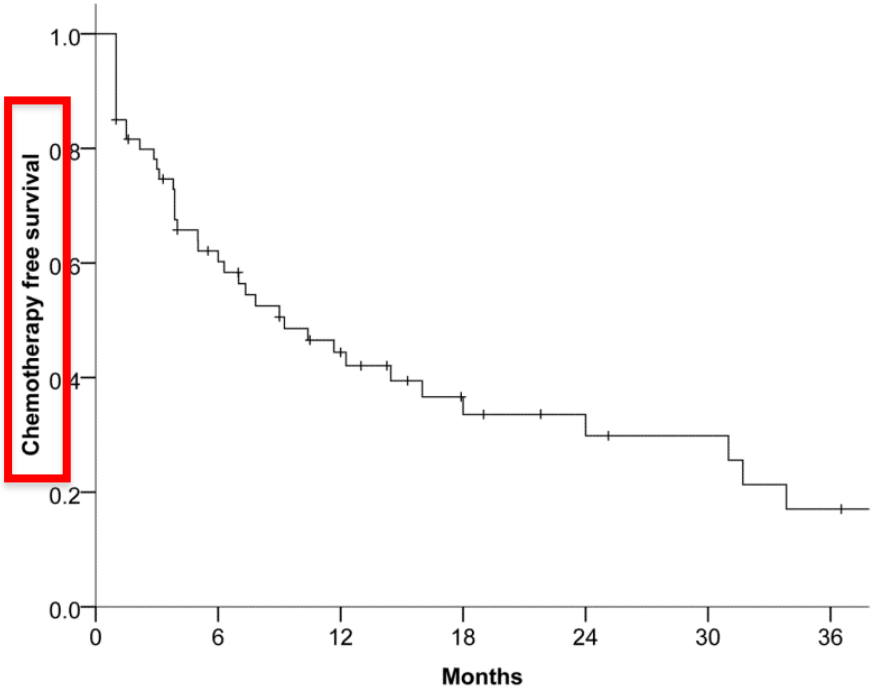
Sobrevida livre de quimioterapia
- 9 meses (4-14)
  - Ressecção
  - Quimioterapia segunda linha

Brouquet A, et al. Cancer. 2011 October 1; 117(19): 4484–4492

Is Resection of Colorectal Liver Metastases after a Second-Line Chemotherapy Regimen Justified?

Progressão





Brouquet A, et al. Cancer. 2011 October 1; 117(19): 4484–4492

Ann Surg Oncol (2012) 19:2786–2796
DOI 10.1245/s10434-012-2382-7

Annals of
SURGICAL ONCOLOGY
OFFICIAL JOURNAL OF THE SOCIETY OF SURGICAL ONCOLOGY

ORIGINAL ARTICLE – HEPATOBILIARY TUMORS

Progression while Receiving Preoperative Chemotherapy Should Not Be an Absolute Contraindication to Liver Resection for Colorectal Metastases

Progressão – 176 (8,2%)
Sem progressão – 1967 (91,8%)

Pelo menos duas linhas de QT
Fatores prognósticos:
- > 3 metastases
- > 50mm
- CEA ≥ 200

Vigano L, et al. Ann Surg Oncol (2012) 19:2786–96

Ann Surg Oncol (2012) 19:2786–2796
DOI 10.1245/s10434-012-2382-7

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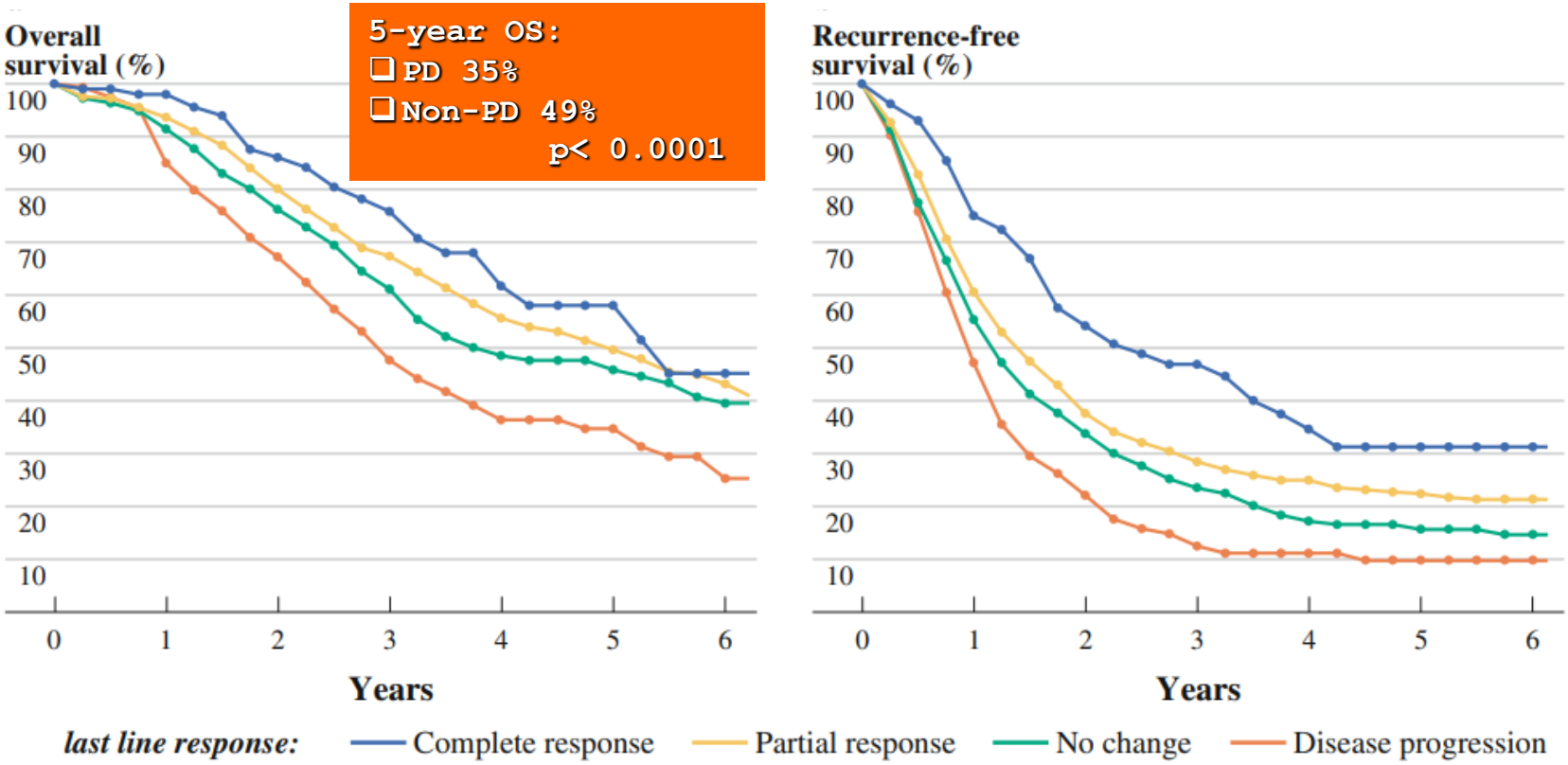

Sobrevida de acordo com a resposta

Vigano L, et al. Ann Surg Oncol (2012) 19:2786–96

Fatores prognósticos

TABLE 3 Survival predictive model in the disease progression group according to the presence of prognostic factors

No. of factors	>3 metastases	Size ≥ 50 mm	CEA ≥ 200 ng/mL[a]	Survival	
				3 years (%)	5 years (%)
0	0	0	0	60.5	53.3
1	1	0	0	38.2	29.9
	0	1	0	26.7	19.1
	0	0	1	7.9	4.1
2	1	1	0	8.0	4.2
	1	0	1	0.8	0.2
	0	1	1	0.1	0
3	1	1	1	0	0

[a] CEA value at diagnosis

❑CEA ≥ 200ng/mL

Vigano L, et al. Ann Surg Oncol (2012) 19:2786–96

European Journal of Cancer 78 (2017) 7–15

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.ejcancer.com

Original Research

Resection of colorectal liver metastases after second-line chemotherapy: is it worthwhile? A LiverMetSurvey analysis of 6415 patients

CrossMark

QT 1a Linha – 5.624
QT 1a e 2a Linha - 791

Adam R, et al. Eur J Cancer 2017;78:7-15.

European Journal of Cancer 78 (2017) 7–15

Available online at www.sciencedirect.com

ScienceDirect

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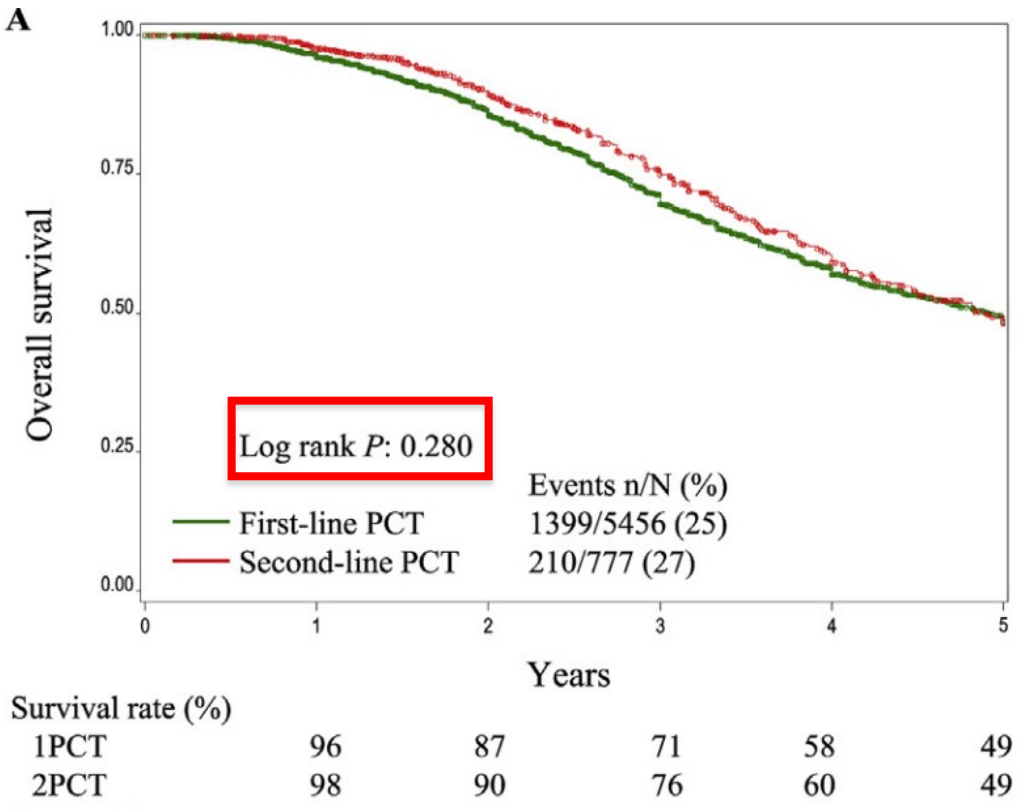
Original Research

Resection of colorectal liver metastases after second-line chemotherapy: is it worthwhile? A LiverMetSurvey analysis of 6415 patients



Do diagnóstico

Adam R, et al. Eur J Cancer 2017;78:7-15.

European Journal of Cancer 78 (2017) 7–15

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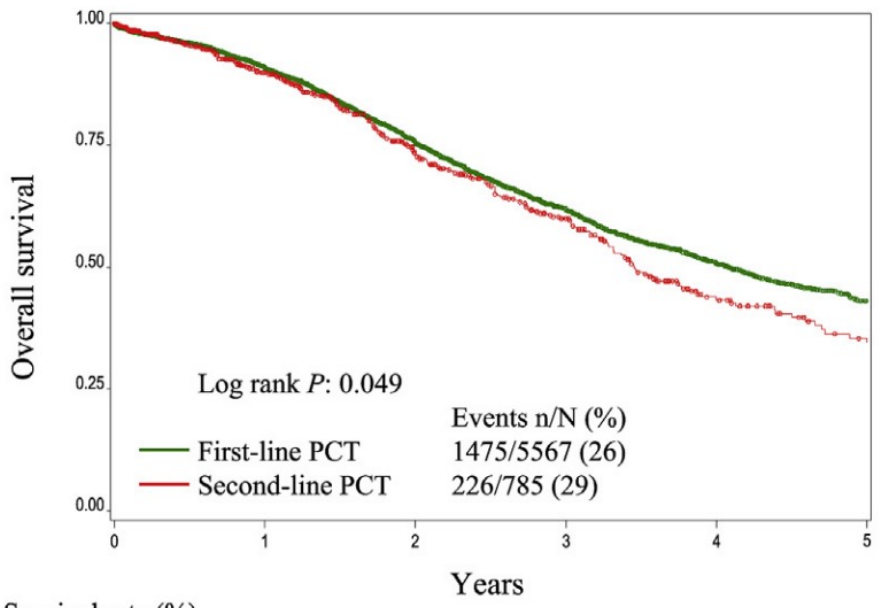
journal homepage: www.ejcancer.com

Original Research

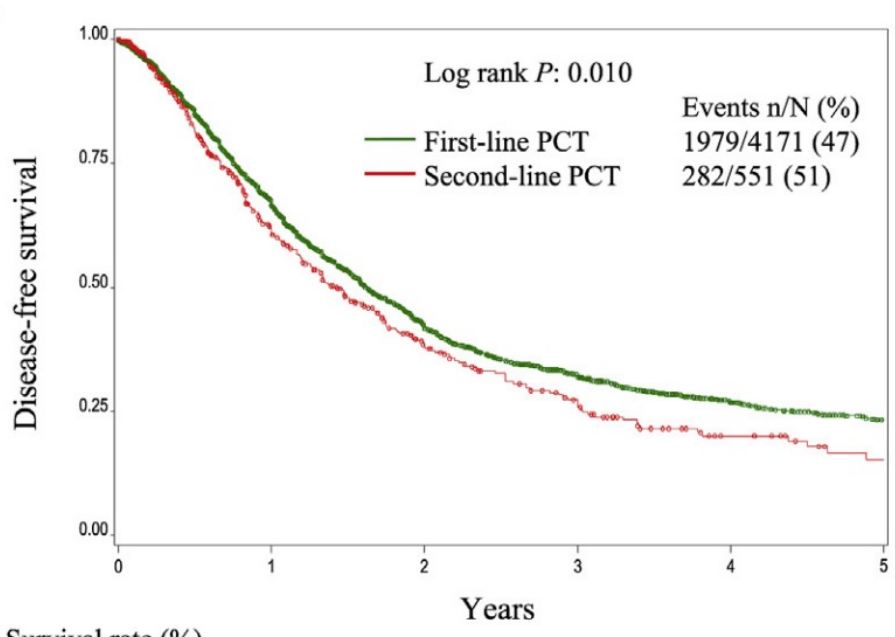
Resection of colorectal liver metastases after second-line chemotherapy: is it worthwhile? A LiverMetSurvey analysis of 6415 patients

B



Survival rate (%)					
1PCT	91	76	62	51	43
2PCT	90	74	60	43	35

D



Survival rate (%)					
1PCT	68	42	32	27	23
2PCT	62	39	27	20	15

Adam R, et al. Eur J Cancer 2017;78:7-15.

European Journal of Cancer 78 (2017) 7–15

Available online at www.sciencedirect.com

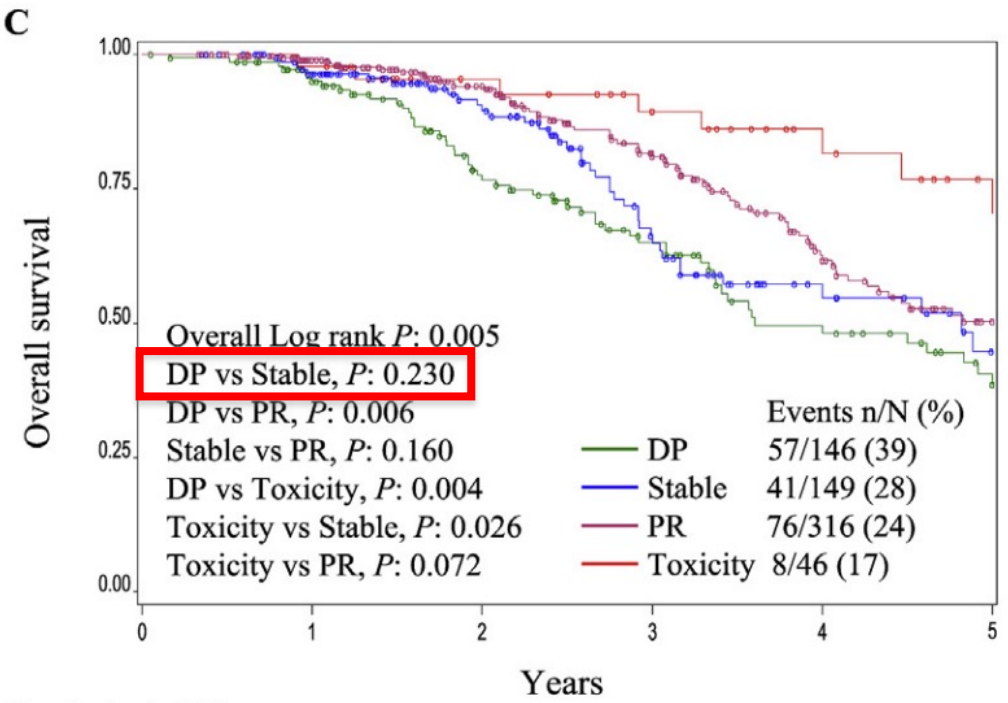
ScienceDirect

journal homepage: www.ejcancer.com

Original Research

Resection of colorectal liver metastases after second-line chemotherapy: is it worthwhile? A LiverMetSurvey analysis of 6415 patients

Indicar cirurgia



Survival rate (%)					
DP	96	78	65	50	40
Stable	96	91	66	57	45
PR	99	94	82	63	50
Toxicity	98	95	89	86	77

Adam R, et al. Eur J Cancer 2017;78:7-15.

cancers

MDPI

Article

Hepatectomy versus Chemotherapy for Resectable Colorectal Liver Metastases in Progression after Perioperative Chemotherapy: Expanding the Boundaries of the Curative Intent

Retrospectivo de base de dados prospective
Ressecável no diagnóstico
Progressão por imagem (após 4 ciclos)
Avaliação com RECIST

- ❑ Hepatectomia 27
- ❑ Quimioterapia 78

- ❑ II-line perioperative chemotherapy (HEP)
- ❑ Prosecution of chemotherapy alone

Famularo S, et al. Cancers 2023, 15, 783.

cancers

MDPI

Article

Hepatectomy versus Chemotherapy for Resectable Colorectal Liver Metastases in Progression after Perioperative Chemotherapy: Expanding the Boundaries of the Curative Intent

Sobrevida global

	1 ano	3 anos
2da linha	53,6%	10%
Cirurgia	95%	46,8%

- II-line perioperative chemotherapy (HEP)
- Prosecution of chemotherapy alone

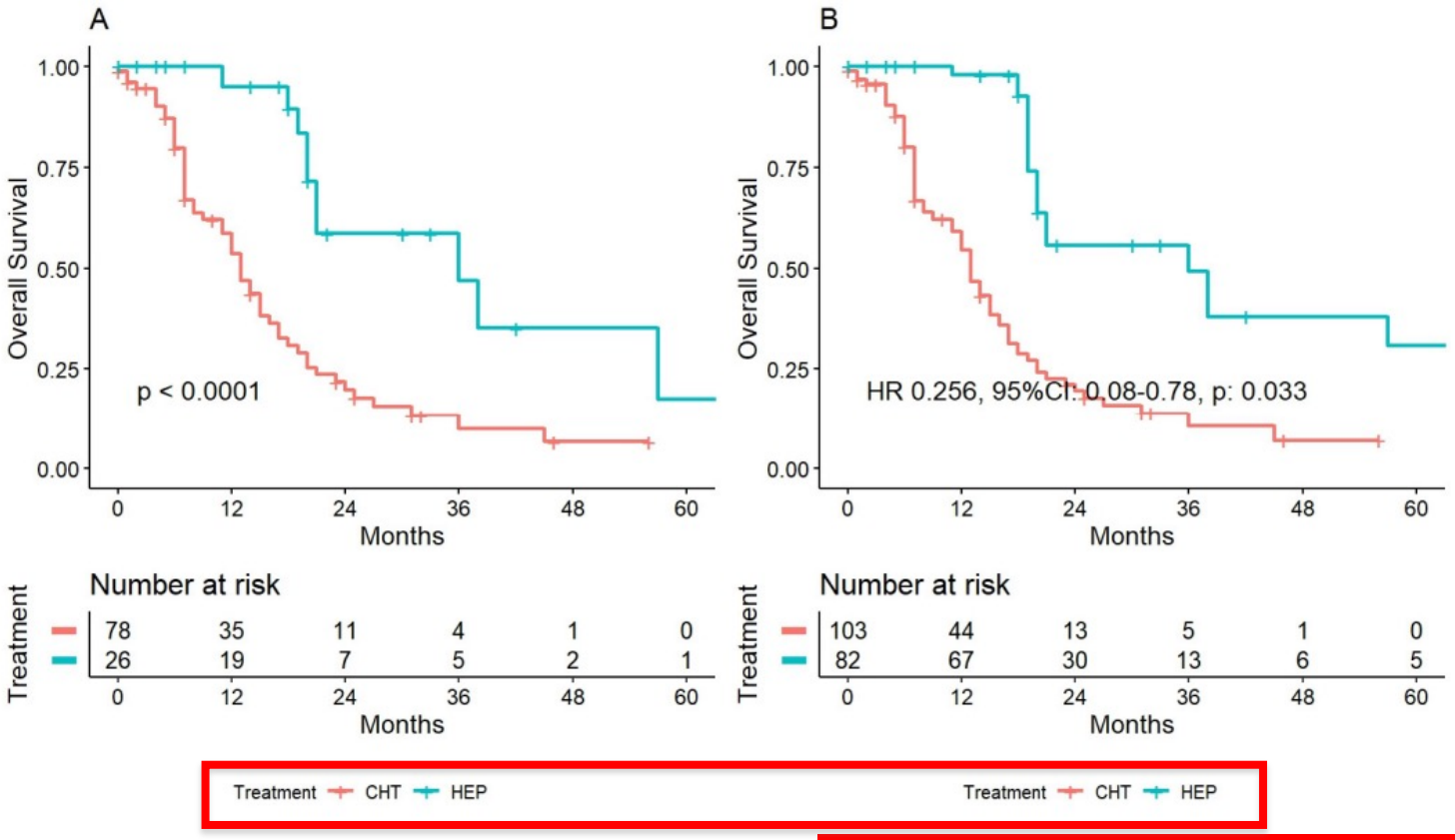
Famularo S, et al. Cancers 2023, 15, 783.

cancers

MDPI

Article

Hepatectomy versus Chemotherapy for Resectable Colorectal Liver Metastases in Progression after Perioperative Chemotherapy: Expanding the Boundaries of the Curative Intent



- II-line perioperative chemotherapy (HEP)
- Prosecution of chemotherapy alone

Famularo S, et al. Cancers 2023, 15, 783.

cancers

MDPI

Article

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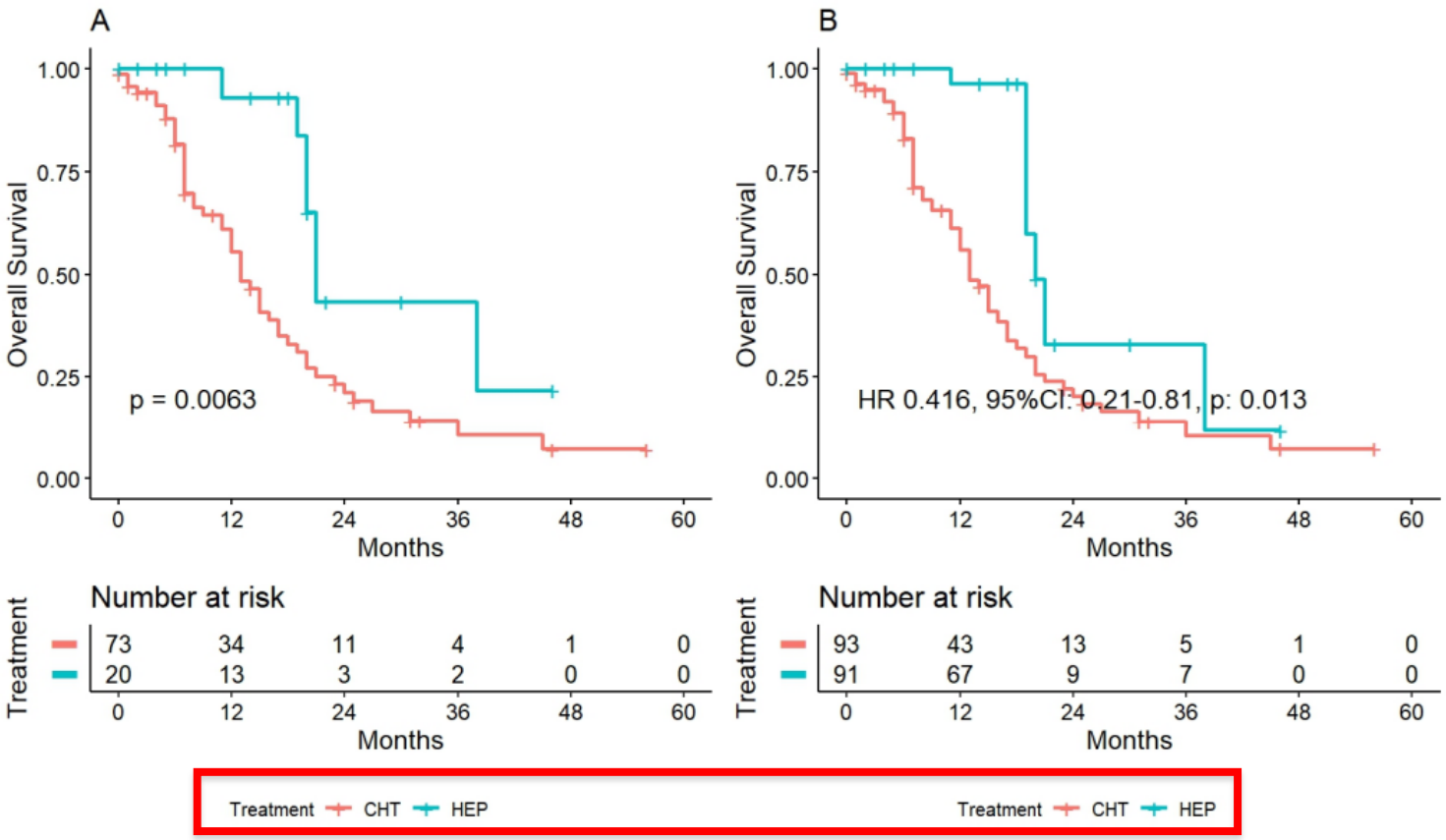

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Controvérsias na metástase hepática colorretal

Ressecção em vigência de progressão

- ❑ Reunião multidisciplinary em todos os casos
- ❑ Cirurgião com expertise em fígado avalia ressecabilidade
- ❑ Considerar cirurgia upfront nos pacientes ressecáveis
- ❑ Reavaliação em intervalo curto na neoadjuvância (2-4 ciclos)
- ❑ Considerar ressecção na progressão
- ❑ Avaliar fatores prognósticos (CEA)

Metástase hepática!

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