SYMPOSIA
ORGANIZZAZIONE CONGRESSI

15° INCONTRO

IL PUNTO SU: NOVITA' E RIFLESSIONI IN CHIRURGIA ONCOLOGICA EPATOBILIOPANCREATICA

QUEL CHE SI PUÒ FARE NON SEMPRE SI DEVE FARE

Alassio, 30 novembre - 1 dicembre 2018

HEPATOCELLULAR CARCINOMA

Lo stato dell'arte in Brasile

Orlando Jorge M. Torres
Full Professor & Chairman
Department of Gastrointestinal Surgery
Hepatopancreatobiliary Unit
Universidade Federal do Maranhão - Brazil

BRAZIL

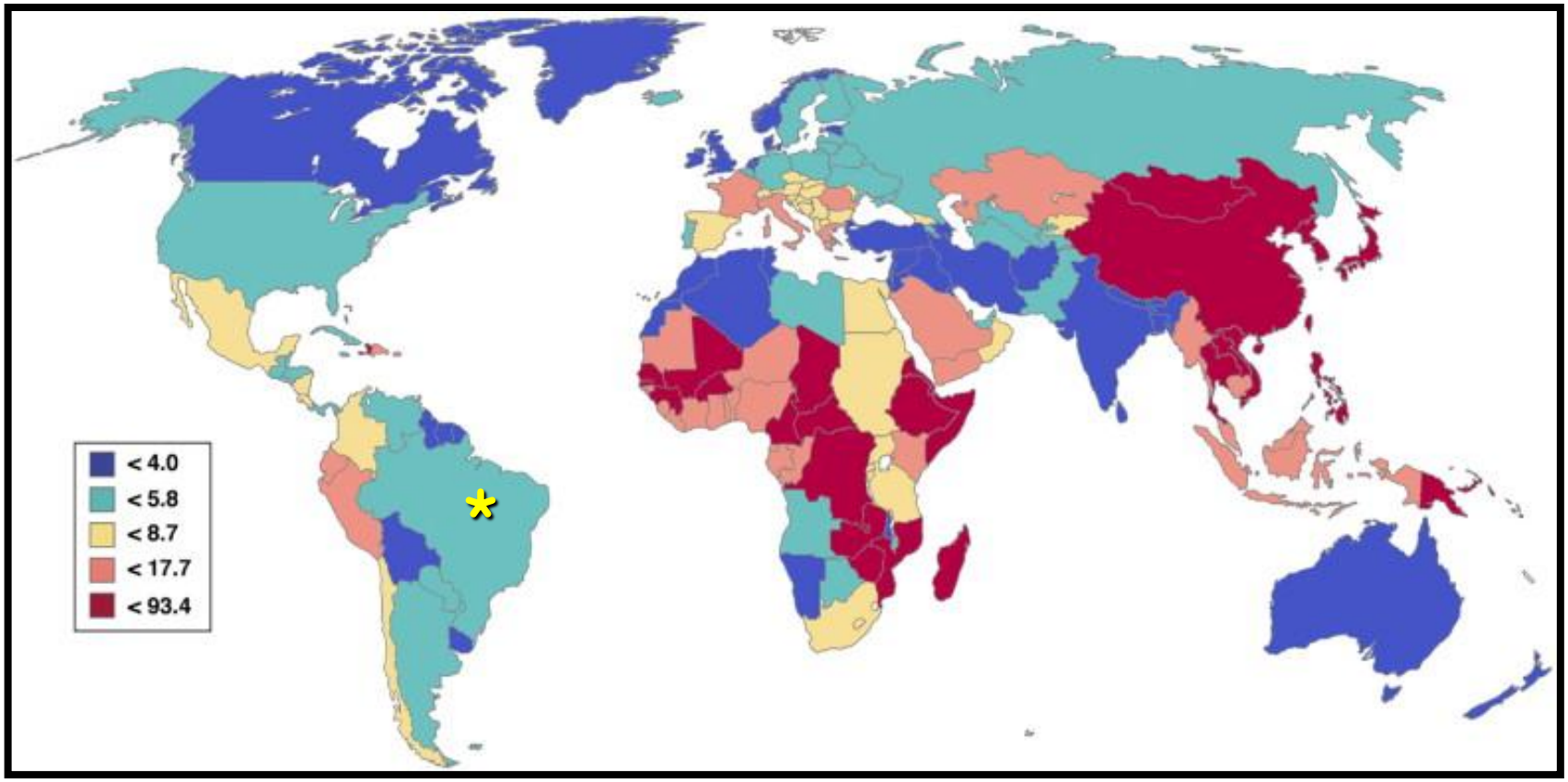
São Paulo

Rio de Janeiro

Northeast

HEPATOCELLULAR CARCINOMA

Estimated incidence rate per 100,000



GLOBOCAN 2008 (IARC)

HEPATITIS B

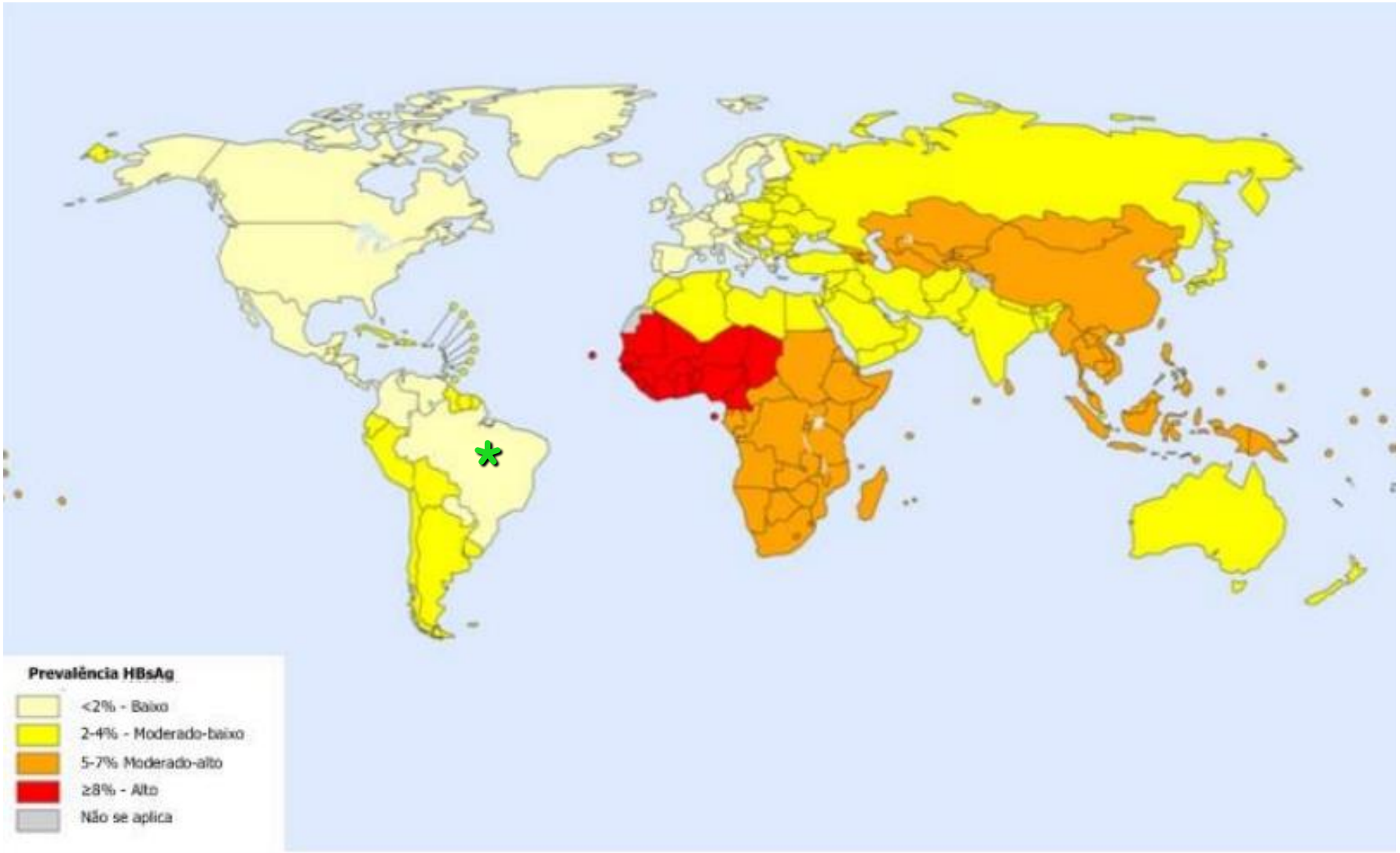
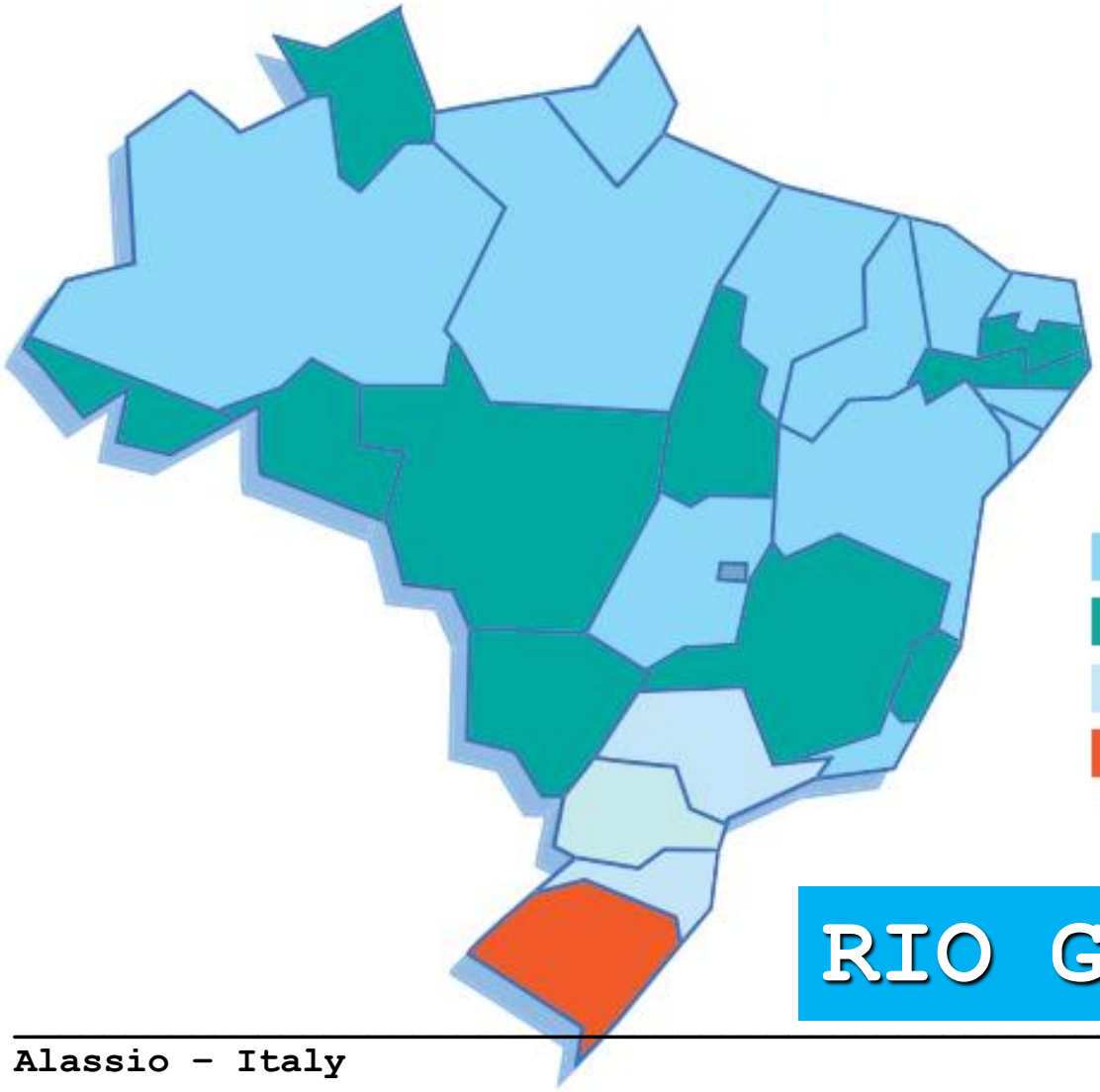


Figura 2. Prevalência da infecção por hepatite B, adultos de 19 a 49 anos, 2005. Fonte: adaptado de OTT, JJ (2012)

GEOGRAPHIC DISTRIBUTION



< 2.0 cases/100,000 individuals

2.0-3.5 cases/100,000 individuals

3.5-5.0 cases/100,000 individuals

> 5.0 cases/100.000 individuals

RIO GRANDE DO SUL

ANNALS of Hepatology

ORIGINAL ARTICLE

July-August, Vol. 13 No. 4, 2014: 386-393

Epidemiology of HCC in Brazil: incidence and risk factors in a ten-year cohort

Denise C. Paranaguá-Vezozzo,*,** Suzane K. Ono,*,** Mónica V. Alvarado-Mora,*,**
Alberto Q. Farias,*,** Marlone Cunha-Silva,** João I. D. França,**
Venancio A. F. Alves,*,*** Morris Sherman,**** Flair José Carrilho*,**

* São Paulo Clínicas Liver Cancer Group. ** Department of Gastroenterology, University of São Paulo School of Medicine, São Paulo, SP, Brazil.
*** Department of Pathology, University of São Paulo School of Medicine, São Paulo, SP, Brazil.
**** Department of Gastroenterology, University of Toronto and University Health Network, Toronto, Canada.

Table 1. Epidemiologic and clinical features of a) 812 HCC-free patients at time zero for HCC surveillance and b) 72 patients at the time of diagnosis of HCC (HCC patients).

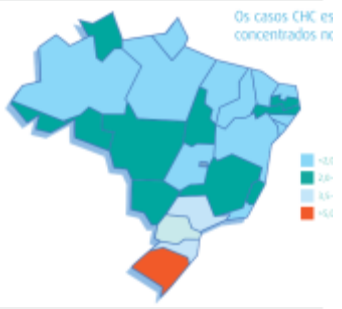
Patient features	Non HCC n = 812		HCC n = 72	
Risk factors (n, %)				
Chronic hepatitis C	462	56.9	47	65.3
Chronic hepatitis B	133	16.4	16	22.2
Alcohol	124	15.3	5	6.9
NASH¶	26	3.2	1	1.4
Miscellaneous	67	8.3	3	4.2

RISK FACTORS

Paranagua-Vezozzo DC, et al. Ann Hepatol 2014;13:386-93

Table 1 Demographic and clinical characteristics of cirrhotic outpatients attending a hospital clinic in the South of Brazil *n* (%)

Characteristic	HCC *n* = 75	Without HCC *n* = 378	*P* value
Age (yr)	54.9 ± 10.7	53.2 ± 12.2	0.23
Male sex	44 (58.7)	217 (57.4)	0.90
Cirrhosis etiology			0.27
HCV	35 (46.7)	132 (34.9)	
Alcohol	16 (21.3)	93 (24.6)	
HCV + alcohol	15 (20.0)	74 (19.6)	
HBV	2 (2.7)	3 (0.8)	
HBV + alcohol	0 (0.0)	5 (1.3)	
NAFLD	1 (1.3)	7 (1.8)	
Cryptogenic	1 (1.3)	12 (3.2)	
Other	5 (6.7)	52 (13.8)	



Appel da Silva MC, et al. World J Gastroenterol 2016;22:10219-25

Brazilian Journal of Medical and Biological Research (2009) 42: 958-962
ISSN 0100-879X Case Report

Does hepatocellular carcinoma in non-alcoholic steatohepatitis exist in cirrhotic and non-cirrhotic patients?

A.L. Chagas[1], L.O.O. Kikuchi[1], C.P.M.S. Oliveira[1], D.C.P. Vezozzo[1], E.S. Mello[2], A.C. Oliveira[1], L.C. Cella[1], P. Herman[1], T. Bachella[1], S.H. Caldwell[3], V.A.F. Alves[2] and F.J. Carrilho[1]

[1]Departamento de Gastroenterologia (LIM 07/37), [2]Departamento de Patologia (LIM 14), Faculdade de Medicina, Universidade de São Paulo, São Paulo, SP, Brasil

Table 1. Demographic, clinical, biochemical, and histological parameters of the 7 patients studied.

	1	2	3	4	5	6	7
Gender	F	M	M	M	F	M	F
Age (years)	59	71	61	77	35	65	73
Diabetes mellitus	Y	Y	N	N	Y	N	Y
Overweight	Y	Y	Y	Y	Y	Y	Y
Dyslipidemia	N	Y	N	N	N	Y	N
Cirrhosis	Y	Y	Y	Y	Y	N	Y
Child-Pugh	A6	A5	A5	A5	B9	-	A6
AFP (ng/mL)	6	10	21	10	3	7	17
HCC Rx	TACE	Resection	PEI + TX	Resection	TACE	TACE	PEI
HCC differentiation	NA	GII	GII	GIII	NA	GI	GI
Number of nodules	1	1	3	1	4	2	1
Echo pattern	High	High	High	NA	Low	Mixed	High
HCC size (mm)	33	34	30	43	28	52	33
Stage (BCLC)	Early	Early	Early	Early	Intermediate	Intermediate	Early

AFP = alpha-fetoprotein; HCC = hepatocellular carcinoma; TACE = transcatheter arterial chemoembolization; PEI + TX = percutaneous ethanol instillation + liver transplantation; NA = not available by ultrasound; GI, II, III = grades I, II and III, respectively; BCLC = Barcelona Clinic Liver Cancer criteria.

ANNALS of Hepatology

ORIGINAL ARTICLE

July-August, Vol. 13 No. 4, 2014: 386-393

Epidemiology of HCC in Brazil: incidence and risk factors in a ten-year cohort

Denise C. Paranaguá-Vezozzo,*,** Suzane K. Ono,*,** Mónica V. Alvarado-Mora,*,**
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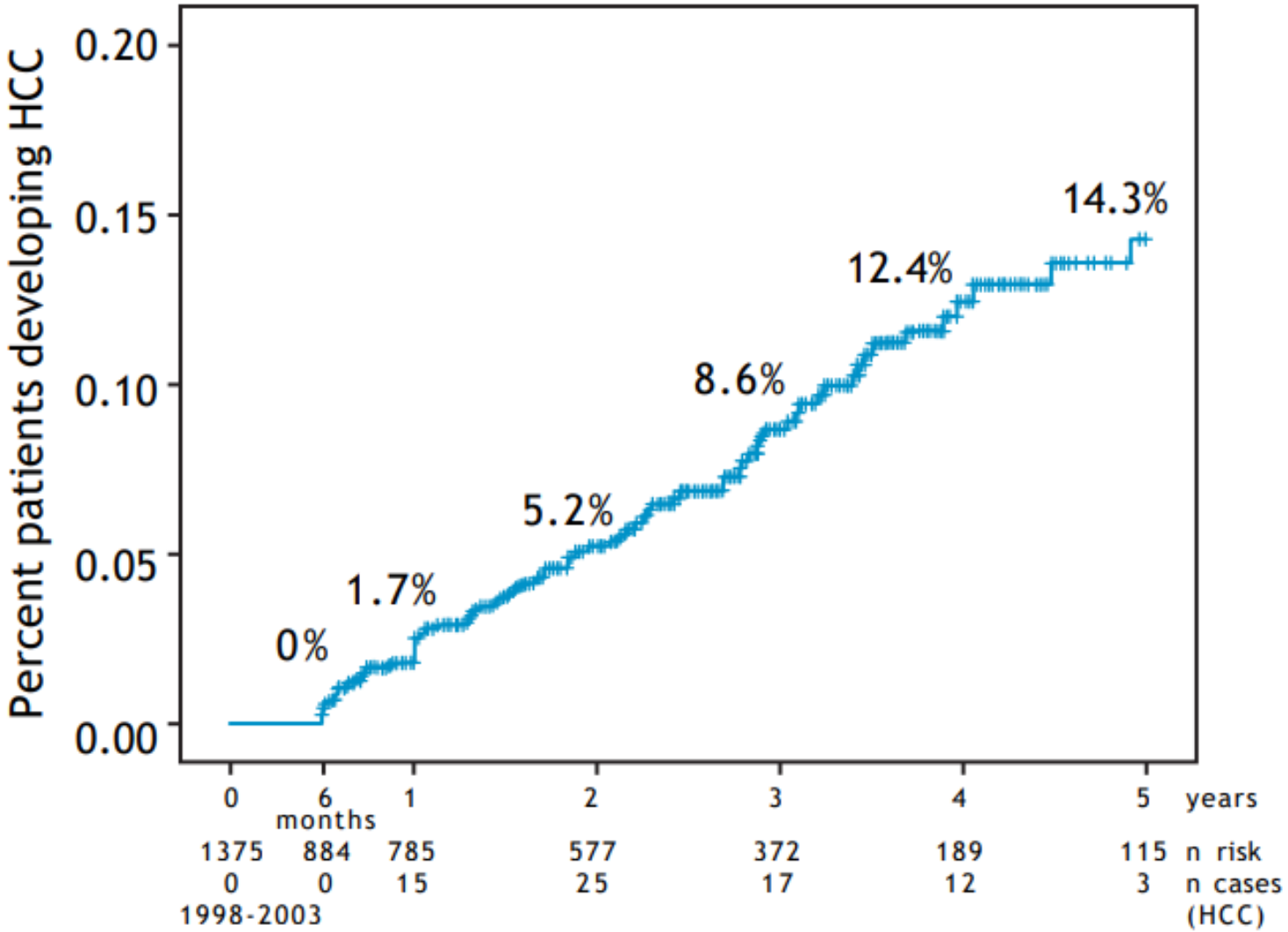
* São Paulo Clínicas Liver Cancer Group. ** Department of Gastroenterology, University of São Paulo School of Medicine, São Paulo, SP, Brazil.
*** Department of Pathology, University of São Paulo School of Medicine, São Paulo, SP, Brazil.
**** Department of Gastroenterology, University of Toronto and University Health Network, Toronto, Canada.

Table 1. Epidemiologic and clinical features of a) 812 HCC-free patients at time zero for HCC surveillance and b) 72 patients at the time of diagnosis of HCC (HCC patients).

Patient features	Non HCC n = 812		HCC n = 72	
Included in Milan Criteria (n, %)				
Yes	–	–	57	79.2
No	–	–	15	20.8

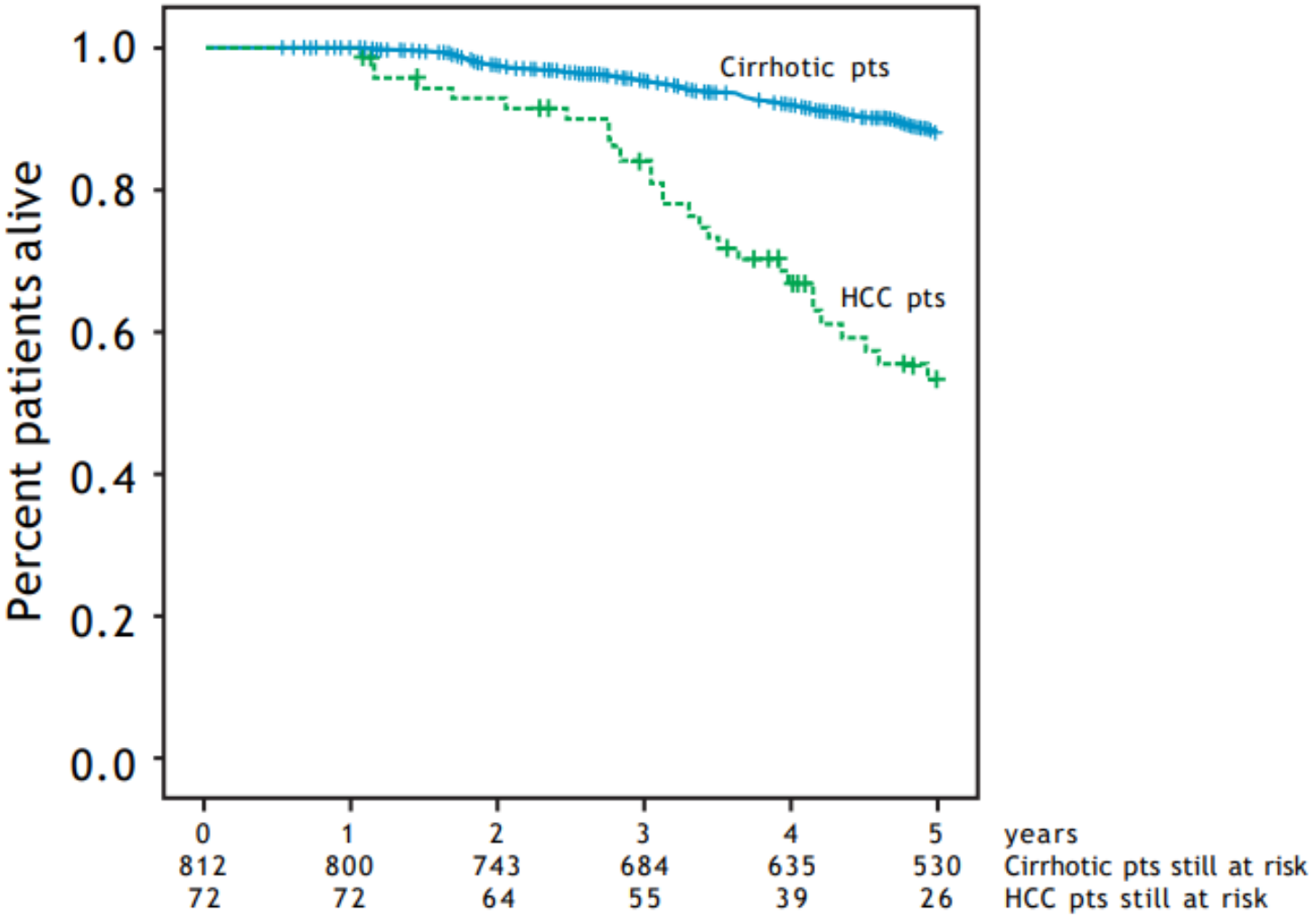
MILAN CRITERIA

CUMULATIVE ANNUAL INCIDENCE



Paranagua-Vezozzo DC, et al. Ann Hepatol 2014;13:386-93

CUMULATIVE SURVIVAL RATES



Paranagua-Vezozzo DC, et al. Ann Hepatol 2014;13:386-93

World Journal of Gastroenterology

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DOI: 10.3748/wjg.v22.i46.10219

World J Gastroenterol 2016 December 14; 22(46): 10219-10225
ISSN 1007-9327 (print) ISSN 2219-2840 (online)

ORIGINAL ARTICLE

Retrospective Study

Incidence of hepatocellular carcinoma in outpatients with cirrhosis in Brazil: A 10-year retrospective cohort study

Marcelo Campos Appel-da-Silva, Suelen Aparecida da Silva Miozzo, Isabella de Azevedo Dossin, Cristiane Valle Tovo, Fernanda Branco, Angelo Alves de Mattos

Alpha-fetoprotein

Table 2 Pre-test probability, likelihood ratio, post-test probability, sensitivity, and specificity of alpha-fetoprotein ranges to predict hepatocellular carcinoma

AFP level (ng/mL)	Pre-test probability	LR+	Post-test probability	Sensitivity	Specificity
< 6.0	16.60%	0.50	9.1%	66.7%	66.3%
6-19.9	16.60%	1.00	16.6%	45.6%	89.3%
20-50	16.60%	1.31	20.8%	35.1%	96.1%
> 50	16.60%	10.03	66.8%	35.1%	96.1%

LR: Likelihood ratio; AFP: Alpha-fetoprotein.

Appel da Silva MC, et al. World J Gastroenterol 2016;22:10219-25

CUMULATIVE ANNUAL INCIDENCE

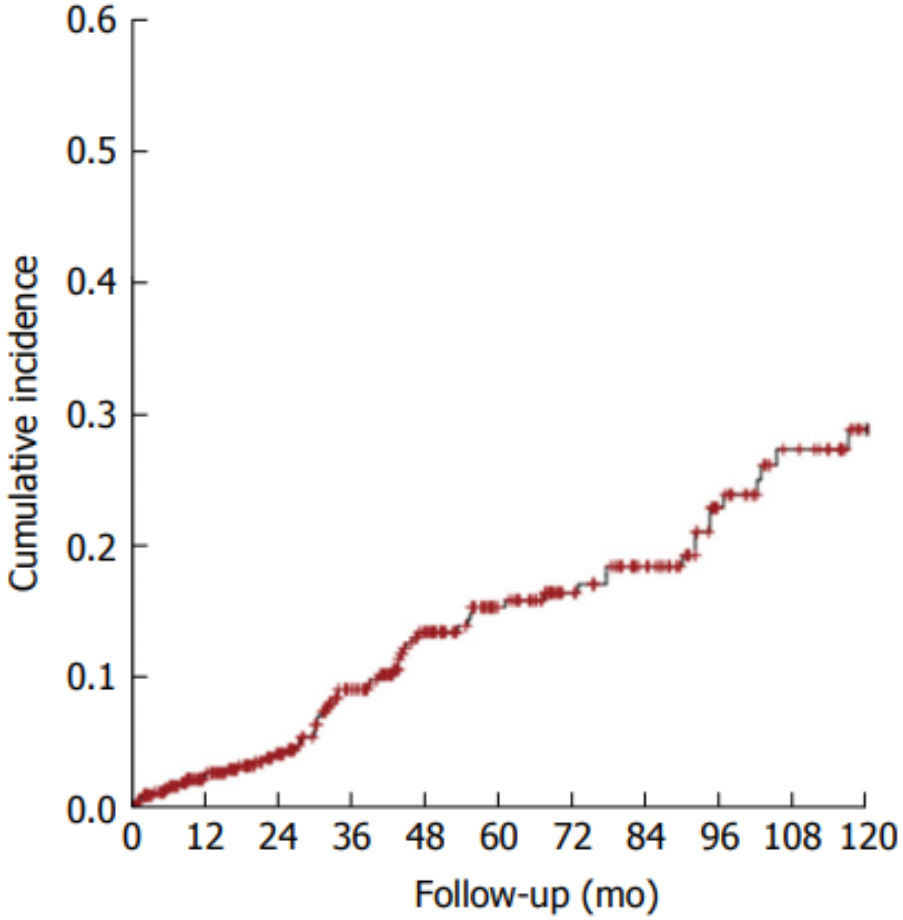
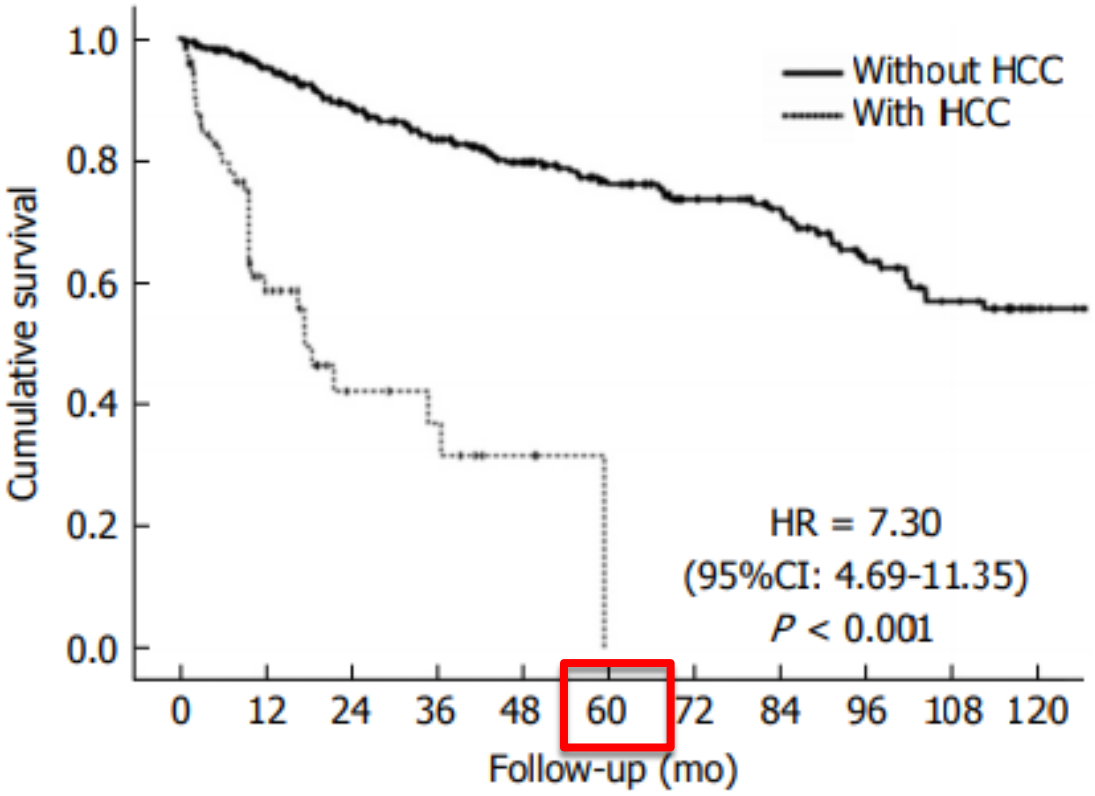


Figure 2 Ten-year cumulative incidence of hepatocellular carcinoma in cirrhotic outpatients.

Appel da Silva MC, et al. World J Gastroenterol 2016;22:10219-25

CUMULATIVE SURVIVAL RATES



Without HCC	378	317	263	221	179	138	108	90	64	50	33
With HCC	76	26	9	7	3	0	0	0	0	0	0

Figure 3 Kaplan-Meier cumulative survival curve in patients with hepatocellular carcinoma and 10-yr follow-up. HCC: Hepatocellular carcinoma.

Appel da Silva MC, et al. World J Gastroenterol 2016;22:10219-25

DOI: 10.1590/S0004-28032015000500001

BRAZILIAN SOCIETY OF HEPATOLOGY RECOMMENDATIONS FOR THE DIAGNOSIS AND TREATMENT OF HEPATOCELLULAR CARCINOMA

Flair J **CARRILHO**[1], Angelo Alves de **MATTOS**[2], Alex F **VIANEY**[3], Denise Cerqueira P **VEZOZZO**[1], Fábio **MARINHO**[4], Francisco J **SOUTO**[5], Helma P **COTRIM**[6], Henrique Sergio M **COELHO**[7], Ivonete **SILVA**[8], José Huygens P **GARCIA**[9], Luciana **KIKUCHI**[1], Patricia **LOFEGO**[10], Wellington **ANDRAUS**[4], Edna **STRAUSS**[1], Giovanni **SILVA**[11], Isaac **ALTIKES**[12], Jose Eymard **MEDEIROS**[13], Paulo L **BITTENCOURT**[14] and Edison R **PARISE**[8]

BCLC

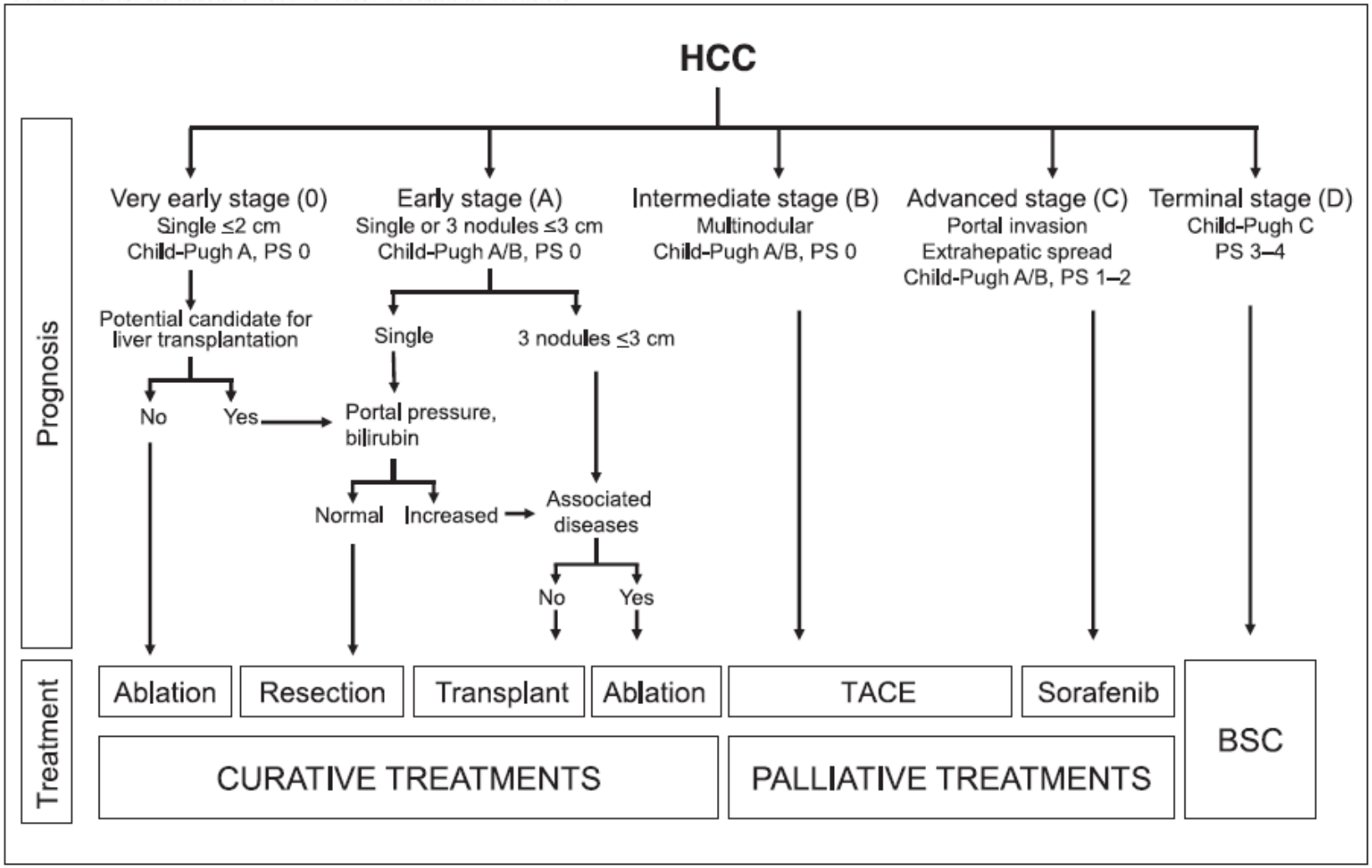
Carrilho FJ, et al. Arq Gastroenterol 2015;52:2-14

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

BCLC

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



EASL-EORTC. J Hepatol 2012; 56:908-43

Annals of Hepatology

The Official Journal of the Mexican Association of Hepatology, the Latin-American Association for Study of the Liver and the Canadian Association for the Study of the Liver

ORIGINAL ARTICLE

March-April, Vol. 16 No. 2, 2017: 255-262

Practical Considerations of Real Life of Hepatocellular Carcinoma in a Tertiary Center of Brazil

Sandra R. Almeida-Carvalho,* Maria L. Gomes-Ferraz,* Carla A. Loureiro-Matos,* Antônio E. Benedito-Silva,* Roberto J. Carvalho-Filho,* Rogério Renato-Perez,† Adriano Miziara-Gonzalez,† Alcides A. Salzedas-Netto,‡ Denis Szejnfeld,§ Giuseppe D'Ippolito,§ Valéria Pereira-Lanzoni,‖ Ivonete S. Souza-Silva*

* Department of Gastroenterology, Hepatology Unit. † Department of Surgery, Liver Transplant Unit. ‡ Department of Pediatric Surgery. § Department of Diagnostic Radiology. ‖ Department of Diagnostic Pathology. Federal University of Sao Paulo (Unifesp), Sao Paulo, SP, Brazil.

Table 1. Demographic, clinical, laboratory and tumor characteristics of patients with hepatocellular carcinoma (n = 247).

Characteristics	
Demographic/clinical	
Age (years)†	60 ± 10
Male/female	74%/26%
Etiology	
Hepatitis C	55%
Hepatitis C/alcohol	14%
Alcohol	12%
Hepatitis B	8%
Other	11%
Cirrhosis	92%
Child-Pugh A/B/C	57%/36%/7%

Almeida-Carvalho SR, et al. Ann Hepatol 2017 16:255-62

TREATMENT

Tumor treatment, n (%)		
Liver transplant	25	(10)
Surgical resection	13	(5)
Transarterial chemoembolization	122	(49)
Radiofrequency ablation	3	(1)
Percutaneous ethanol injection	5	(2)
Sorafenin	35	(14)
Symptomatic therapy	68	(28)

Almeida-Carvalho SR, et al. Ann Hepatol 2017 16:255-62

MILAN CRITERIA

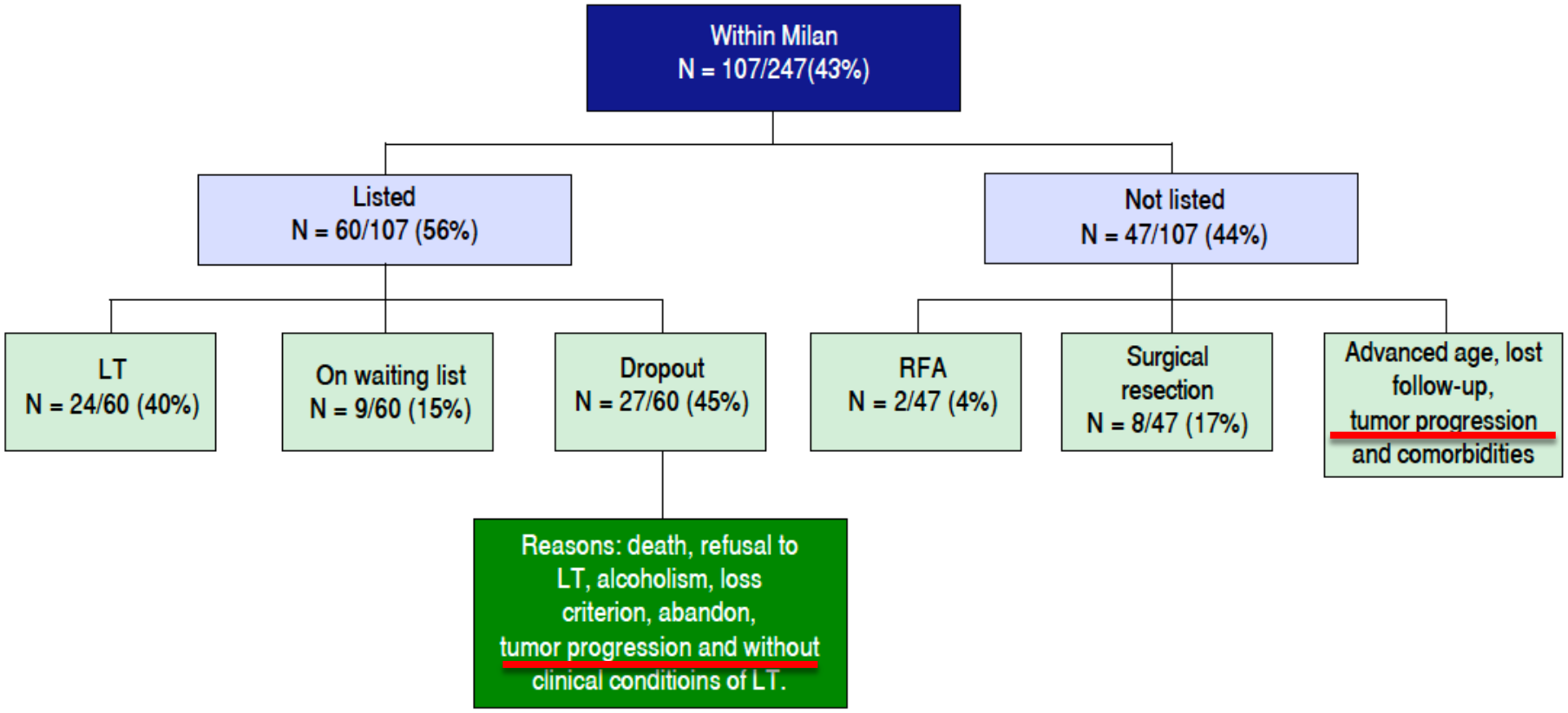
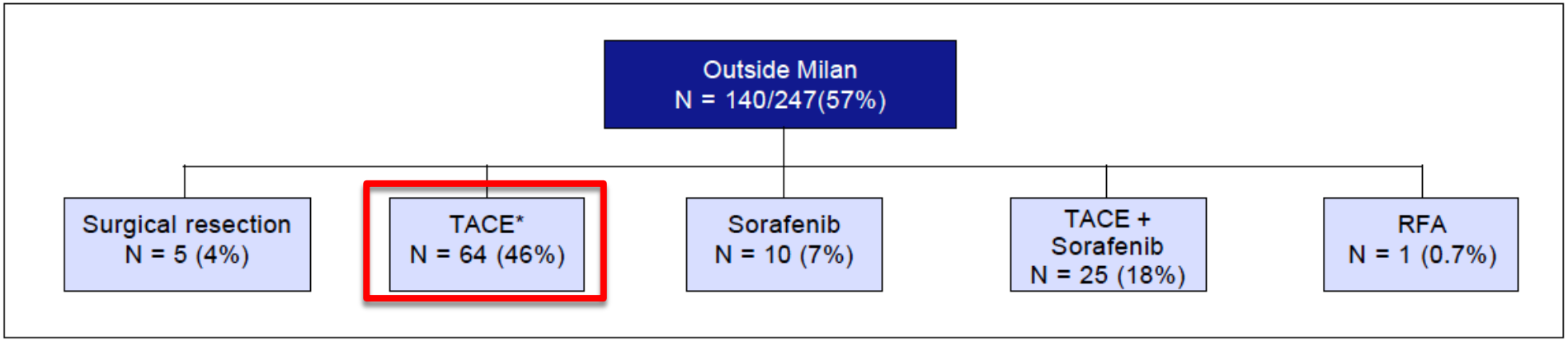


Figure 1. *Algorithm of HCC patients within the Milan criteria according to treatment offered and outcomes (n = 247). LT: liver transplantation. RFA: radiofrequency thermal ablation.*

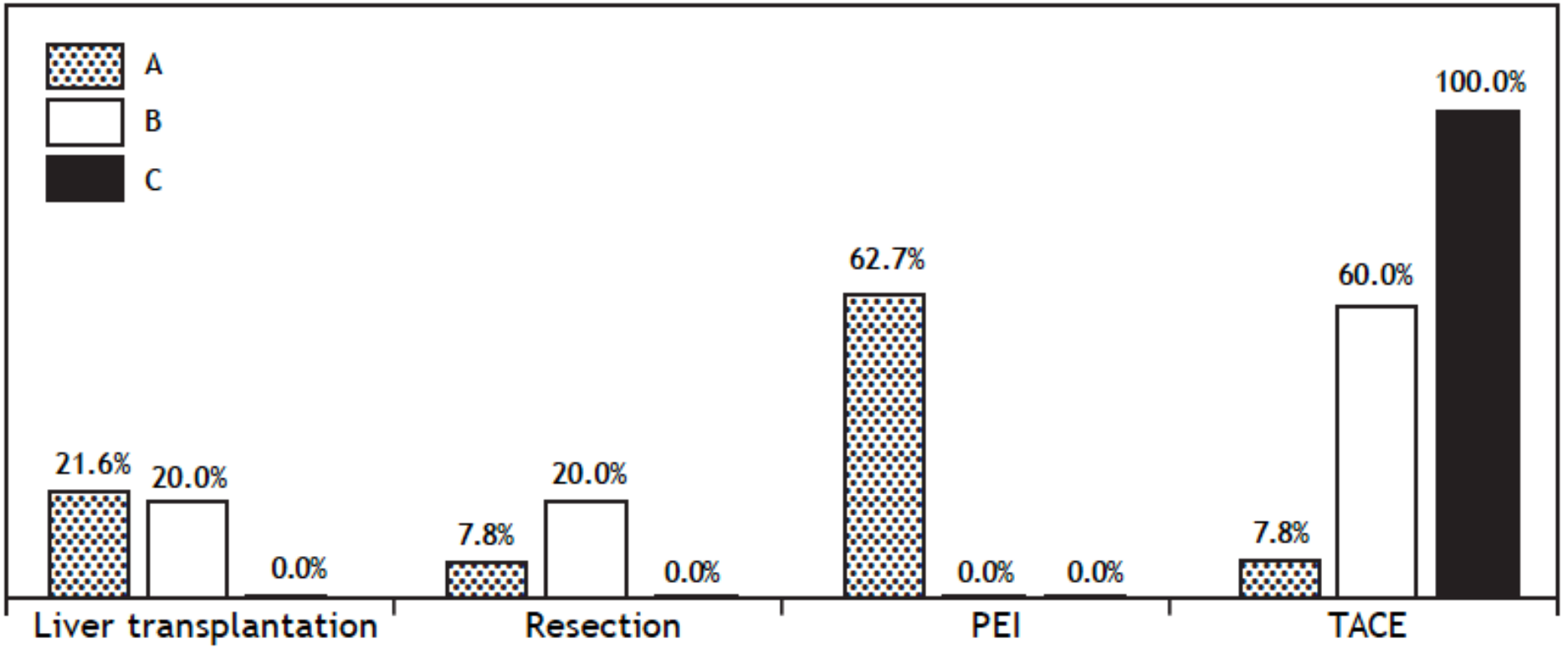
Almeida-Carvalho SR, et al. Ann Hepatol 2017 16:255-62

MILAN CRITERIA

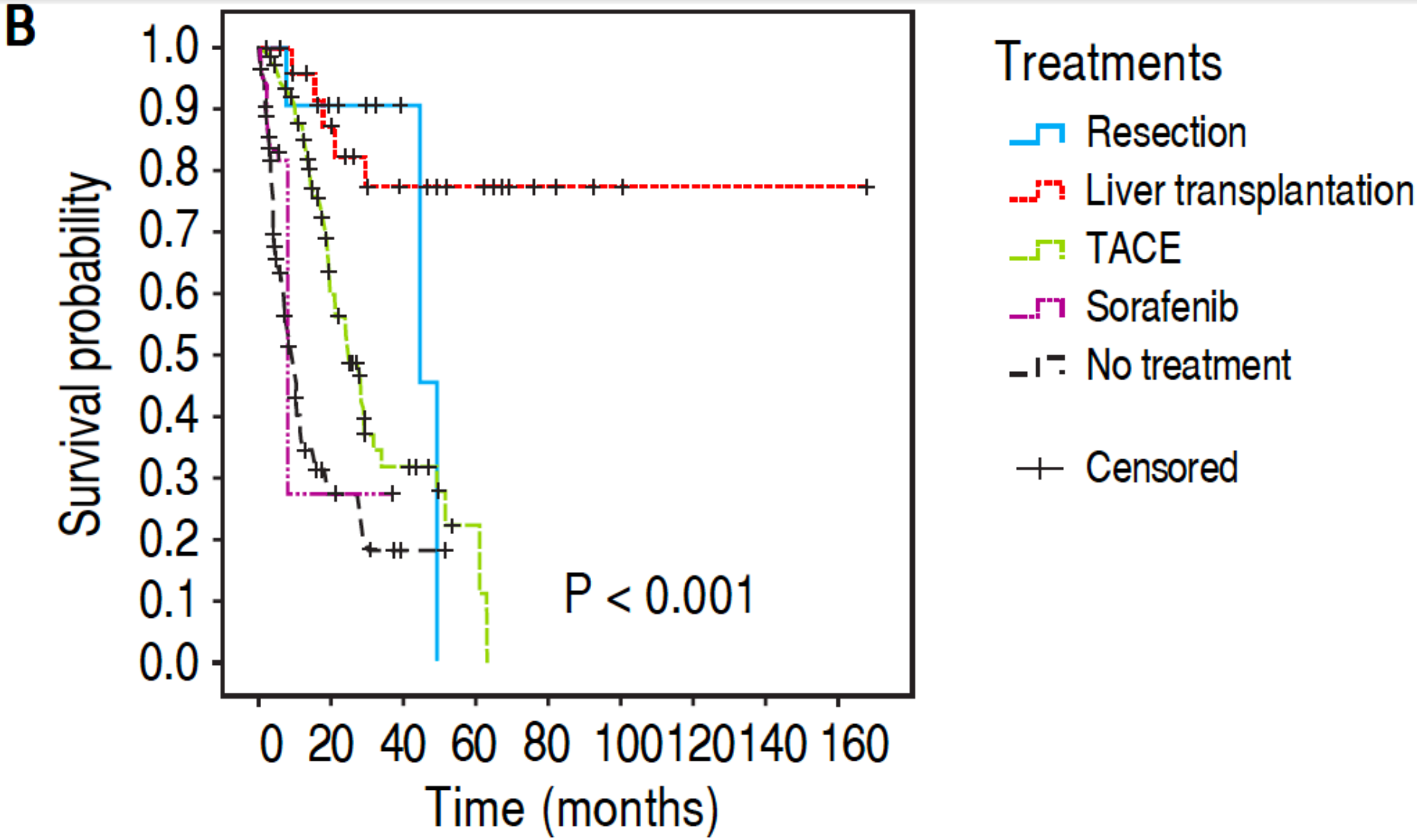


Almeida-Carvalho SR, et al. Ann Hepatol 2017 16:255-62

TREATMENT ACCORDING TO BCLC



Paranagua-Vezozzo DC, et al. Ann Hepatol 2014;13:386-93



Almeida-Carvalho SR, et al. Ann Hepatol 2017 16:255-62

TREATMENT OF HCC

Liver transplantation	16.6%
Liver resection	7.0%
RFA or Ethanol injection	44.5%
TACE	12.5%
Paliative care	19.4%

Paranagua-Vezozzo DC, et al. Ann Hepatol 2014;13:386-93

TREATMENT OF HCC

Tumor treatment, n (%)		
Liver transplant	25	(10)
Surgical resection	13	(5)
Transarterial chemoembolization	122	(49)
Radiofrequency ablation	3	(1)
Percutaneous ethanol injection	5	(2)
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Symptomatic therapy	68	(28)

Almeida-Carvalho SR, et al. Ann Hepatol 2017;16:255-62

LIVER RESECTION

ARQGA/1850

/ ORIGINAL ARTICL

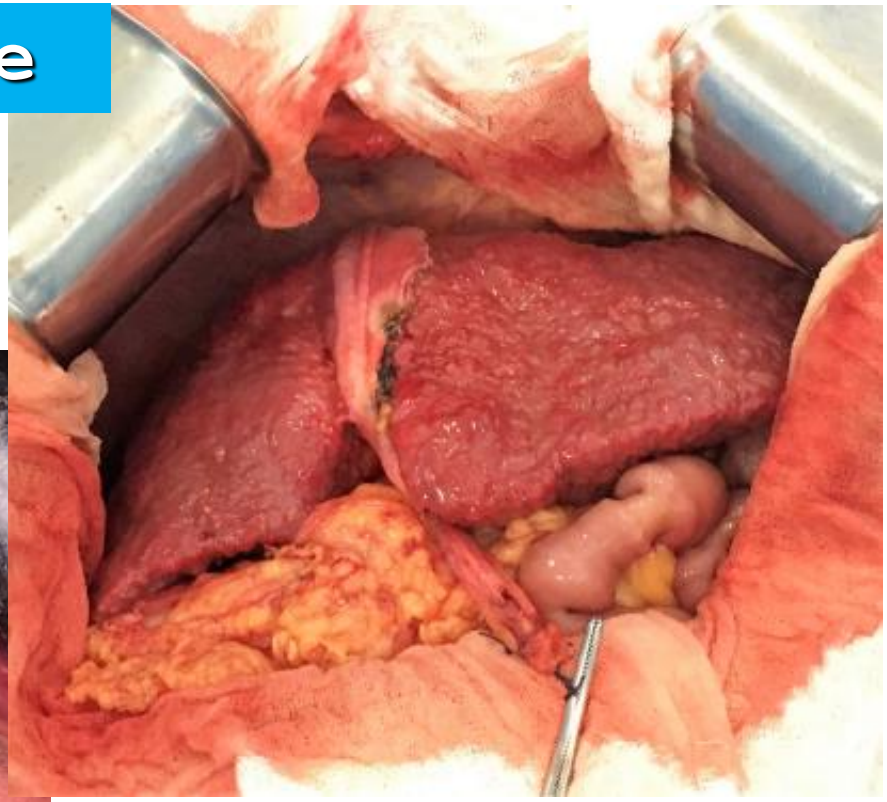
IS RESECTION OF HEPATOCELLULAR CARCINOMA IN THE ERA OF LIVER TRANSPLANTATION WORTHWILE? A single center experience

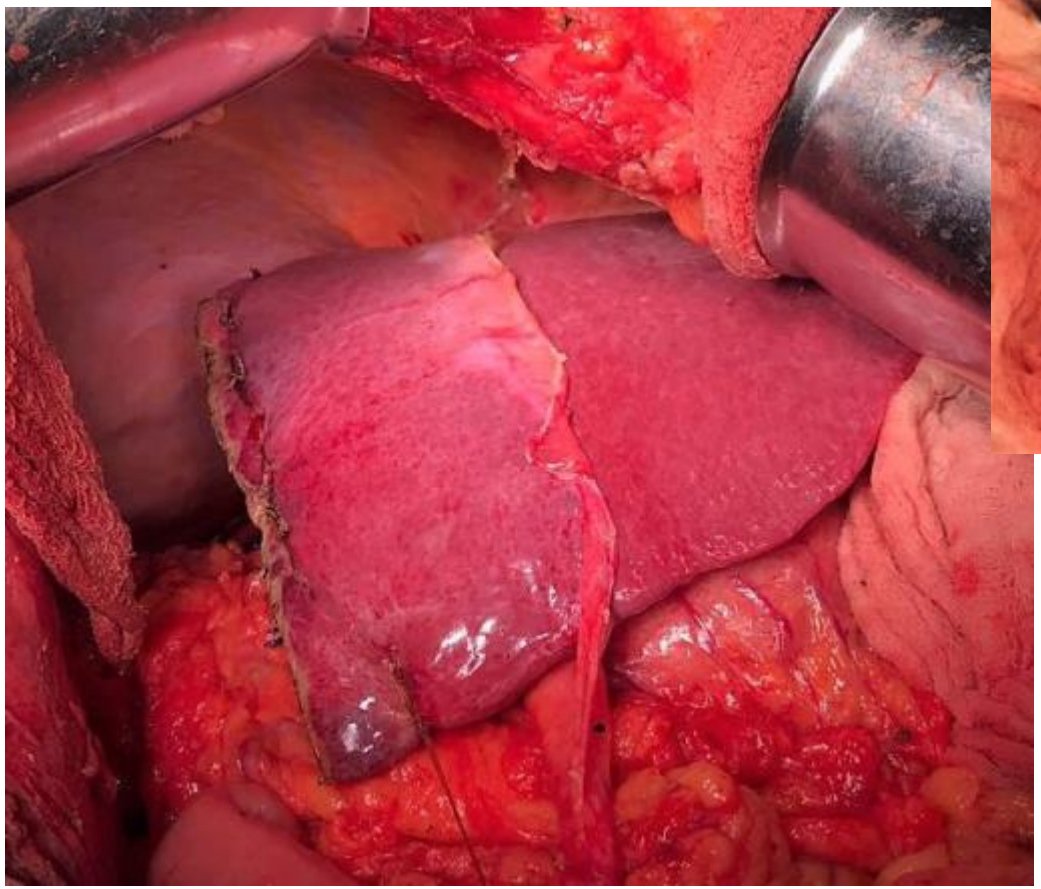
Paulo **HERMAN**, Felipe de Lucena Moreira **LOPES**, Jaime Arthur Pirola **KRUGER**, Gilton Marques **FONSECA**, Vagner Birk **JEISMANN** and Fabricio Ferreira **COELHO**

Herman P, et al - Arq Gastroenterol 2016;53:169-74

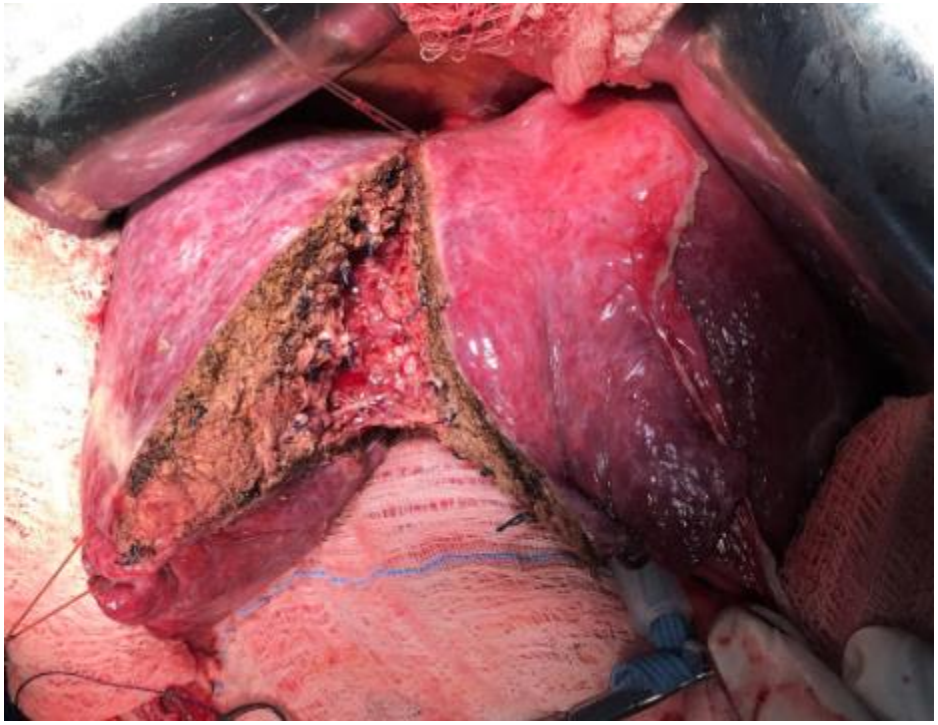
Chronic liver disease

OPEN

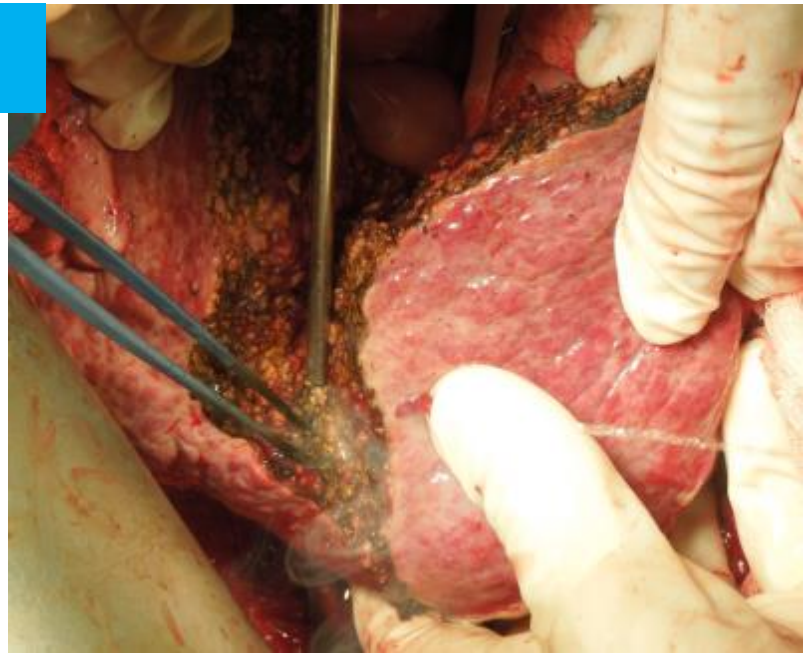


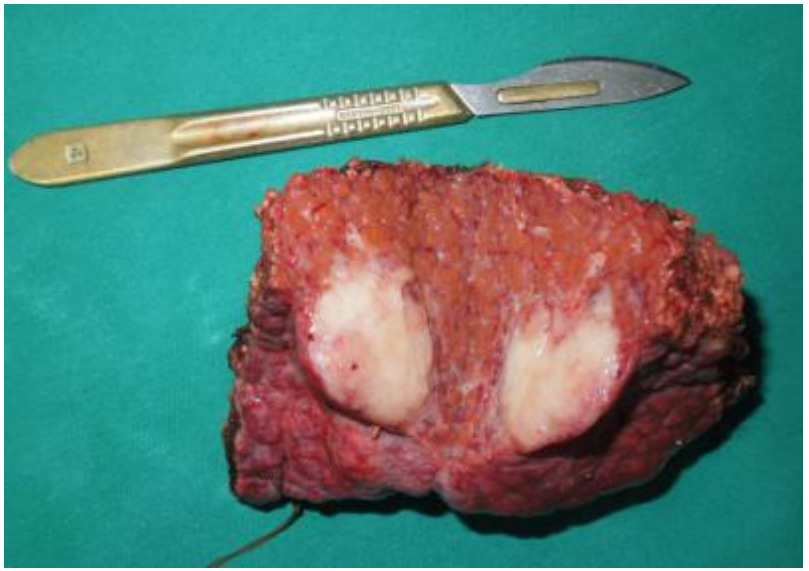


Chronic liver disease

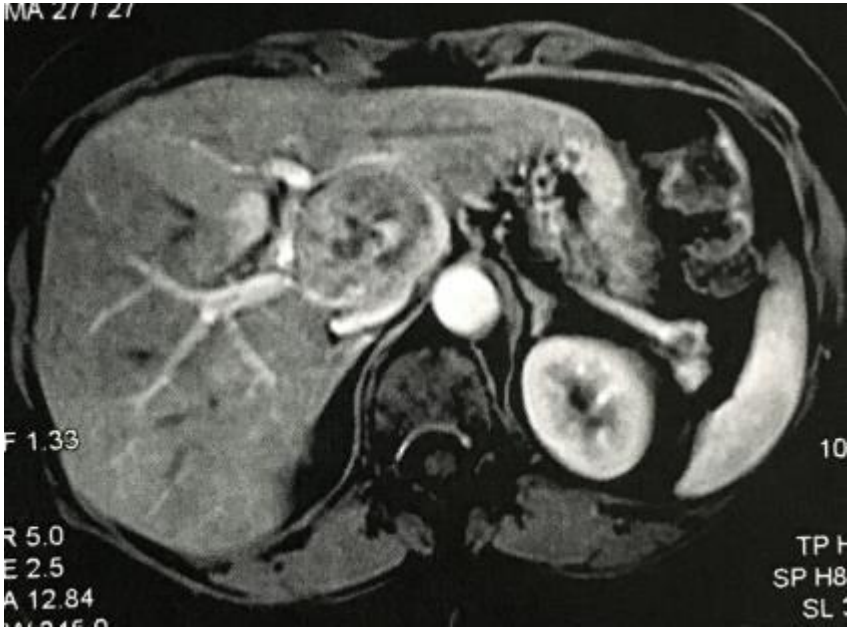


Chronic liver disease



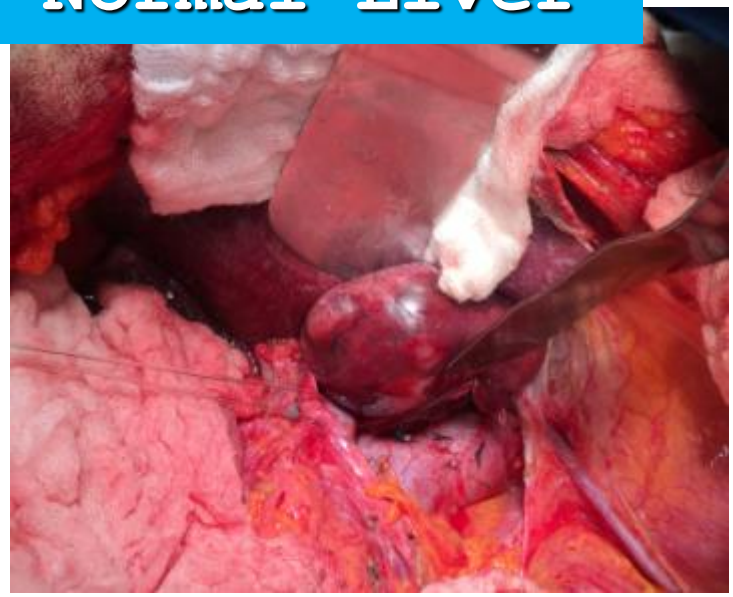


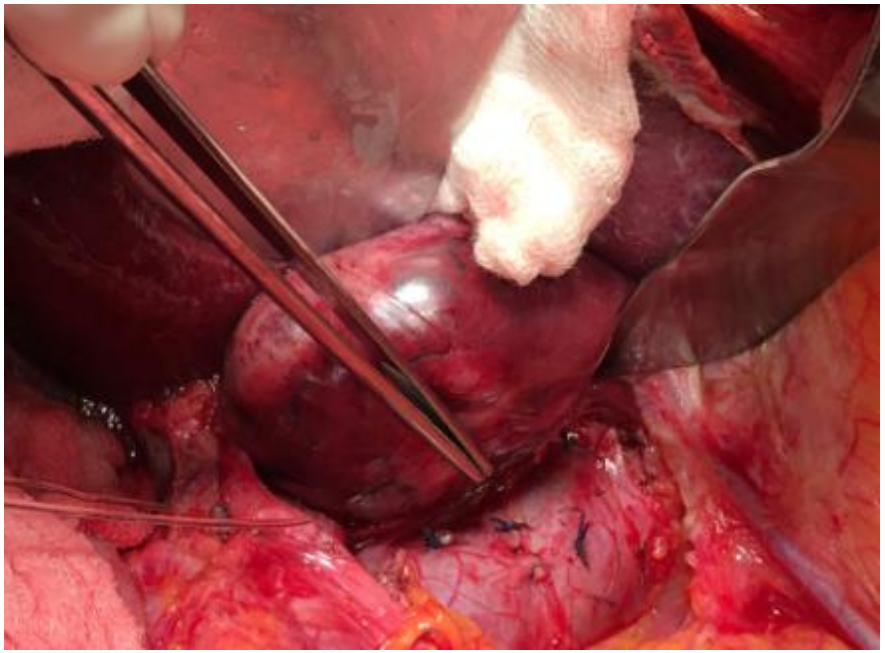
Normal Liver



70 yo, female HCC
Normal Liver
Child A5, MELD 8
No portal hipertension

Normal Liver





Isolated caudate resection

ALPPS

CASE REPORT – OPEN ACCESS

Normal Liver

International Journal of Surgery Case Reports 26 (201

Contents lists available at ScienceDirect

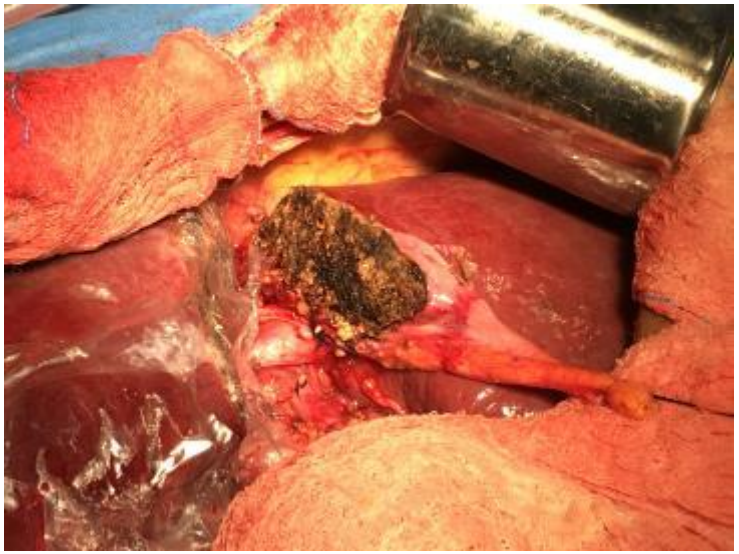
International Journal of Surgery Case Reports

journal homepage: www.casereports.com

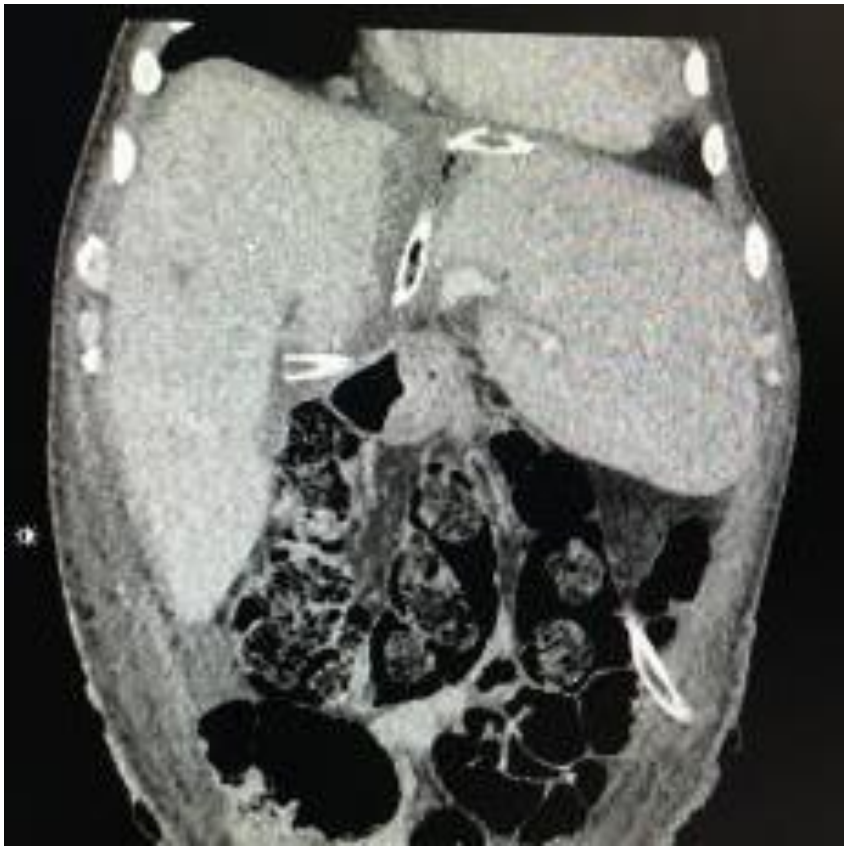
The ALPPS procedure for hepatocellular carcinoma larger than 10 centimeters

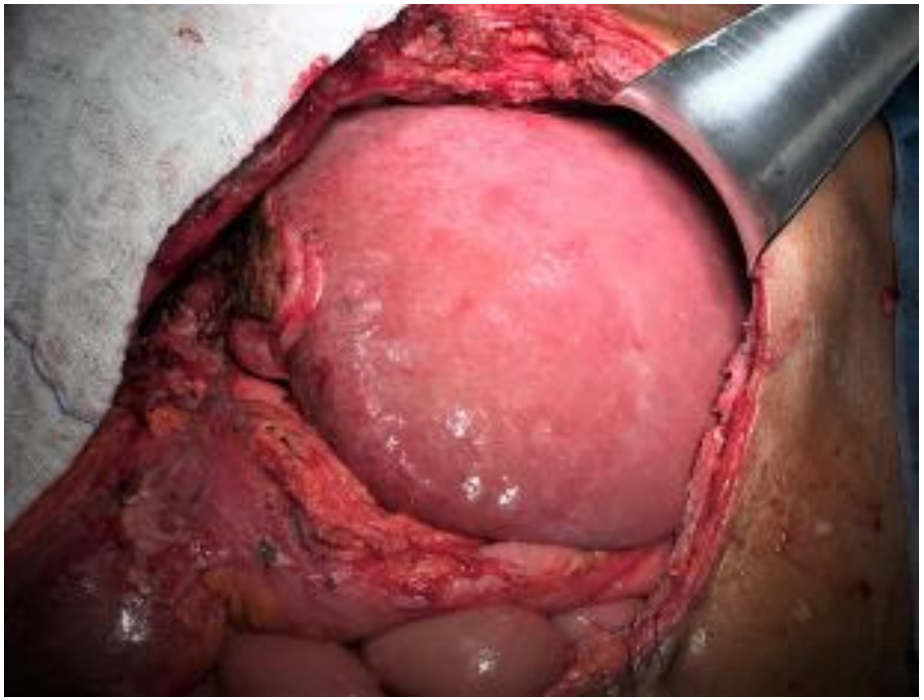
Orlando Jorge M. Torres*, Rodrigo Rodrigues Vasques, Thiago Henrique S. Silva, Miguel Eugenio L. Castelo-Branco, Camila Cristina S. Torres

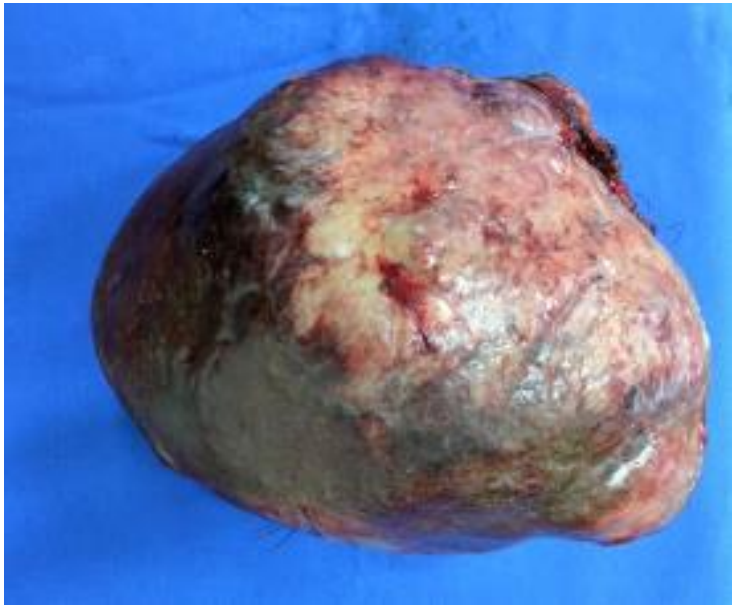
Department of Digestive Surgery, Federal University of Maranhão, São Luiz, MA, Brazil



Torres OJM, et al. Int J Surg Case Rep 2016;26:113-7

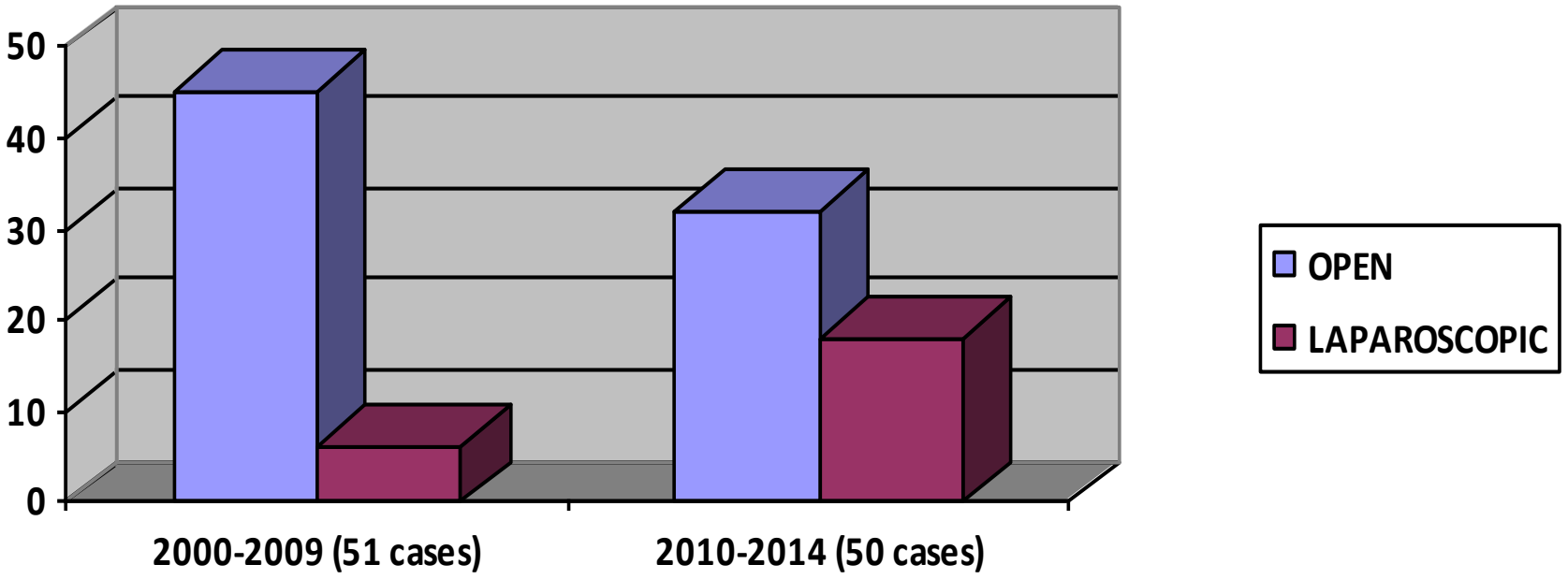






Torres OJM, et al. Int J Surg Case Rep 2016;26:113-7

LIVER RESECTION

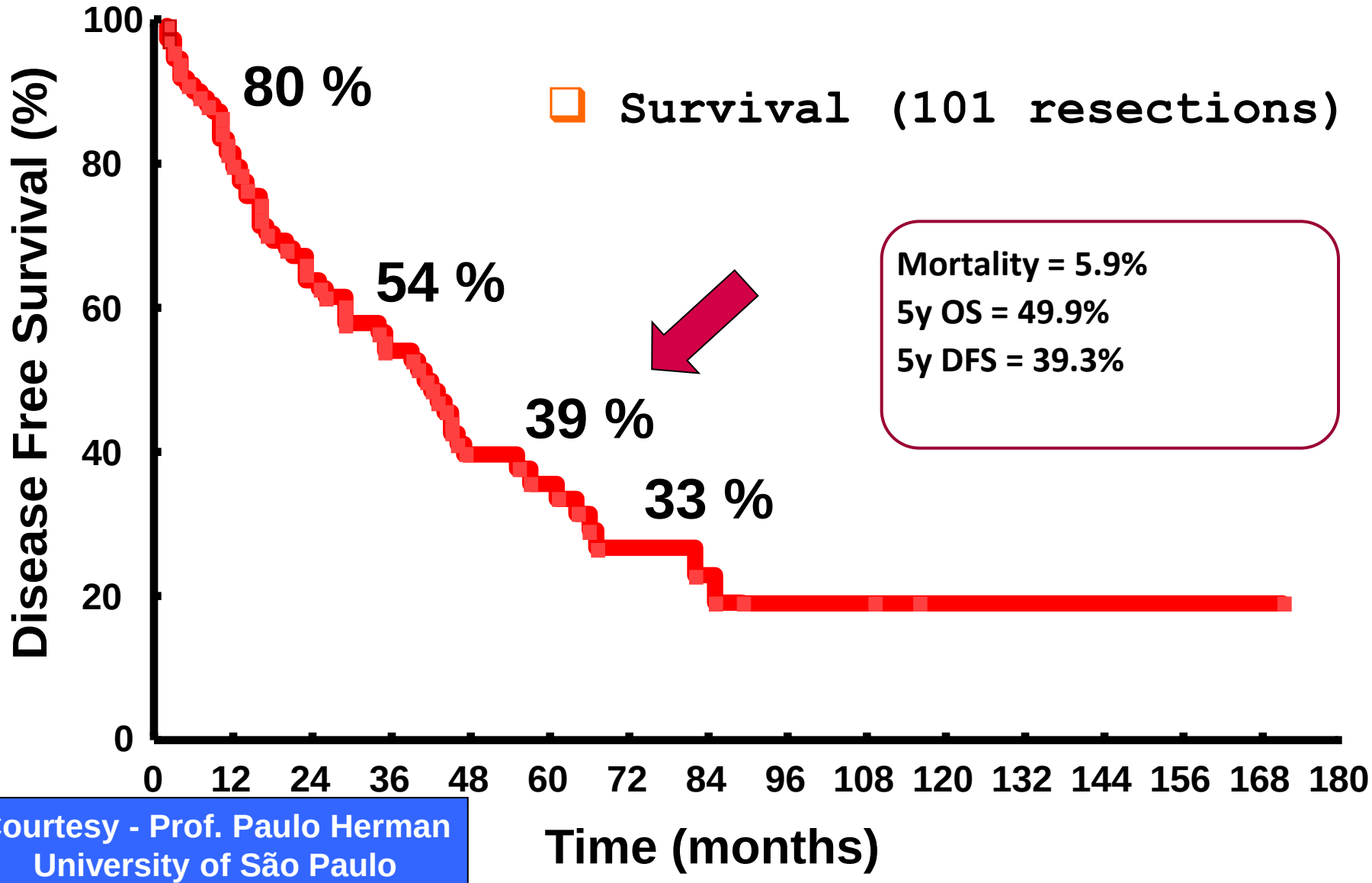


Courtesy - Prof. Paulo Herman
University of São Paulo

HCC - Laparoscopy
68% - 2014/2015

Herman P, et al – Arq Gastroenterol 2016;53:169-74

Liver resection



Courtesy - Prof. Paulo Herman
University of São Paulo

Herman P, et al – Arq Gastroenterol 2016;53:169-74

LIVER RESECTION

ARTIGO ORIGINAL

Resultados do tratamento cirúrgico do carcinoma hepatocelular

Results of surgical treatment of hepatocellular carcinoma

Adriano M. Gonzalez[1], Alberto Goldenberg[2], Tarcisio Triviño[3], Mara Rita Salum[4], Valéria Pereira Lanzoni[5], Edson José Lobo[6], Alessandro de Rinaldis[7], Vladimir Schraibman[8]

Gonzalez AM, et al - Einstein 2014;2:292-7

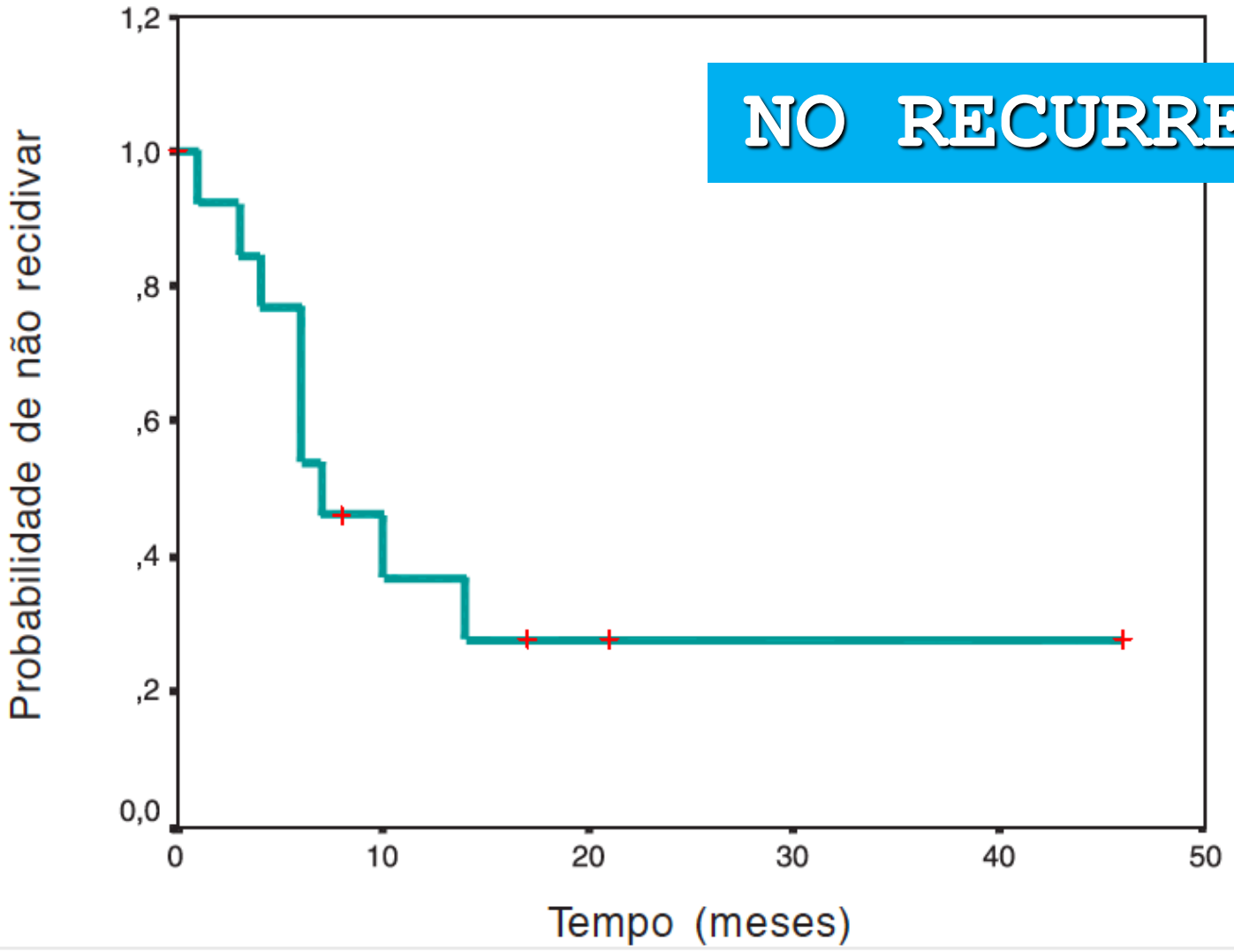
LIVER RESECTION

Tabela 2. Distribuição dos doentes segundo a sede da lesão, tipo de ressecção, tamanho e número de nódulos

Obs.	Tipo de ressecção	Sede das lesões	Número	Tamanho
1	Bissegmentectomia VI e VII	VI e VII	1	18 x 15 cm
2	Hepatectomia direita	VI e VII	1	13 x 13 cm
3	Segmentectomia I	I	1	3,5 x 3,5 cm
4	Bissegmentectomia II e III	II e III	2	8 x 7 e 1 x 1 cm
5	Segmentectomia V	V	2	0,8 x 0,2 cm e 2,6 x 2,0 cm
6	Bissegmentectomia IV e V	IV e V	4	10 x 8 e 0,5 cm (3 nódulos)
7	Bissegmentectomia II e III + nodulectomia em segmento IV	II, III e IV	2	10 x 8 e 1.5 x 1,8 cm
8	Bissegmentectomia II e III	II e III	1	14 x 11 cm
9	Trissetorectomia esquerda + Segmentectomia I	I, II, III, IV,V e VIII	1	15 x 12 cm
10	Hepatectomia direita	V, VI, VII e VIII	1	13 x 11 cm
11	Hepatectomia direita	V, VI, VII e VIII	1	15 x 12 cm
12	Segmentectomia VI + Nodulectomia em segmento VII	VII e VI	2	5 x 5 e 0,8 x 0,7 cm
13	Segmentectomia V	V	1	5,5 x 5,5 cm
14	Segmentectomia VI + Nodulectomia entre os segmentos II e III	VI e II, III	2	4,5 x 4,5 e 1,2 x 1,2 cm

Gonzalez AM, et al – Einstein 2014;2:292-7

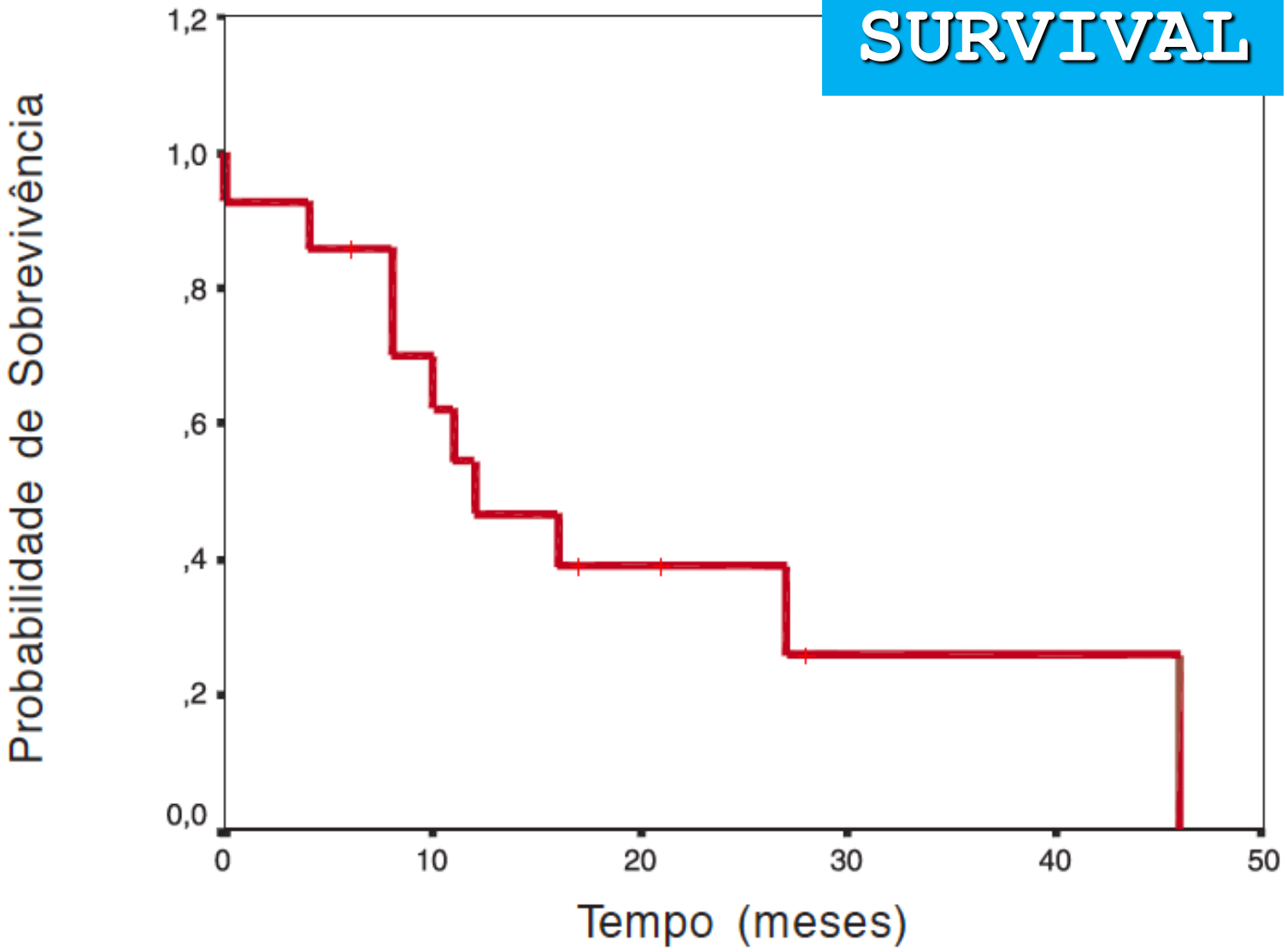
LIVER RESECTION



Gonzalez AM, et al - Einstein 2014;2:292-7

LIVER RESECTION

SURVIVAL



Gonzalez AM, et al – Einstein 2014;2:292-7

ABCDDV/1184

ABCD Arq Bras Cir Dig
2016;29(2):105-108
DOI: /10.1590/0102-6720201600020010

Original Article

INFLUENCE OF HEPATOCELLULAR CARCINOMA ETIOLOGY IN THE SURVIVAL AFTER RESECTION

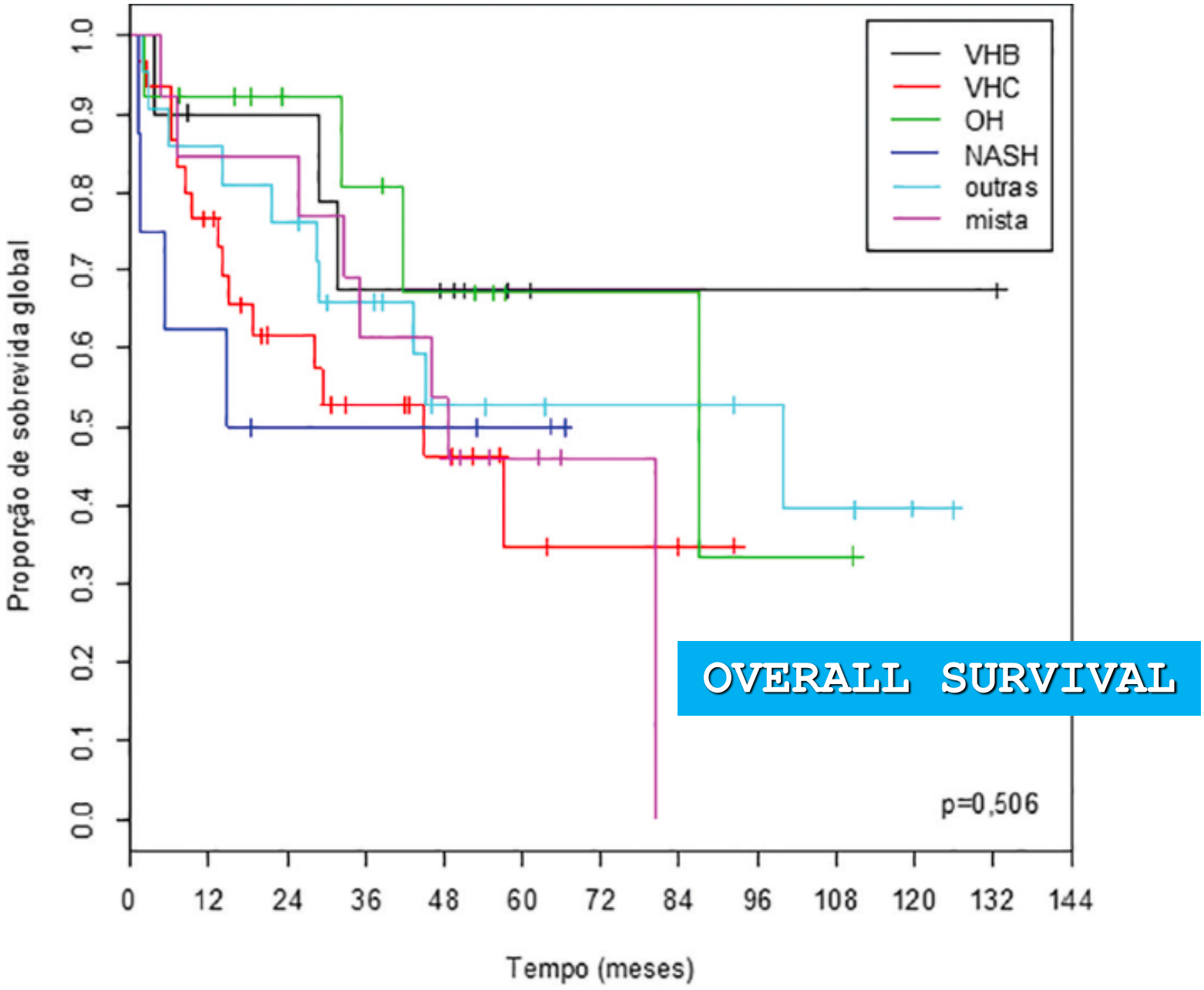
Influência da causa do carcinoma hepatocelular na sobrevida de pacientes após ressecção

Felipe de Lucena Moreira **LOPES** , Fabricio Ferreira **COELHO**, Jaime Arthur Pirolla **KRUGER**, Gilton Marques **FONSECA**, Raphael Leonardo Cunha de **ARAUJO**, Vagner Birk **JEISMANN**, Paulo **HERMAN**

TABLE 1 - Disease characteristics among patients with HCC

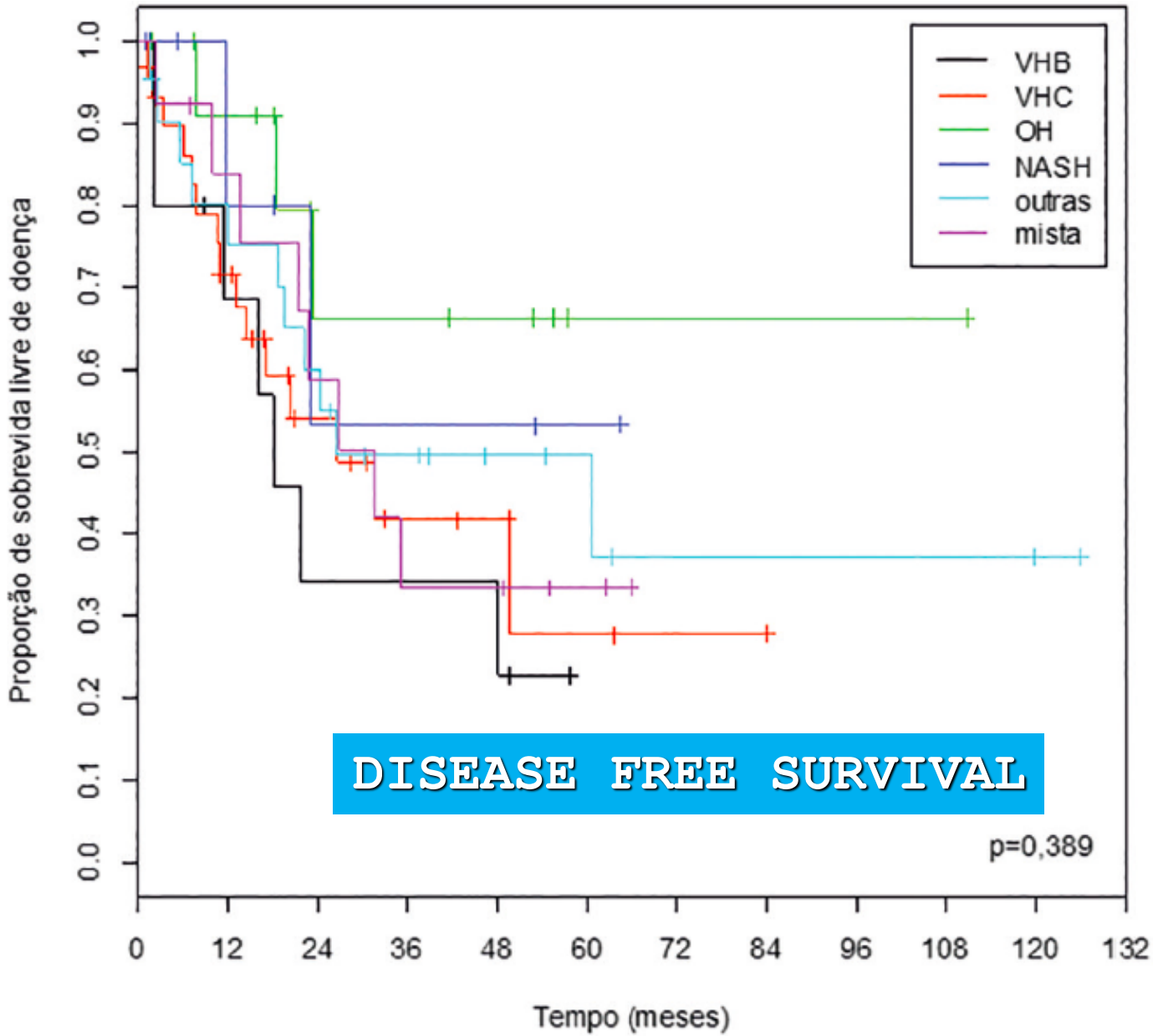
		n	%
Etiology	HBV	11	10.9
	HCV	34	33.7
	alcohol	13	12.9
	NASH	8	7.9
	mixed	14	13.9
	others	21	20.8
	Total	101	100.0
Cirrhosis	yes	77	76.2
	no	24	23.8
	Total	101	100.0
Nodule (cm)	n	98	
	average	6.8	
	median	4.8	
	minimum-maximum	0.5-24.0	
	standard deviation	5.1	

Lopes FLM, et al – Arq Bras Cir Dig 2016;29:105-8



OVERALL SURVIVAL

Lopes FLM, et al - Arq Bras Cir Dig 2016;29:105-8



Lopes FLM, et al - Arq Bras Cir Dig 2016;29:105-8

LAPAROSCOPIC LIVER RESECTION

JOURNAL OF LAPAROENDOSCOPIC & ADVANCED SURGICAL TECHNIQUES
Volume 24, Number 4, 2014

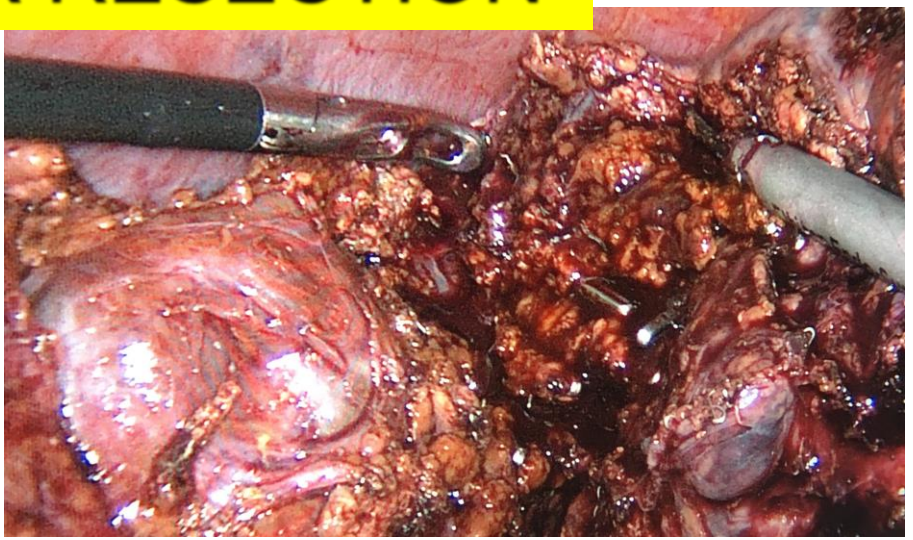
DOI: 10.1089/lap.2013.0502

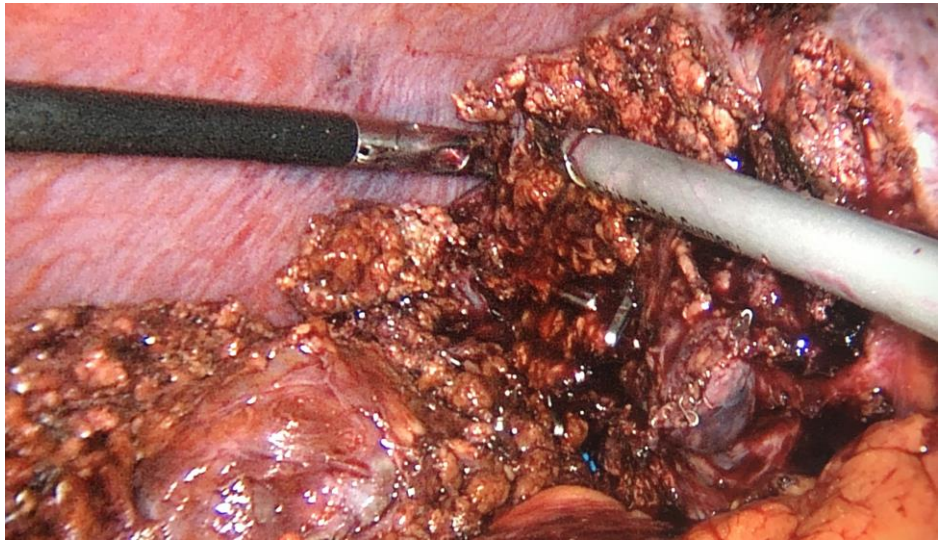
Laparoscopic Resection of Hepatocellular Carcinoma: When, Why, and How? A Single-Center Experience

Paulo Herman, MD, Marcos Vinicius Perini, MD, Fabricio Ferreira Coelho, MD, Jaime Arthur Pirolla Kruger, MD, Renato Micelli Lupinacci, MD, Gilton Marques Fonseca, MD, Felipe de Lucena Moreira Lopes, MD, and Ivan Cecconello, MD

Herman P, et al. J Lap Adv Surg Tech 2014;24:223-228

LAPAROSCOPIC LIVER RESECTION





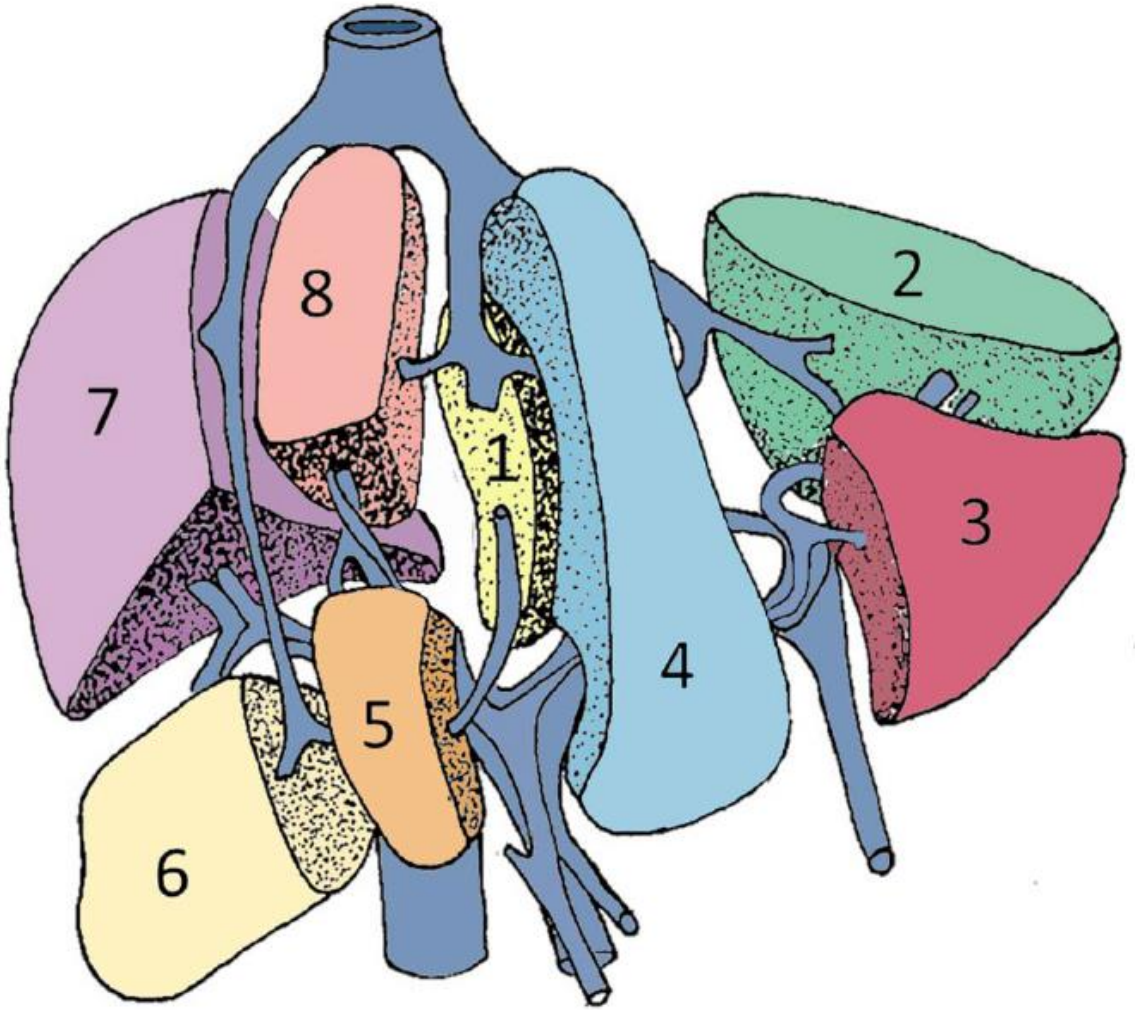
LAPAROSCOPIC LIVER RESECTION

- Solitary nodule, smaller than 5 cm in diameter
- Preserved liver function (Child–Pugh Class A)
- Peripheral location on the liver
- Resection of up to two segments of the liver
- Platelet count of >100,000/mL
- American Society of Anesthesiologists score lower than 3
- Patients with portal hypertension and esophageal varices Grade 1 or 2 (with platelet count of >100,000/mL) in Child Class A patients were not excluded.

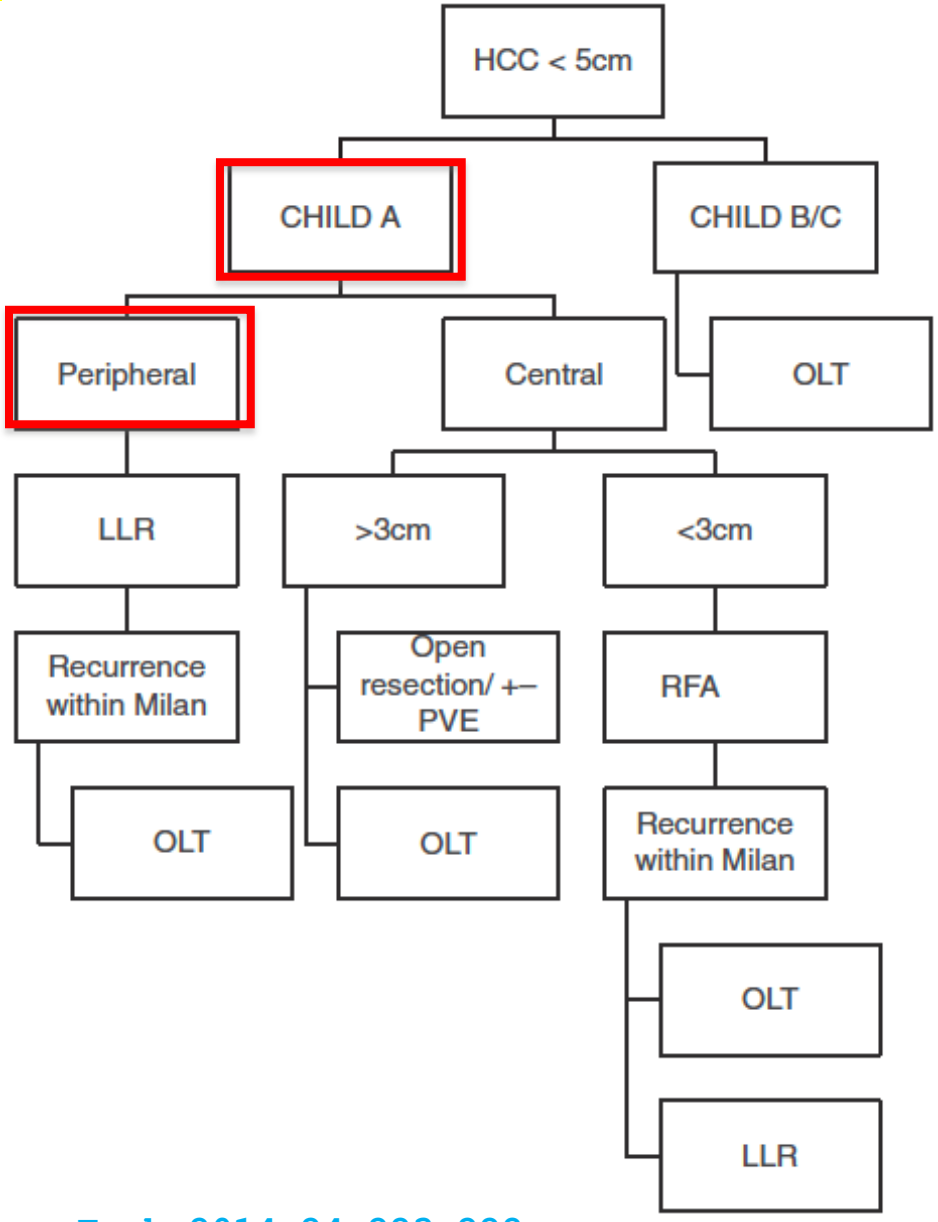
Herman P, et al. J Lap Adv Surg Tech 2014;24:223-228

LAPAROSCOPIC LIVER RESECTION

LAPAROSCOPIC SEGMENTS



LAPAROSCOPIC LIVER RESECTION



Herman P, et al. J Lap Adv Surg Tech 2014;24:223-228

LAPAROSCOPIC LIVER RESECTION

TABLE 1. DEMOGRAPHIC, PREOPERATIVE, AND SURGICAL DATA OF PATIENTS WITH HEPATOCELLULAR CARCINOMA WHO UNDERWENT LAPAROSCOPIC LIVER RESECTION

	n	%
Gender		
Male	21	70
Female	9	30
Cirrhosis etiology		
HCV	17	56
HCB	6	20
NASH	3	10
Alcohol	3	10
Unknown	1	3
Type of resection		
Anatomical	20	66
Nonanatomical	10	33
Blood transfusion		
Yes	6	20
No	24	80
Postoperative complication (by Clavien–Dindo classification)		
No	18	60
Yes	12	40
Grade I	9	
Grade II	1	
Grade IVb	2	

HCV, hepatitis B virus; HCV, hepatitis C virus; NASH, nonalcoholic steatohepatitis.

Herman P, et al. J Lap Adv Surg Tech 2014;24:223-228

LAPAROSCOPIC LIVER RESECTION

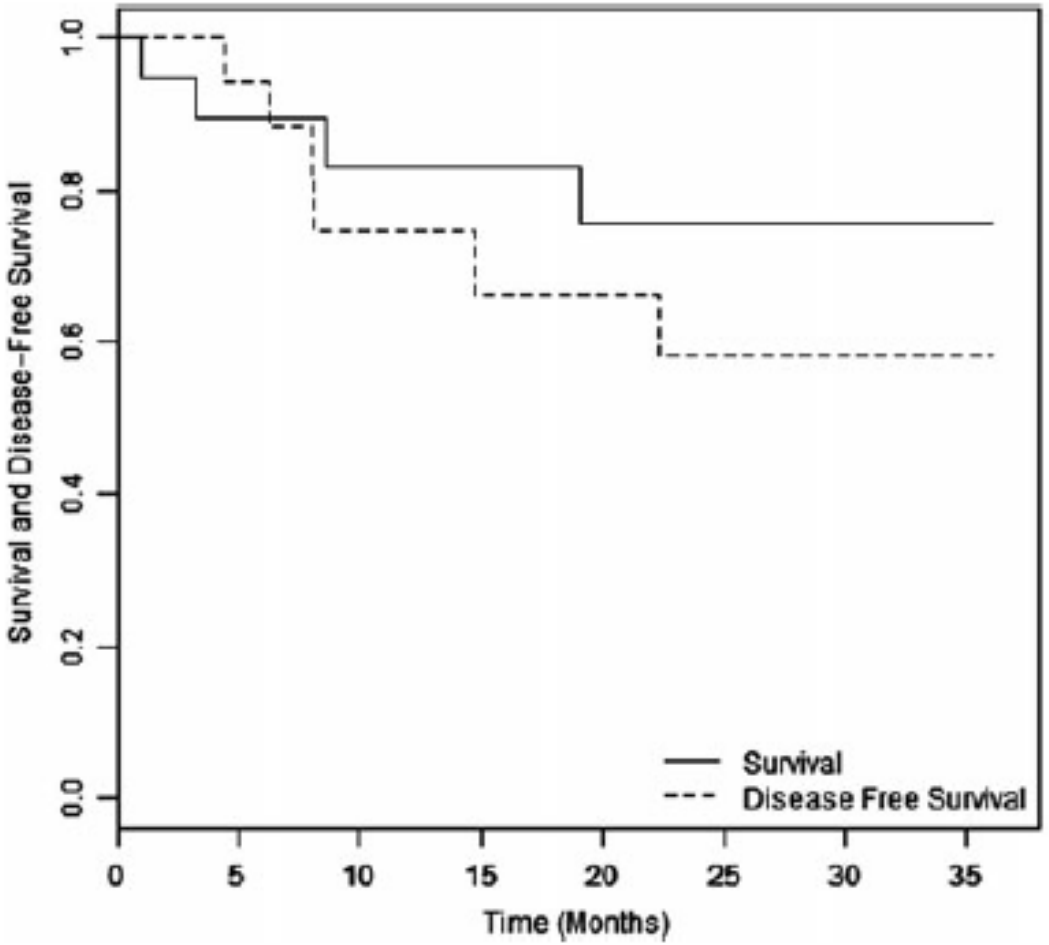
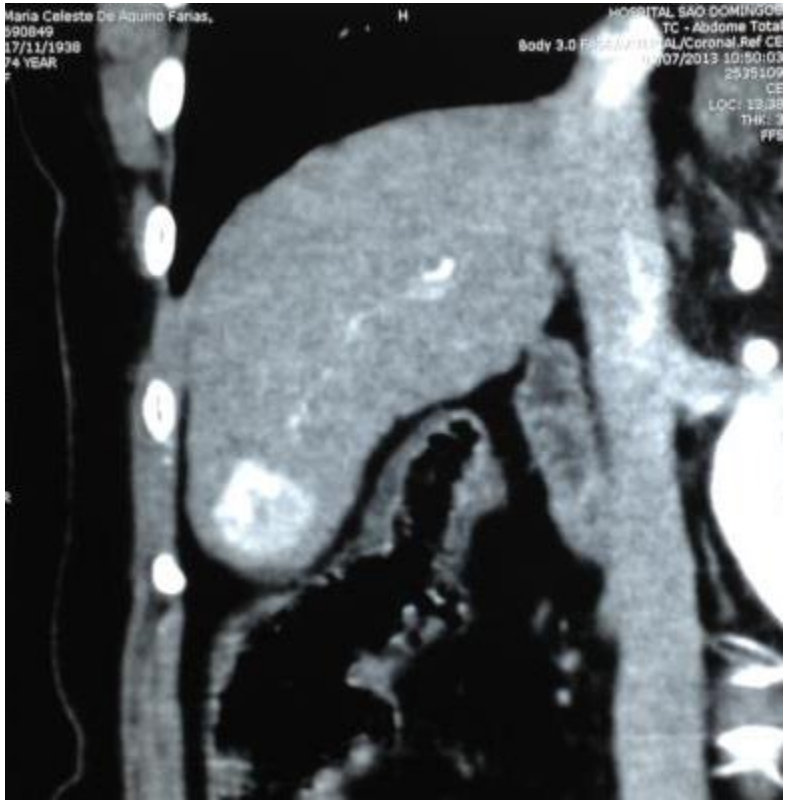


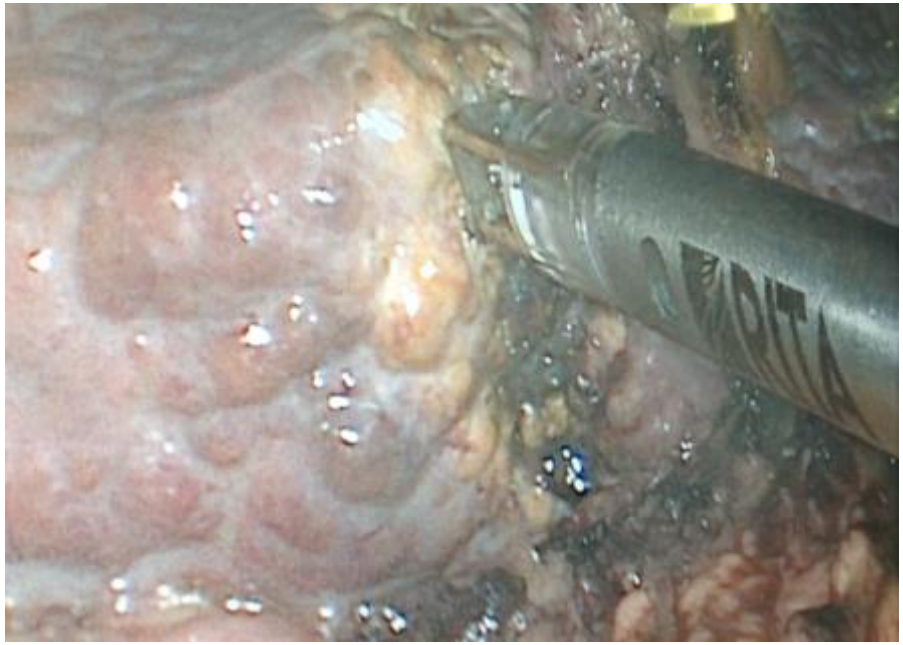
FIG. 2. Overall survival and disease-free survival curves for patients with hepatocellular carcinoma subjected to laparoscopic liver resection.

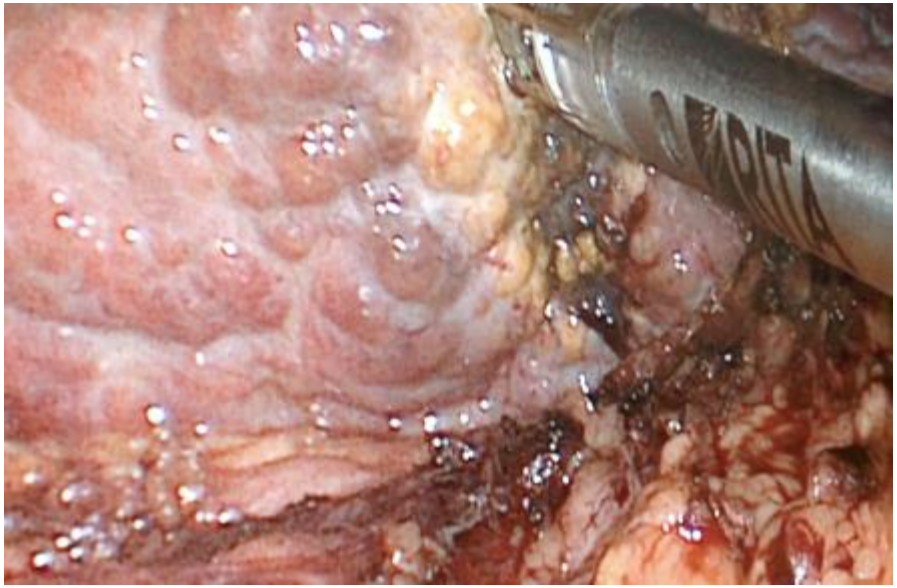
Herman P, et al. J Lap Adv Surg Tech 2014;24:223-228



HABIB TECHNIQUE

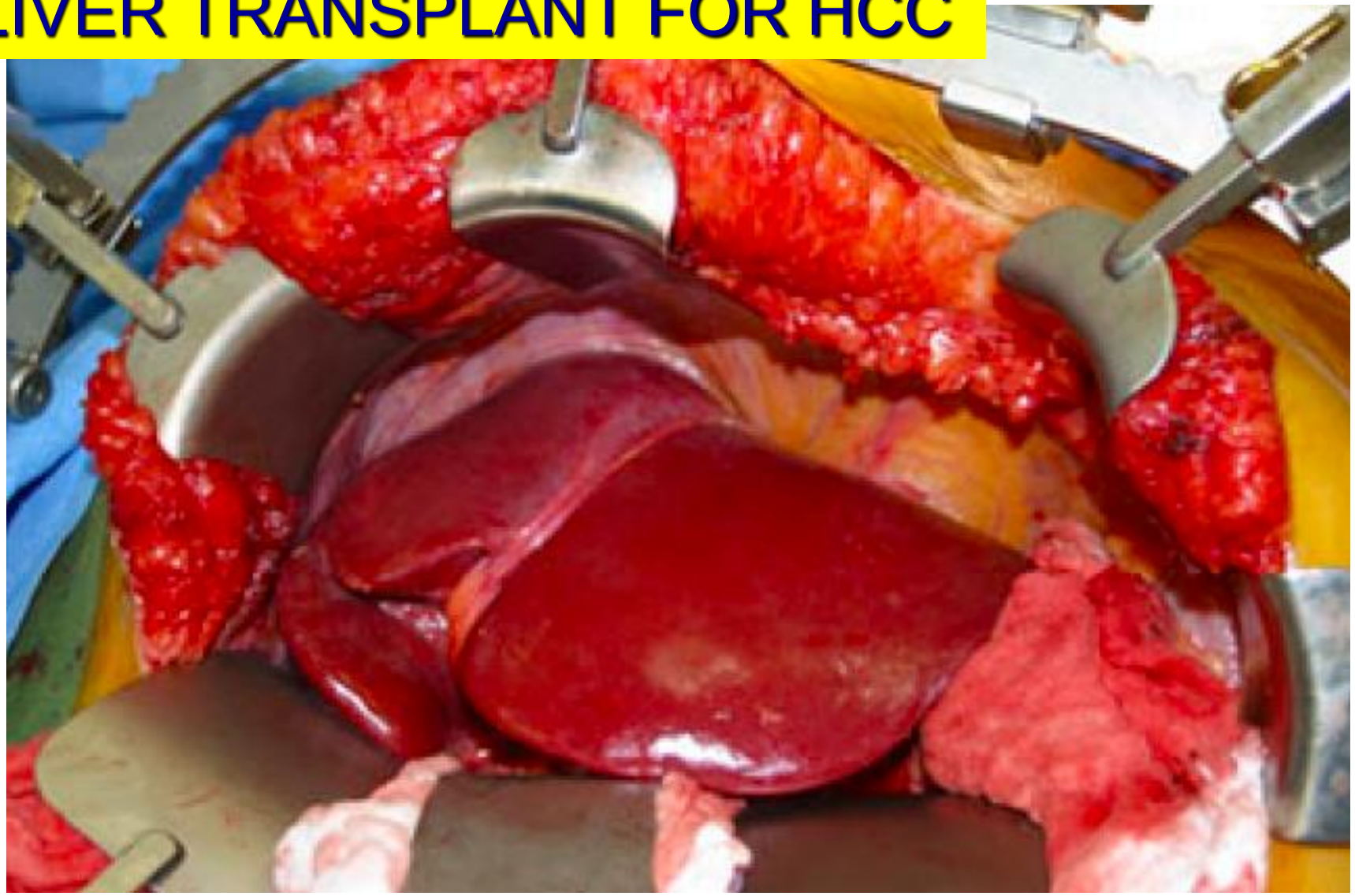
72 yo female
Chronic liver disease
Lesion 6.5 cm S6
Child A5, MELD 8
Pl 157.000

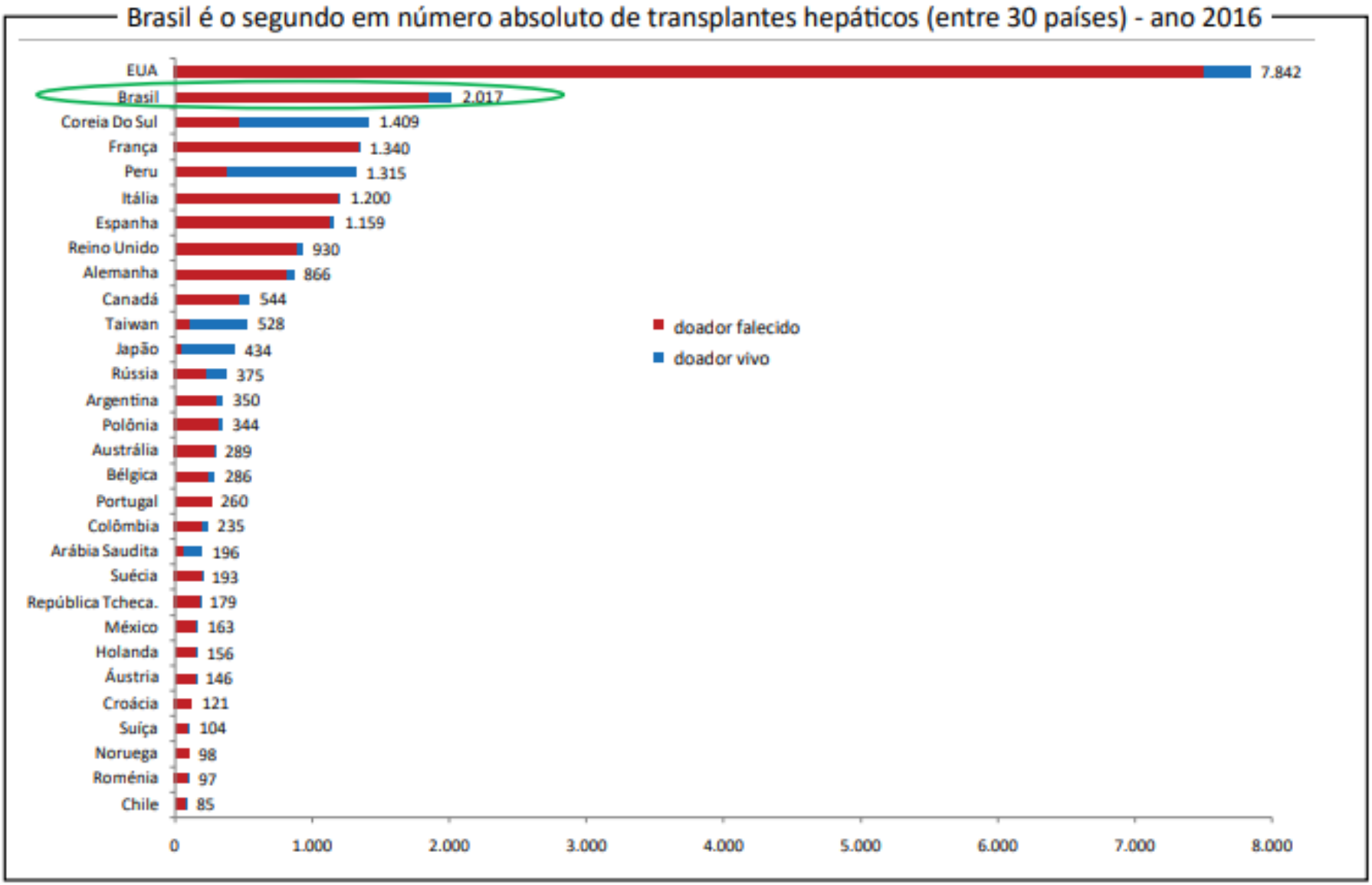


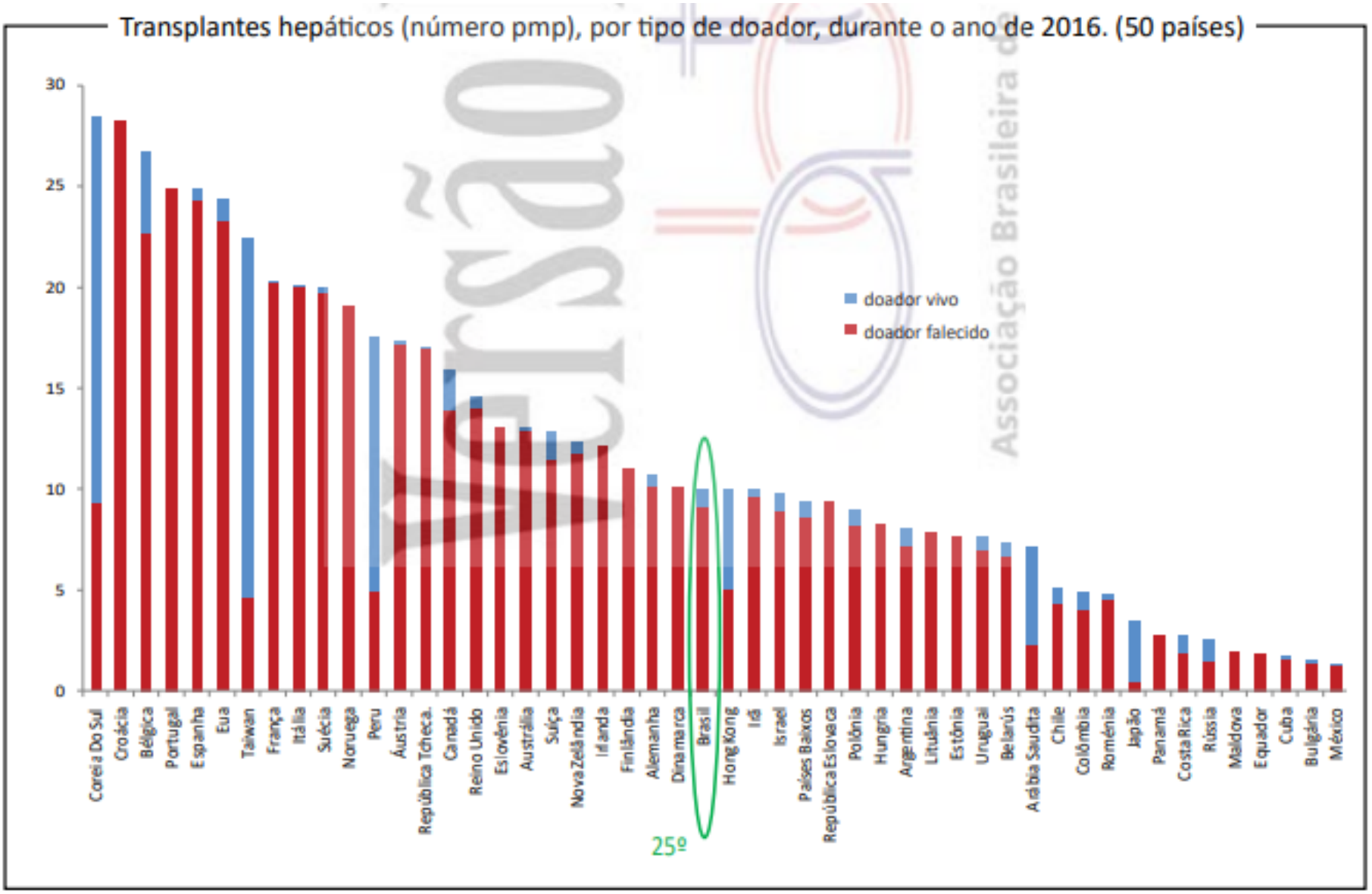


Laparoscopic hepatectomy
Habib device
No morbidity

LIVER TRANSPLANT FOR HCC




Brasil é o segundo em número absoluto de transplantes hepáticos (entre 30 países) - ano 2016
EUA 7.842
Brasil 2.017
Coreia Do Sul 1.409
França 1.340
Peru 1.315
Itália 1.200
Espanha 1.159
Reino Unido 930
Alemanha 866
Canadá 544
Taiwan 528
Japão 434
Rússia 375
Argentina 350
Polônia 344
Austrália 289
Bélgica 286
Portugal 260
Colômbia 235
Arábia Saudita 196
Suécia 193
República Tcheca. 179
México 163
Holanda 156
Áustria 146
Croácia 121
Suíça 104
Noruega 98
Roménia 97
Chile 85
doador falecido
doador vivo
0
1.000
2.000
3.000
4.000
5.000
6.000
7.000
8.000


Transplantes hepáticos (número pmp), por tipo de doador, durante o ano de 2016. (50 países)
30
25
20
15
10
5
0
doador vivo
doador falecido
Coreia Do Sul
Croácia
Bélgica
Portugal
Espanha
Eua
Taiwan
França
Itália
Suécia
Noruega
Peru
Áustria
República Tcheca.
Canadá
Reino Unido
Eslovênia
Austrália
Suíça
Nova Zelândia
Irlanda
Finlândia
Alemanha
Dinamarca
Brasil
Hong Kong
Islândia
Israel
Países Baixos
República Eslovaca
Polônia
Hungria
Argentina
Lituânia
Estônia
Uruguai
Belarus
Arábia Saudita
Chile
Colômbia
Romênia
Japão
Panamá
Costa Rica
Rússia
Maldova
Equador
Cuba
Bulgária
México
25º

LIVER TRANSPLANT PROGRAMS – 64

São Paulo > 50%

RBT

Registro Brasileiro de Transplantes

Veículo Oficial da Associação Brasileira de Transplante de Órgãos

Ano XXIV Nº 2

Dados Números da doação de órgãos e transplantes realizados por estado e instituição no período:

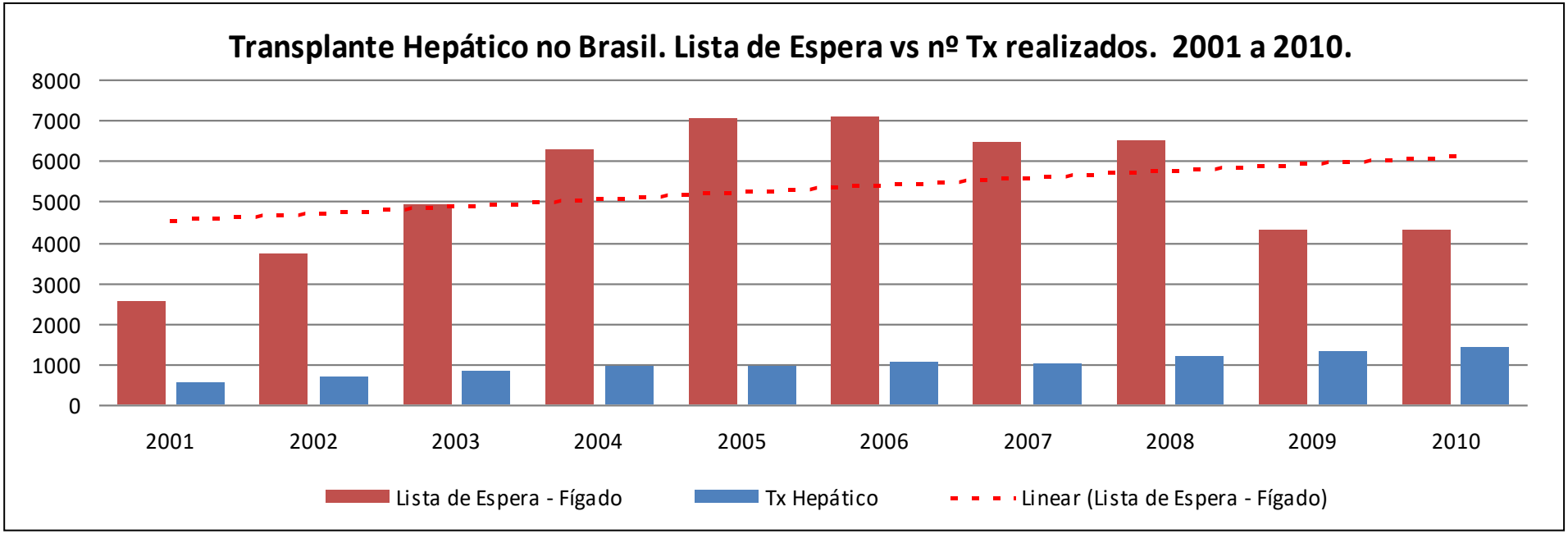
JANEIRO / JUNHO - 2018

Liver transplant for HCC

- 18-34%

LIVER TRANSPLANT FOR HCC

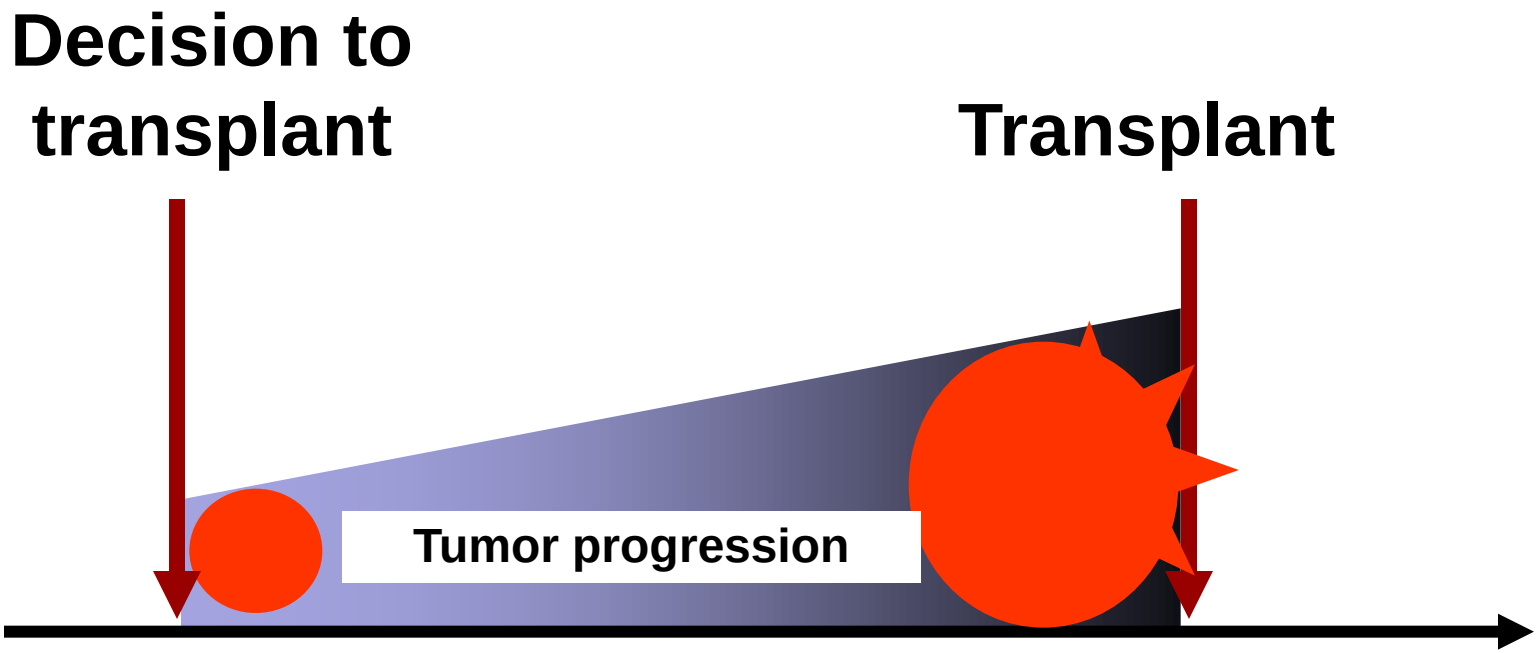
NEED FOR LIVER TRANSPLANT IN BRAZIL



Tx Fígado - Brasil		
Nº Tx em 2010:	**1413**	
Lista de Espera - 2010:	**4304**	
% Tx 2010/Lista de Espera:		**33%**

ORGANS SHORTAGE

LIVER TRANSPLANT FOR HCC



Loss of indication: 4% / month (15-33%)

Yao FY, et al. Liver Transpl. 2002
Roayaie S et al. Clin Liver Dis 2005

Número absoluto de transplantes	2010	2011	2012	2013	2014	2015	2016	2017
CÓRNEA	12.778	14.726	15.280	13.744	13.065	13.830	14.534	15.242
RIM	4.656	4.982	5.431	5.464	5.661	5.589	5.514	5.929
doador vivo	*1.655*	*1.652*	*1.501*	*1.386*	*1.385*	*1.189*	*1.217*	*1.136*
doador falecido	*3.001*	*3.330*	*3.930*	*4.078*	*4.276*	*4.400*	*4.297*	*4.793*
FÍGADO	1.413	1.496	1.602	1.725	1.757	1.809	1.882	2.109
PÂNCREAS	133	181	153	143	128	120	135	112
CORAÇÃO	166	160	228	271	311	353	357	380
PULMÃO	61	49	69	80	67	74	92	112

LDLT

ÓRGÃOS

Órgãos	Total	Vivo	Falecido	PMP	Nº Equipes
Coração	189		189	1,8	31
Fígado	1087	85	1002	10,5	64
Pâncreas	15		15	0,4	9
Pâncreas/Rim	43		43	0,2	
Pulmão	65	0	65	0,6	6
Rim	2858	472	2386	27,5	118
Total	4.257	557	3.700		

- Living donor **7.81%**

Liver transplant

- Mortality 26.78%
- Period Jan-Jun 2018

		FÍGADO	
		Total	*Pediátrico*
Total - Brasil	Ingresso	1.527	*118*
	Mortalidade	409	*11*

ABCDDV/1251

ABCD Arq Bras Cir Dig
2016;29(4):240-245
DOI: /10.1590/0102-6720201600040007

Original Article

LIVER TRANSPLANTATION FOR CARCINOMA HEPATOCELLULAR IN SÃO PAULO: 414 CASES BY THE MILAN/ BRAZIL CRITERIA

O transplante hepático por hepatocarcinoma na era MELD em São Paulo: análise de 414 casos transplantados pelo critério de Milão/Brasil

Gustavo Pilotto D. **SÁ**[1], Fernando P. P. **VICENTINE**[1,2], Alcides A. **SALZEDAS-NETTO**[1,2], Carla Adriana Loureiro de **MATOS**[2], Luiz R. **ROMERO**[2], Dario F. P. **TEJADA**[2], Paulo Celso Bosco **MASSAROLLO**[3], Gaspar J. **LOPES-FILHO**[1,2], Adriano M. **GONZALEZ**[1,2]

- **Milan/Brazil criteria for HCC**
  - **Nodules < 2 cm are excluded**

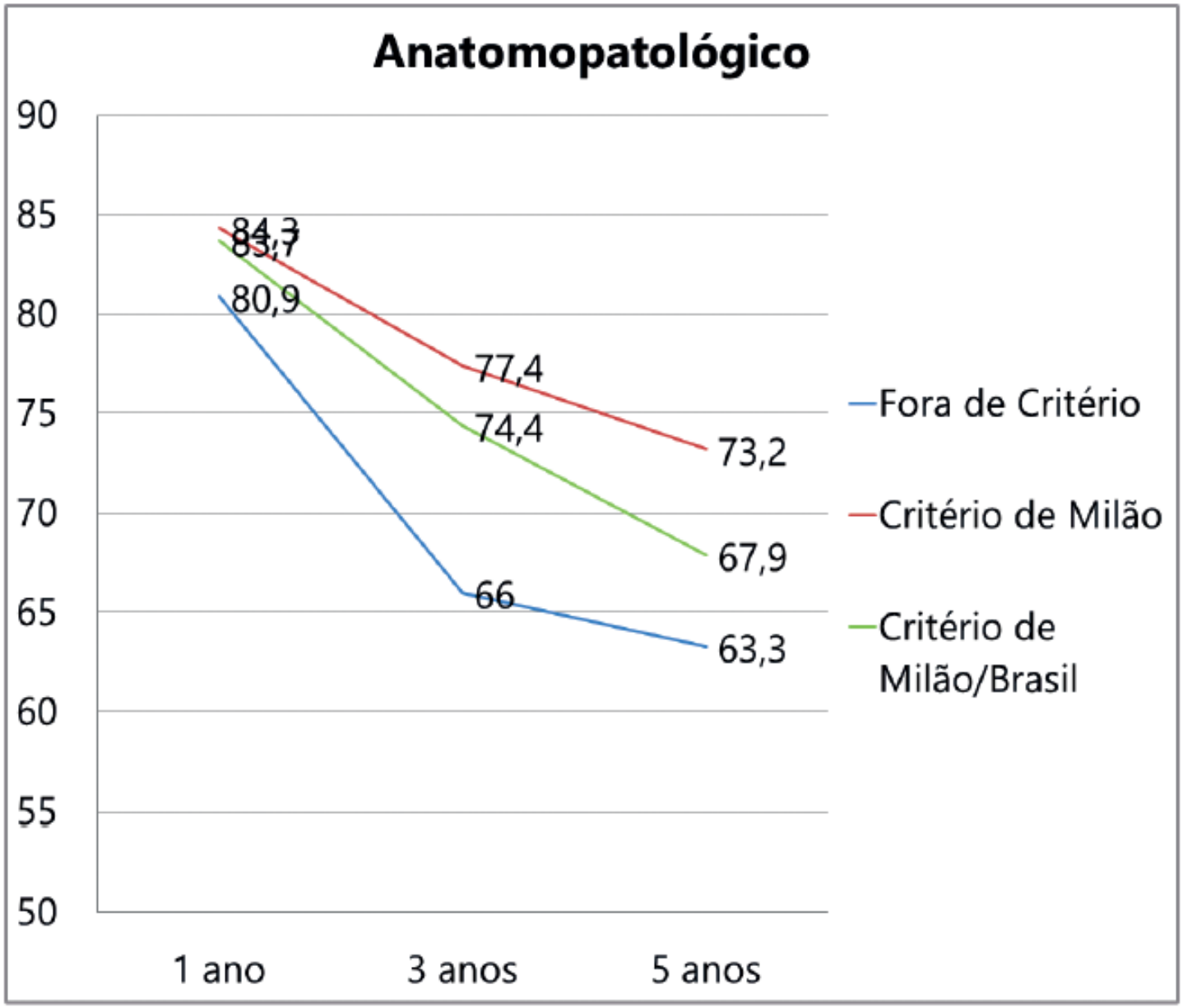
	n	Nodule	Size (cm)	Exams
Milan (16)	48	1 or 2 - 3	≤ 5 or ≤ 3 (each)	-
UCSF (19)	70	1 or 2 - 3	≤ 6,5 ou ≤ 4,5 (sum ≤ 8)	-
Navarro (20)	47	1 or 2 - 3	≤ 6 ou ≤ 5	-
Kyoto (21)	125	≤ 10	≤ 5 (each)	PIVKA-^{II} < 400 (mU/mL)
Asan (22)	221	≤ 6	≤ 5 (each)	-
Edmonton (23)	52	-	Total volume ≤ 115 cm3	-
Valencia (24)	257	≤ 3	≤ 5 (sum ≤ 10)	-
Hangzhou (25)	195	-	Total ≤ 8 cm	-
			Total > 8cm	AFP ≤ 400, degree I/II (BX)
Up – to – seven (26)	1556	≤ 7	≤ 7 (soma)	-
Toronto (27)	294	Milan	Milan	-
		-	-	pathological criteria
Milan/Brazil	414	1 or 2 - 3	≤ 5 or ≤ 3 (each)	-
		(excluding nodules < 2cm)		

Sa GPD, et al. Arq Bras Cir Dig 2016;29:240-245

TABLE 2 - Distribution of patients by Milan criteria in accordance with Milan/Brazil criteria

Milan/Brazil criteria	Milan criteria				Total	
	No		Yes			
	n	%	n	%	n	%
Total	62	15,0%	352	85,0%	414	100,0%
No	29	100,0%	0	0,0%	29	100,0%
Yes	33	8,6%	352	91,4%	385	100,0%

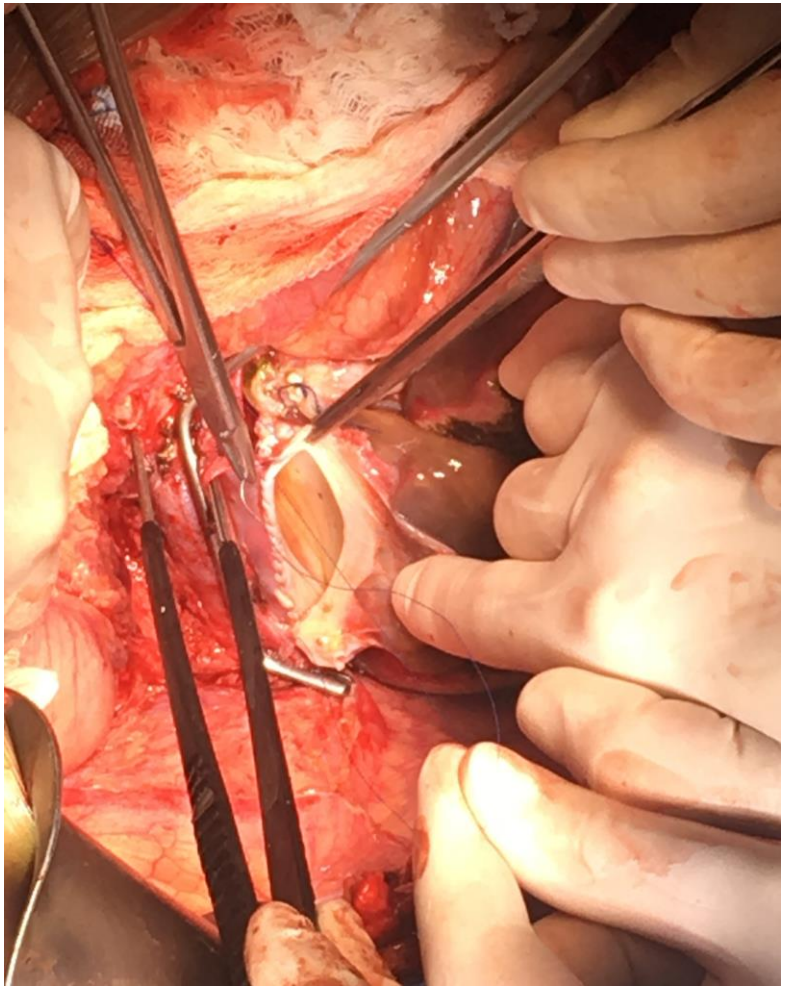
Kappa 0,6 - p<0,00

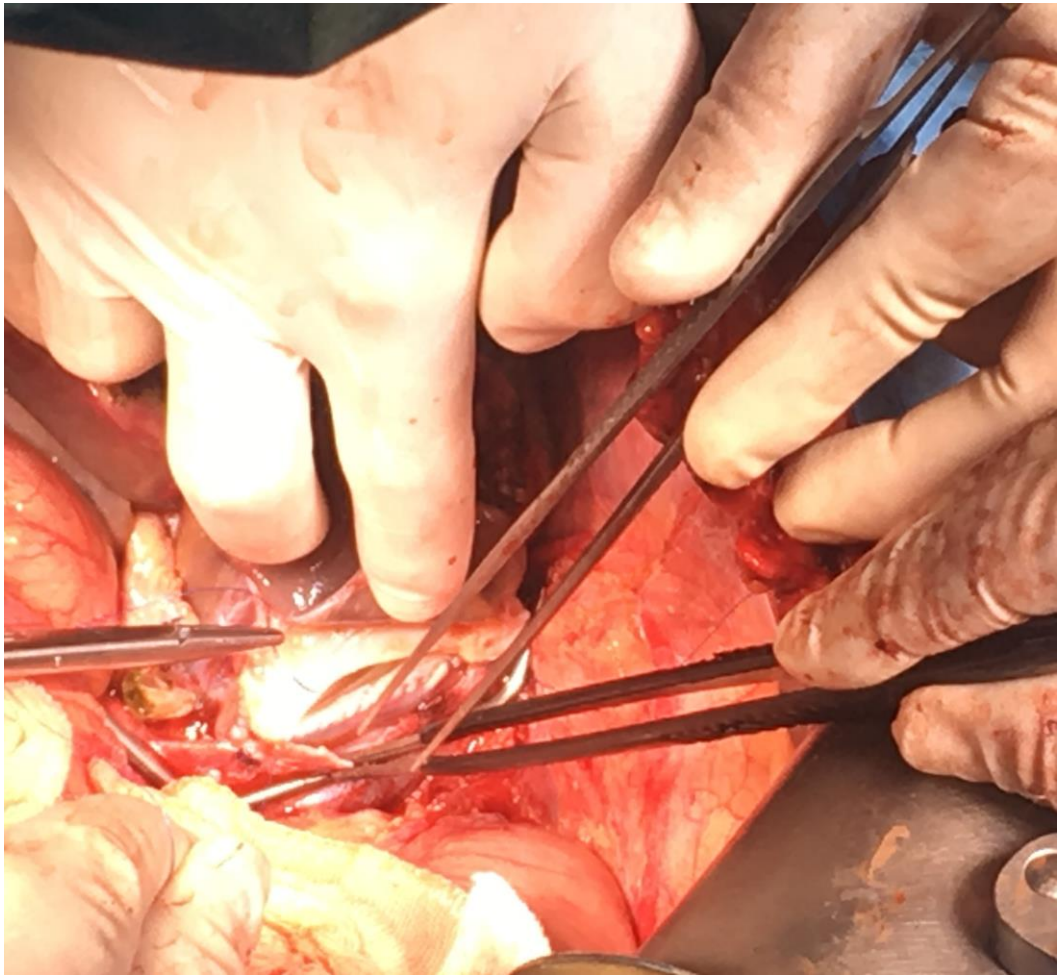


Sa GPD, et al. Arq Bras Cir Dig 2016;29:240-245

Technique

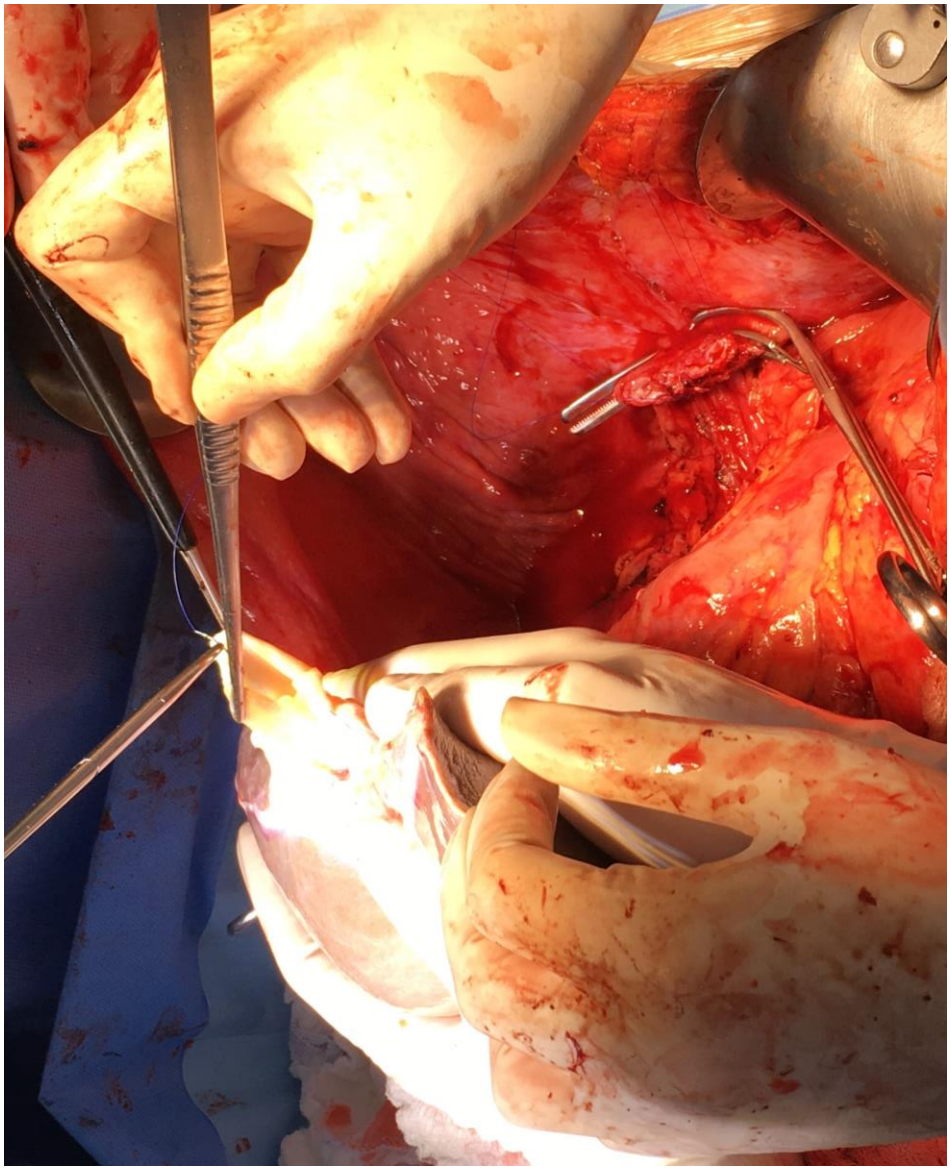
- Piggy-back (> 85%)
- Piggy-back (Belghiti)
- Classic (Standard)

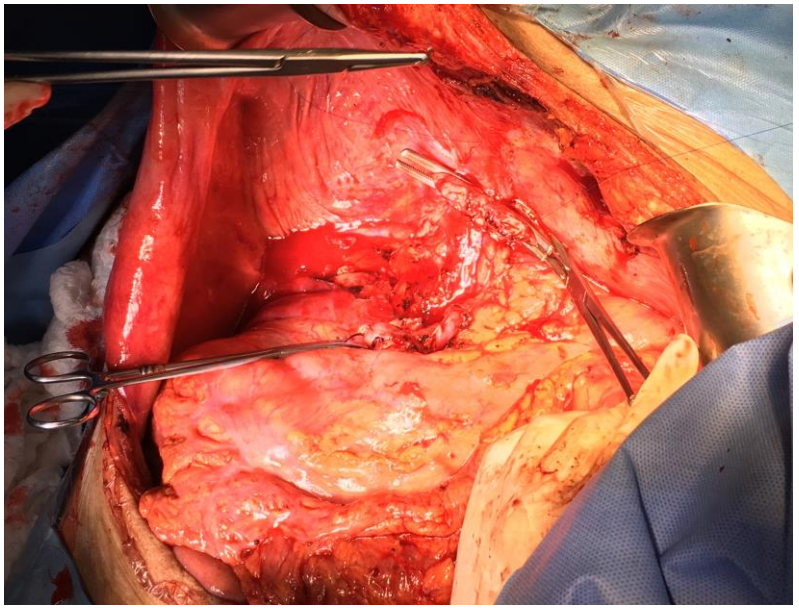


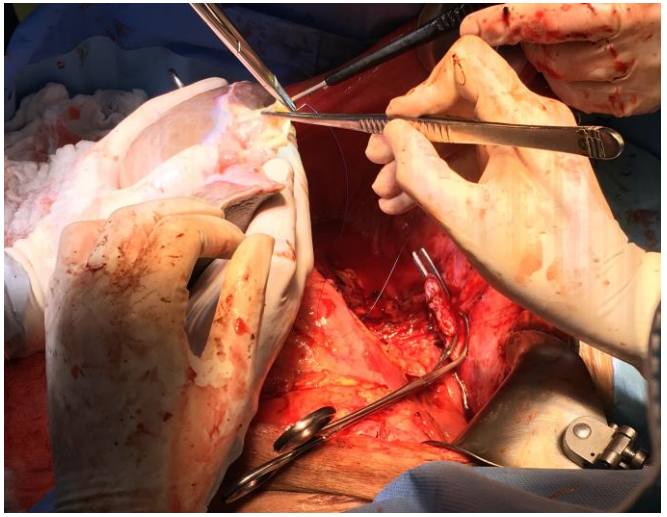


- **Piggy-back (Belghiti)**

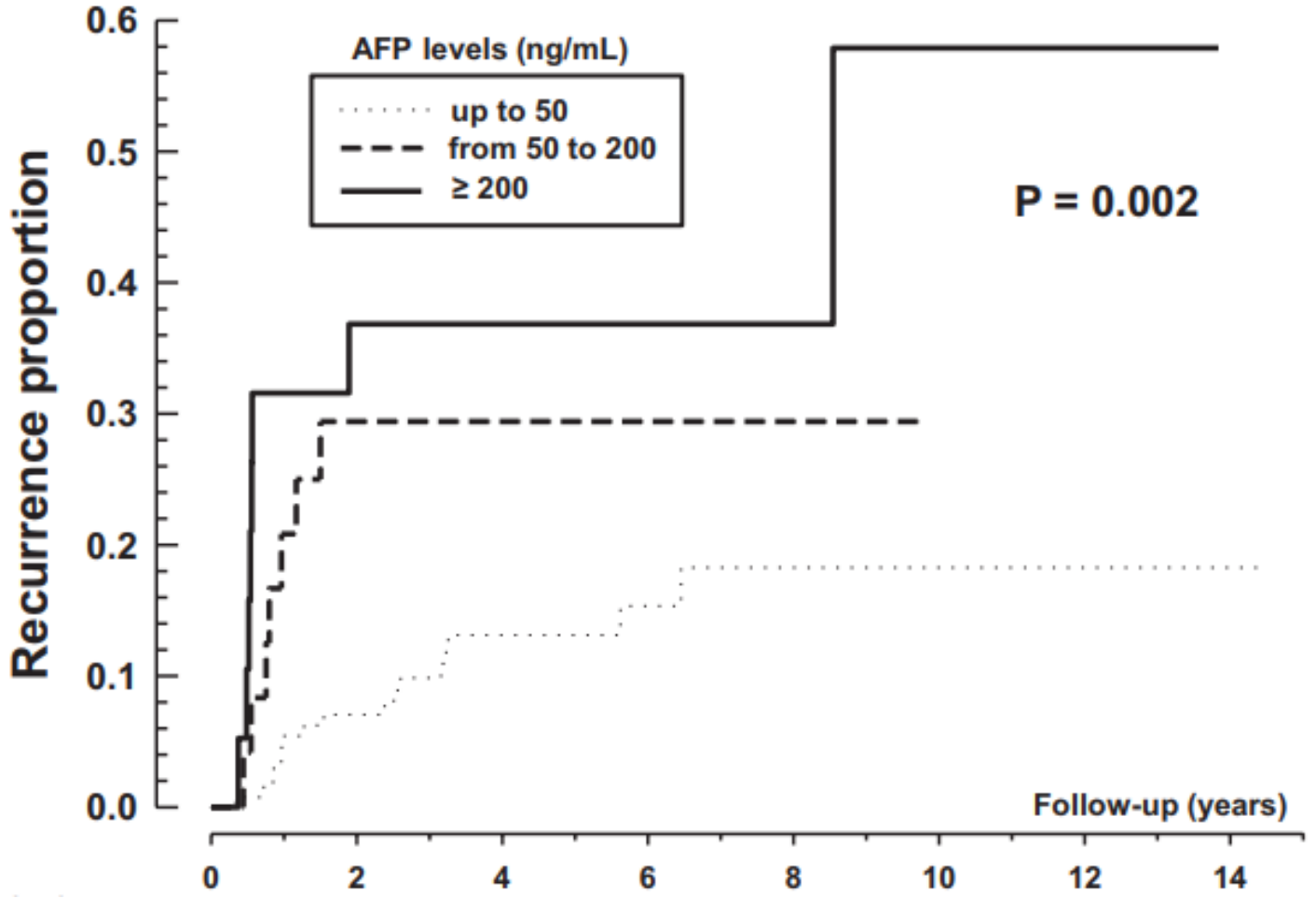
Classic (Standard)







Alpha-fetoprotein



- AFP ≥ 1.000 ng/mL are not included in the list

Schraiber LS, et al. Medicine 2016;95:1-7

RADIOFREQUENCY ABLATION

Table 1. Primary and secondary liver malignancies treated by open and percutaneous RFA

Tumor histology	Open (n = 125)	Percuta-neous (n = 26)	Total (n = 151)
Colorectal adenocarcinoma	62	6	68
HCC	45	13	58
Neuroendocrine tumor	6	0	6
Breast cancer	3	2	5
Adenoma	2	2	4
Cholangiocarcinoma	3	1	4
Kidney cancer	1	0	1
Pancreatic adenocarcinoma	1	0	1
Carcinoid tumor	0	1	1
Endometrial cancer	1	0	1
Thyroid cancer	1	0	1
Leiomyosarcoma	0	1	1
Total	125	26	151

38.4%

Fonseca AZ, et al. Oncology 2015;89:332-6

RADIOFREQUENCY ABLATION

Liver transplantation	16.6%
Liver resection	7.0%
RFA or Ethanol injection	44.5%
TACE	12.5%
Paliative care	19.4%

Paranagua-Vezozzo DC, et al. Ann Hepatol 2014;13:386-93

RADIOFREQUENCY ABLATION

Clinical Study

Oncology

Oncology 2015;89:332–336
DOI: 10.1159/000439089

Received: July 19, 2015
Accepted after revision: July 30, 2015
Published online: September 30, 2015

Complications after Radiofrequency Ablation of 233 Hepatic Tumors

Alexandre Zanchenko Fonseca William Abrao Saad
Marcelo Augusto Ribeiro Jr.

Department of General Surgery, University of Santo Amaro, São Paulo, Brazil

Fonseca AZ, et al. Oncology 2015;89:332-6

RADIOFREQUENCY ABLATION

Table 3. Complications after RFA of primary and secondary liver malignancies according to the type of approach

Complications	Open (n = 125)	Percutaneous (n = 26)	Total (%)
Ascites	14	1	15 (38.4)
Wound infection	5	1	6 (15.4)
Liver failure	4	0	4 (10.2)
Pneumonia	3	0	3 (7.7)
Biliary fistula	1	0	1 (2.5)
Bile duct injury	1	0	1 (2.5)
Skin burn	1	0	1 (2.5)
Kidney insufficiency	1	0	1 (2.5)
CVC infection	1	0	1 (2.5)
Pleural effusion	1	0	1 (2.5)
Bowel obstruction	1	0	1 (2.5)
Urinary tract infection	1	0	1 (2.5)
Jaundice	1	0	1 (2.5)
Bradycardia	0	1	1 (2.5)
Arterioportal shunt	0	1	1 (2.5)
Total	35	4	39

CVC = Central venous catheter.

Fonseca AZ, et al. Oncology 2015;89:332-6

RADIOFREQUENCY ABLATION

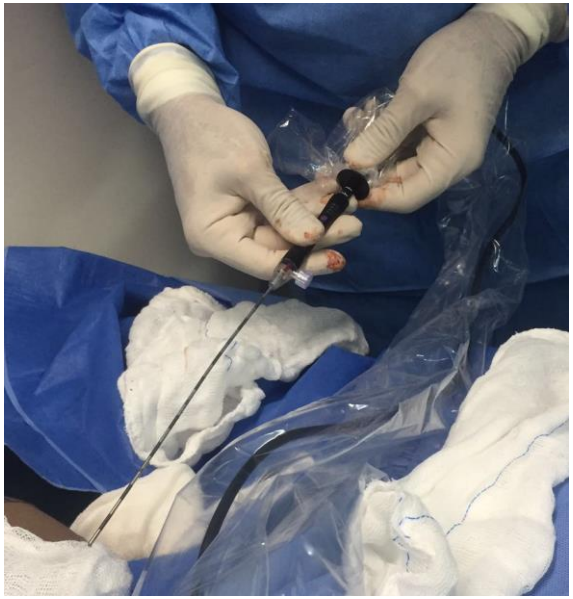
Table 4. Complications after RFA of primary and secondary liver malignancies according to tumor histology

Complications	HCC (n = 58)	CRM (n = 68)	Other (n = 25)
Ascites	14	0	1
Wound infection	1	4	1
Liver failure	3	1	0
Pneumonia	1	2	0
Biliary fistula	0	1	0
Bile duct injury	0	1	0
Skin burn	0	1	0
Kidney insufficiency	0	1	0
CVC infection	0	1	0
Pleural effusion	0	1	0
Bowel obstruction	0	0	1
Urinary tract infection	1	0	0
Jaundice	1	0	0
Bradycardia	1	0	0
Arterioportal shunt	1	0	0
Total	23	13	3

Fonseca AZ, et al. Oncology 2015;89:332-6

80 yo female
4.2 cm HCC in segment 6
Cirrhosis
Child A5, MELD 9
No portal hypertension
Comorbidities

Radiofrequency ablation
Five needles



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Tumor treatment, n (%)		
Liver transplant	25	(10)
Surgical resection	13	(5)
Transarterial chemoembolization	122	(49)
Radiofrequency ablation	3	(1)
Percutaneous ethanol injection	5	(2)
Sorafenin	35	(14)
Symptomatic therapy	68	(28)

Almeida-Carvalho SR, et al. Ann Hepatol 2017 16:255-62

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MINIMALLY INVASIVE THERAPY & ALLIED TECHNOLOGIES, 2017
http://dx.doi.org/10.1080/13645706.2017.1288142

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ORIGINAL ARTICLE

Safety and efficacy of HepaSphere 50–100 μm in the treatment of hepatocellular carcinoma

Charles Edouard Zurstrassen[a], Luiz Paulo De Oliveira Gireli[a], Chiang Jeng Tyng[a], Almir Galvão Vieira Bitencourt[b], Marcos Duarte Guimarães[b], Paula Nicole Vieira Barbosa[b], Aline Cristine Barbosa Santos Cavalcante[a], João Paulo Matushita Junior[a], Mauricio Kauark Amoedo[a], Felipe Jose Coimbra[c], Rogério Camargo Pinheiro Alves[d] and Rubens Chojniak[b]

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Table 2. Rates of local response six months after first chemoembolization session, including target and non-target lesions and new lesions as required by mRECIST criteria.

Type of response	*n* (%)
CR	6 (40%)
PR	2 (13.3%)
SD	6 (40%)
PD	1 (6.7%)
Objective response (CR + PR)	8 (53.3%)

CR: complete response; PD: progressive disease; PR: partial response; SD: stable disease.

Zurstrassen CE, et al. Minim Invas Ther 2017

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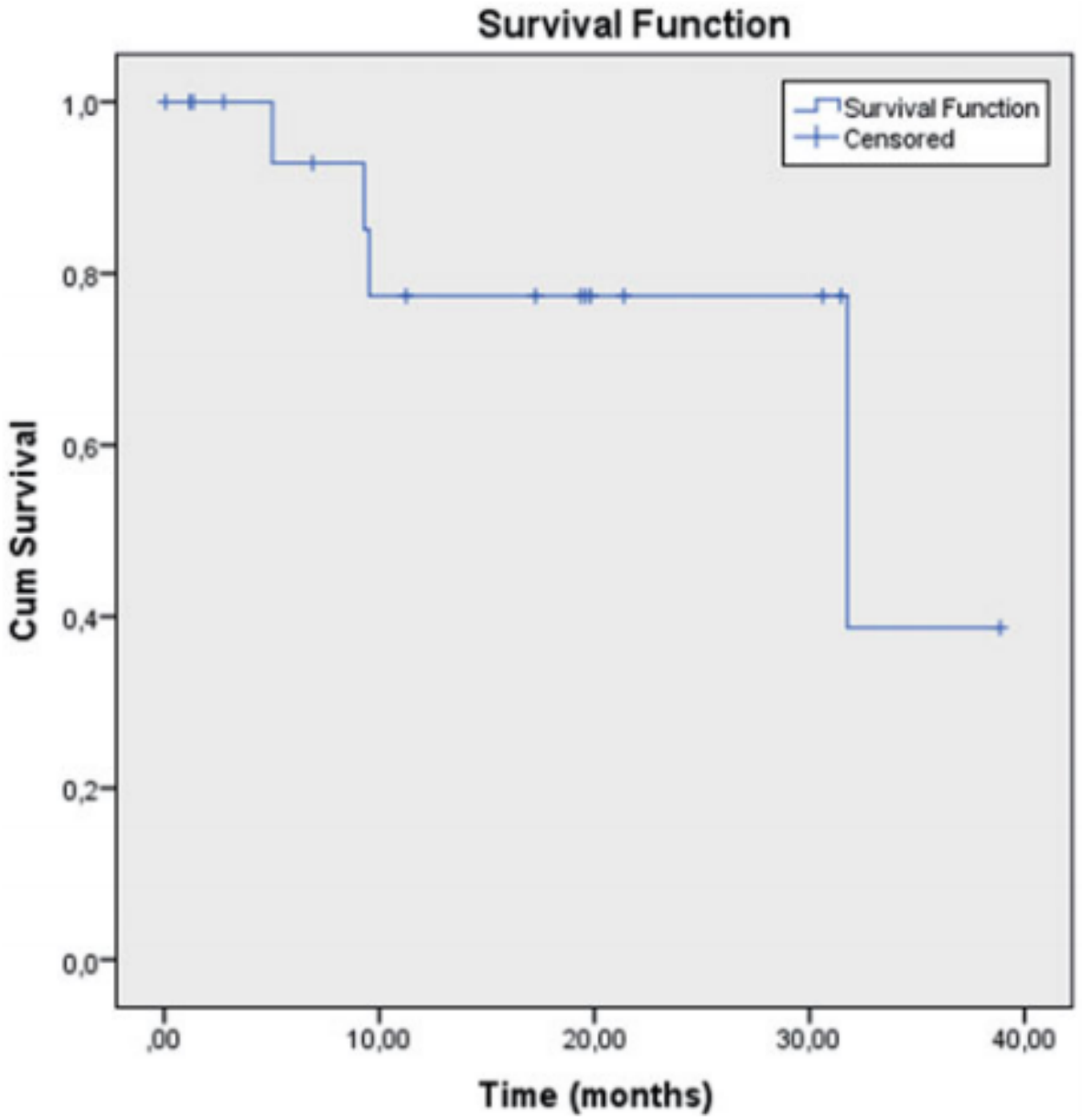

Zurstrassen CE, et al. Minim Invas Ther 2017

HPB Congress

Grazie!

Obrigado!

Thanks!

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