



BREAST CANCER LIVER METASTASES - SURGICAL TREATMENT OPTIONS



Vladislav Treska

Department of Surgery, University Hospital,
Pilsen

Czech Republic

treska@fnplzen.cz

NOTHING TO DISCLOSE

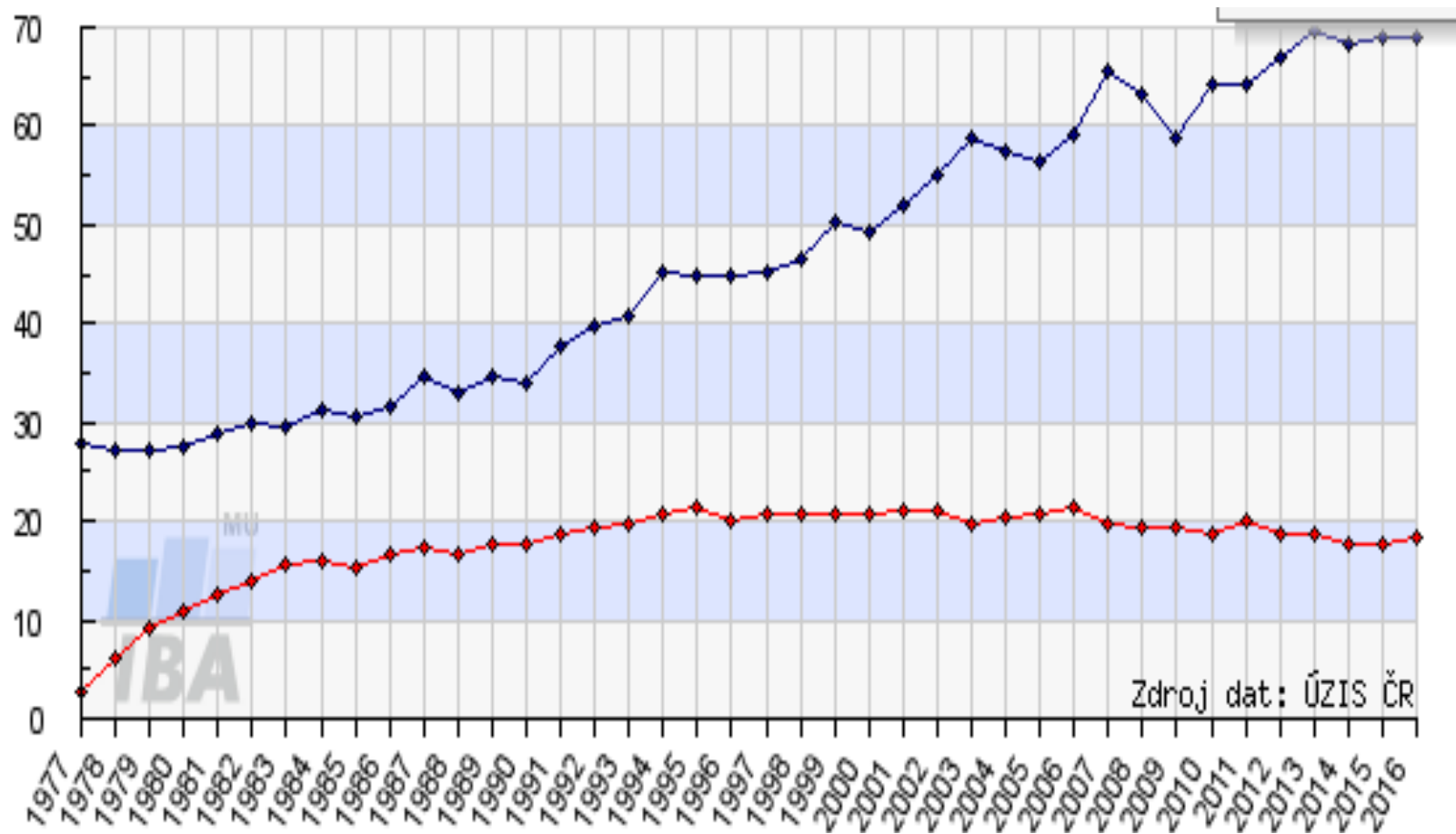
1ST INTERNATIONAL CONGRESS AND SCIENTIFIC
WORKSHOP OF THE CENTRAL-EASTERN EUROPEAN
BREAST CANCER SURGICAL CONSORTIUM

BUDAPEST, HUNGARY 12-14 JUNE 2019

VENUE OF THE CONFERENCE: VÁRKERT BAZÁR



CZECH REPUBLIC - BC INCIDENCE, MORTALITY



BREAST CANCER METASTASES

- ⦿ Metastatic process - in 50% women with breast cancer (bone - 85%, liver - 40%, lung - 20%, brain - 10%)
- ⦿ BCLM - only site < 5% patients (systemic circulation x CLM)
- ⦿ General opinion - BCLM (stage IV) - systemic disease - chemotherapy, supportive care, no indication for liver surgery
- ⦿ Poor long - term survival

LIVER SURGERY FOR BCLM

- ◉ Liver surgery - recent therapeutic reality
- ◉ Long-term survival (beyond 5, 10 yrs)
- ◉ Low economic burden - cost-effective method
- ◉ Best results - neoadj CHT response x non-responders
- ◉ Repeat liver resections, RFA

TREATMENT OPTIONS

- ◉ **Untreated BCLM** - median survival -
4 - 8 mnths
- ◉ **Oncological treatment** - 22-27 mnths
- ◉ **Surgical treatment** - 52 mnths
- ◉ **BUT** - surgery - a part of multimodal treatment -
which patients selection?

LITERATURE DATA - OVERALL SURVIVAL

author	year	N patients	1 - year	3 - years	5 - years
Ruiz	2018	139	-	-	30.9
Bacalbasa	2018	67	-	38	14.4
Treska	2018	32	77.9	62.3	30.6
Kim	2014	13	83.1	49.2	-
Mariani	2013	51	-	80.7	-
Ehrl	2013	29	-	-	20.7
Walsum	2012	32	-	-	37
Groeschl	2012	115	79	52	27
Abott	2012	86	-	-	43.6
Hoffman	2010	41	-	68	48
Rubino	2010	18	90	80	80
Caralt	2008	12	100	79	33
Adam	2006	85	-	-	37

OUR EXPERIENCE

PATIENTS CHARACTERISTIC, METHODS

- 36 women with BCLM (2000 - 2019) - 2.5% (N=1440)
- Age: 50.9 ± 8.9 yrs
- Interval btw primary and liver surgery: 4.0 ± 2.8 yrs
- Primary tumour: ductal carcinoma (66.7%)
- 26 liver resections (72.2%), 10 RFA (27.8%)

- **Evaluated factors:**
- Type of liver surgery, age, histopathology and hormone receptor status of primary tumour, time between BCLM diagnosis and primary tumour surgery, number and diameter of BCLM, presence of extrahepatic mets, local recurrence - overall survival (OS), progression free survival (PFS)

LIVER SURGERY - INDICATIONS, TECHNIQUES

INDICATION

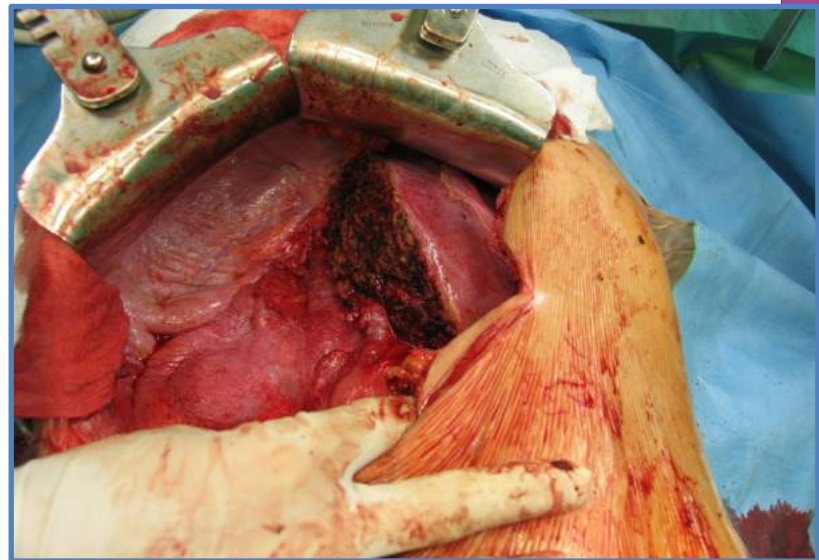
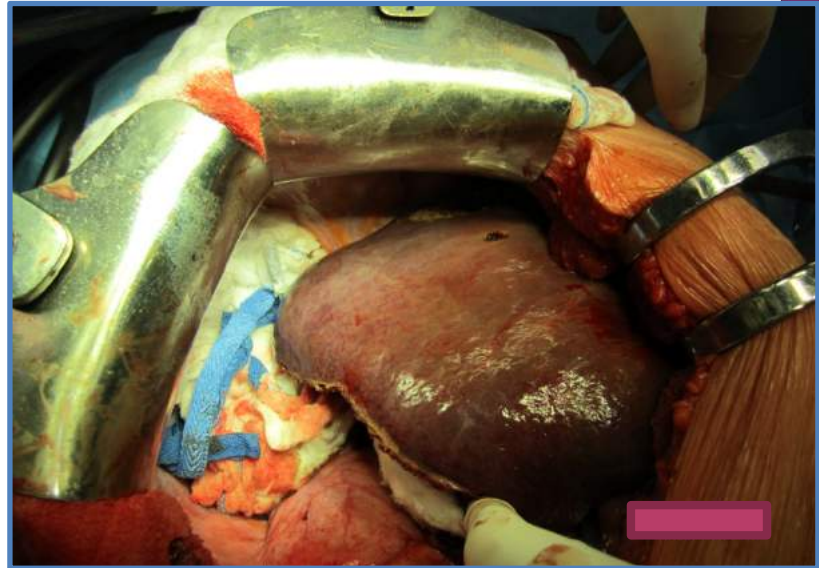
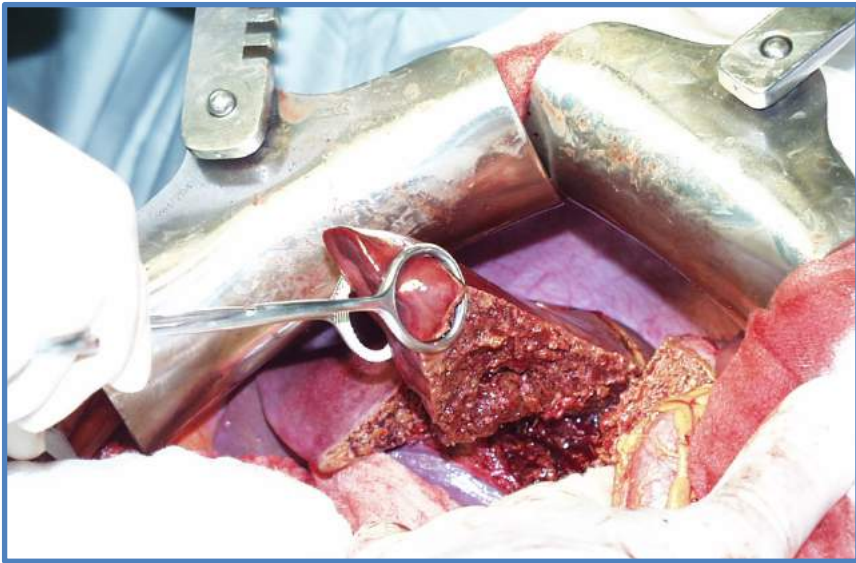
- ◉ Role of multidisciplinary team
- ◉ PET CT, PET MRI, bone scintigraphy - exclusion of non-hepatic extrahepatic metastases (still low level of evidence?)
- ◉ FLRV $\geq 50\%$ (healthy liver), $\geq 40\%$ (NASH)
- ◉ Patient's preference

Tertiary centres

TECHNIQUES

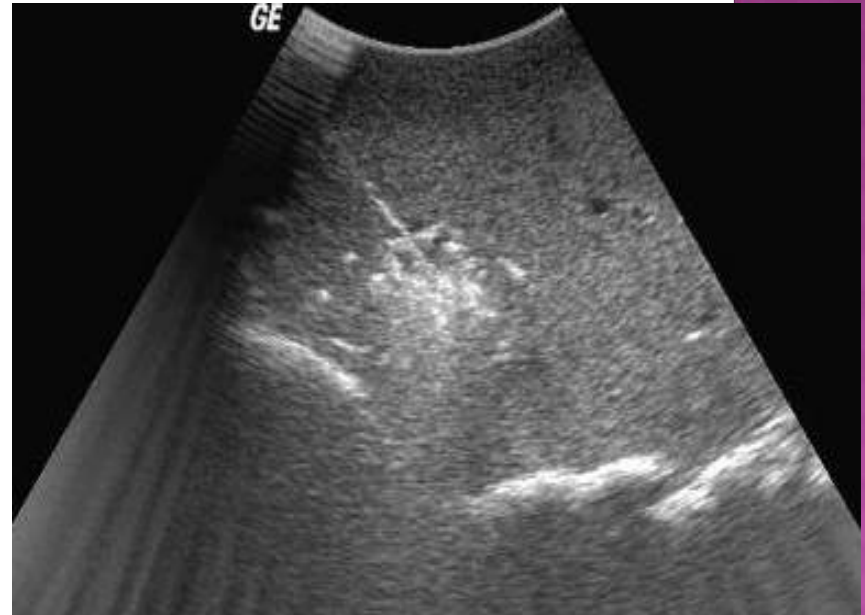
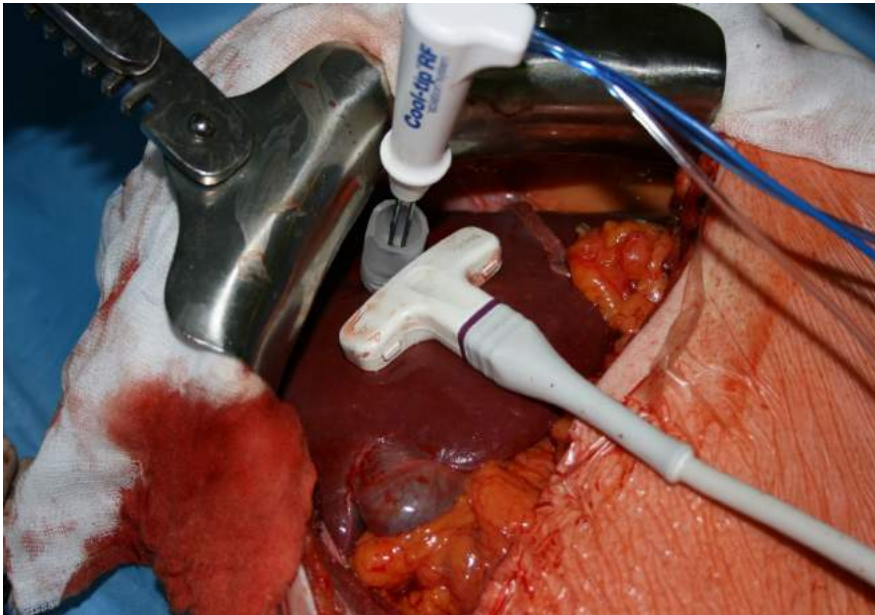
- ◉ **Resection (open laparoscopic)**
- ◉ **Thermoablation (RFA,MWA) - open, laparoscopic, percutaneous**
- ◉ **Part of multimodal treatment**

LARGE X SMALL LIVER RESECTION



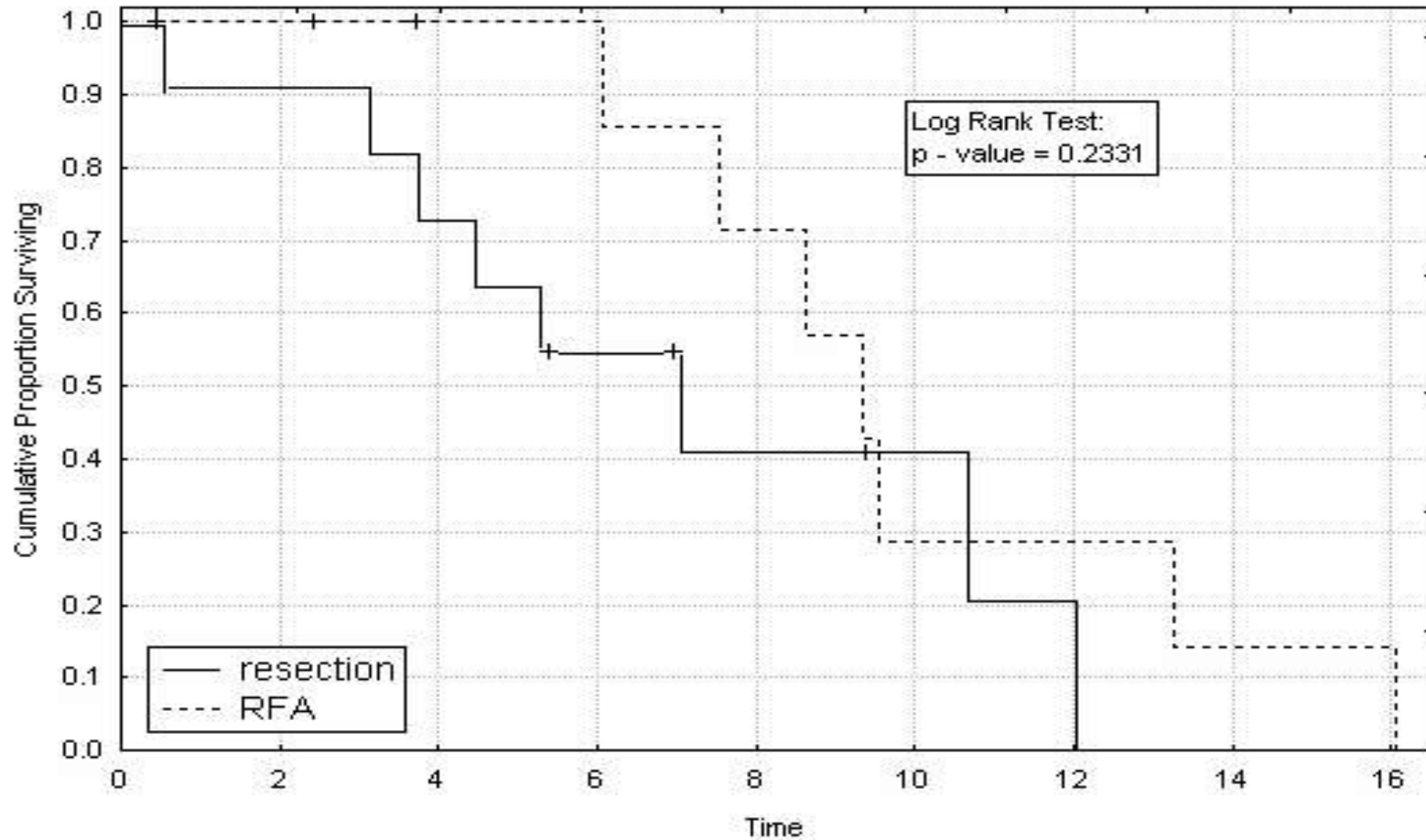
RFA

- ⦿ Open x CT, USG x laparoscopy
- ⦿ Best results - solitary < 3 cm
- ⦿ Combined with resection or repeat procedure



RESULTS

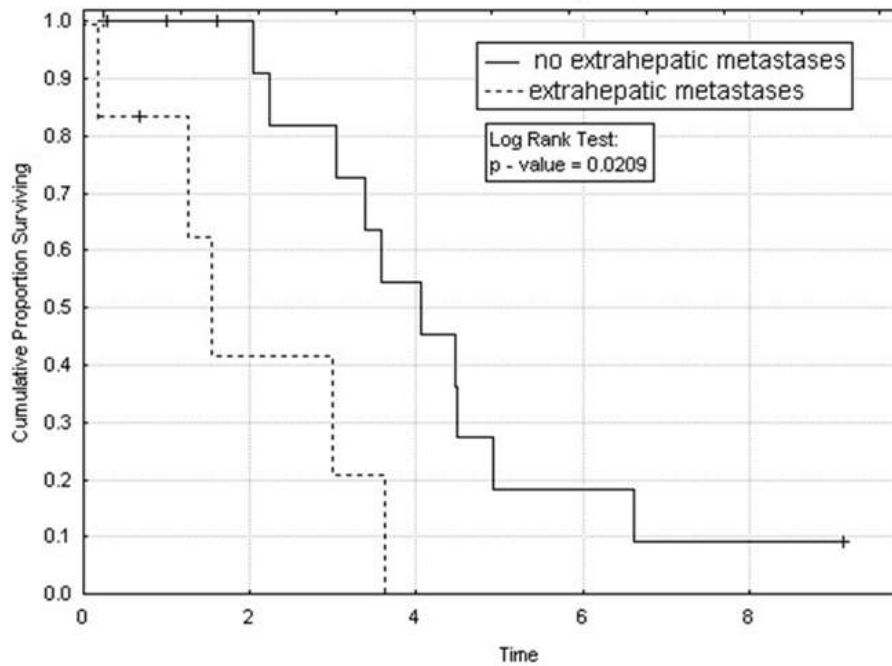
OS - RESECTIONS X RFA



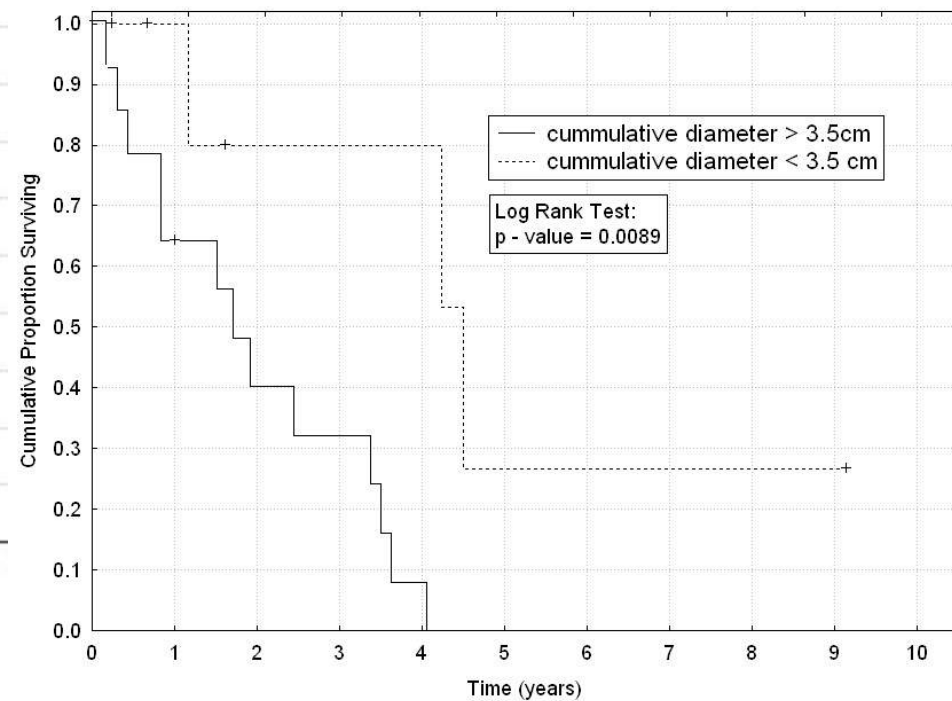
FACTORS AFFECTING LONG -TERM RESULTS

EXTRAHEPATIC METS, BCLM DIAMETER

OS - extrahepatic mets

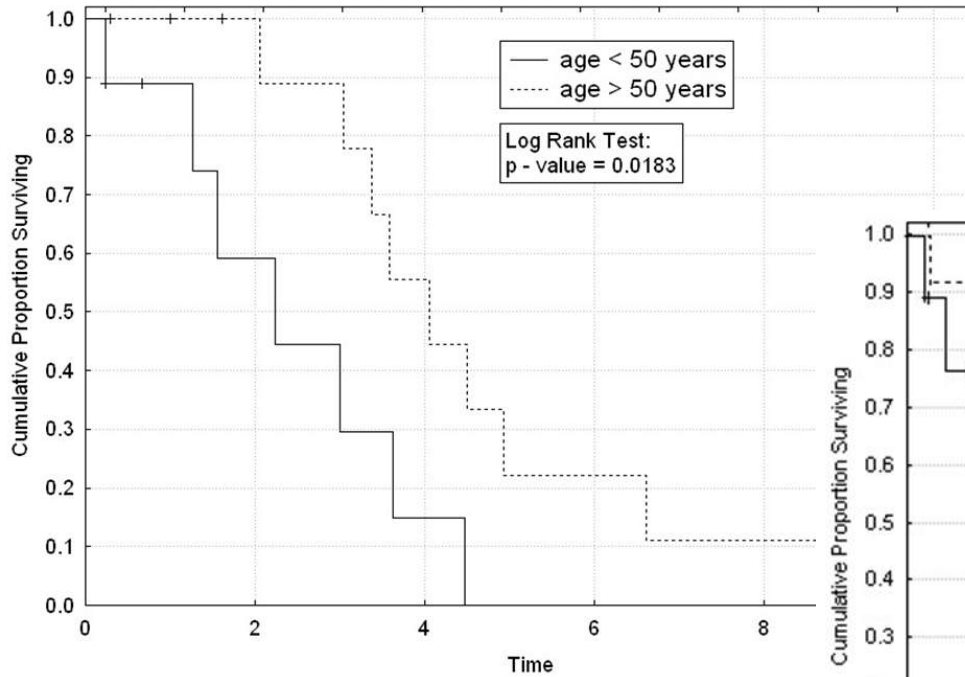


OS - diameter

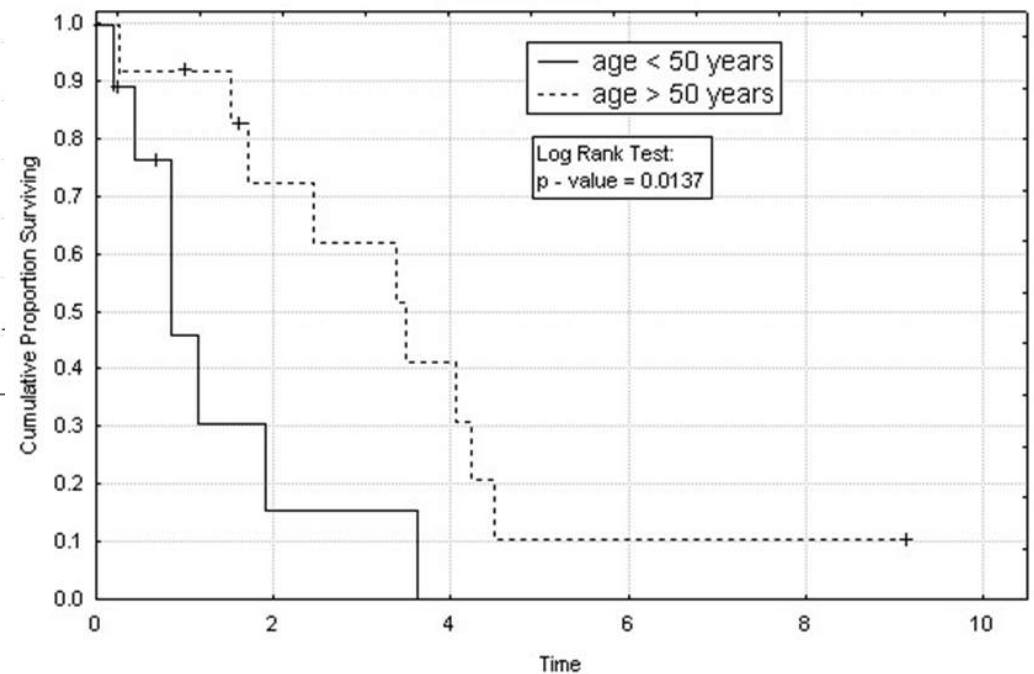


AGE

OS - patients age

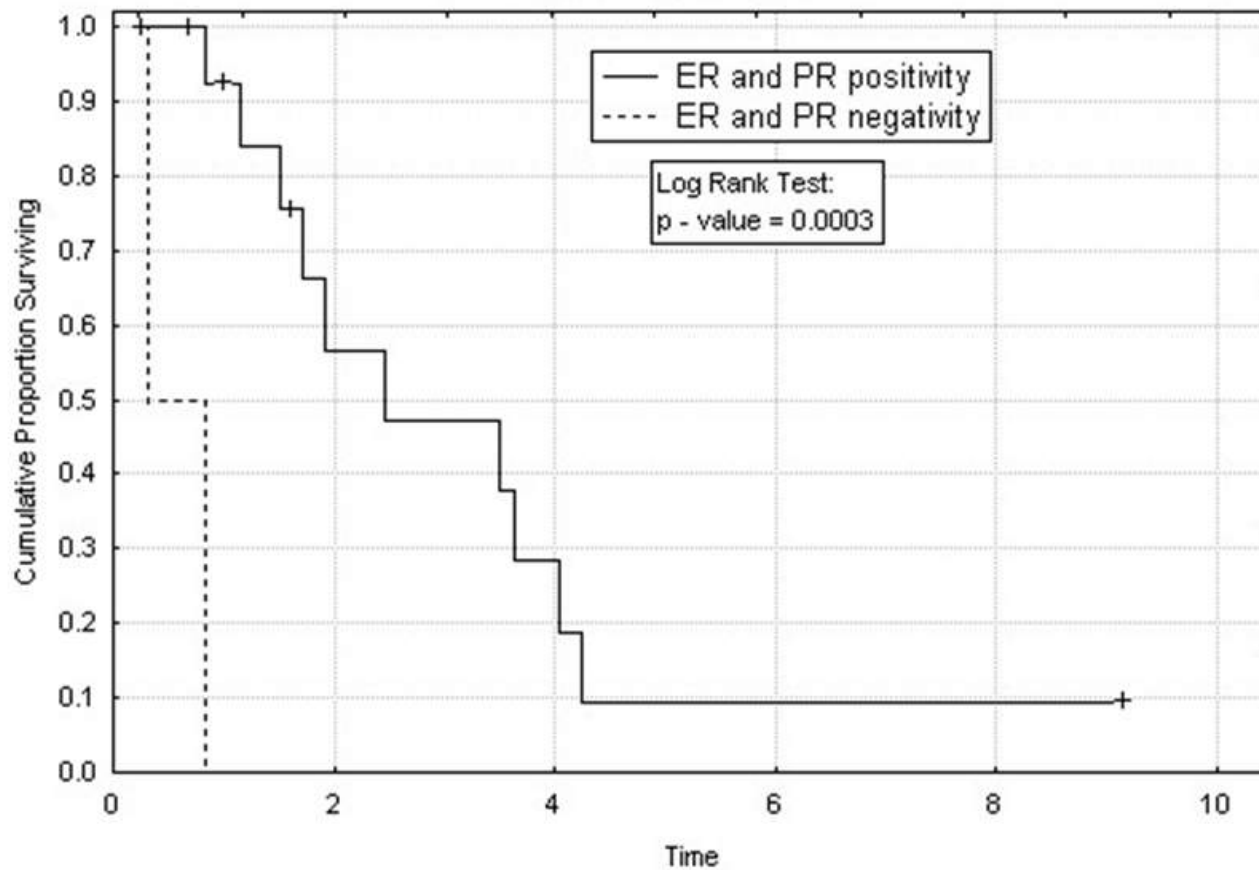


RFS - patients age



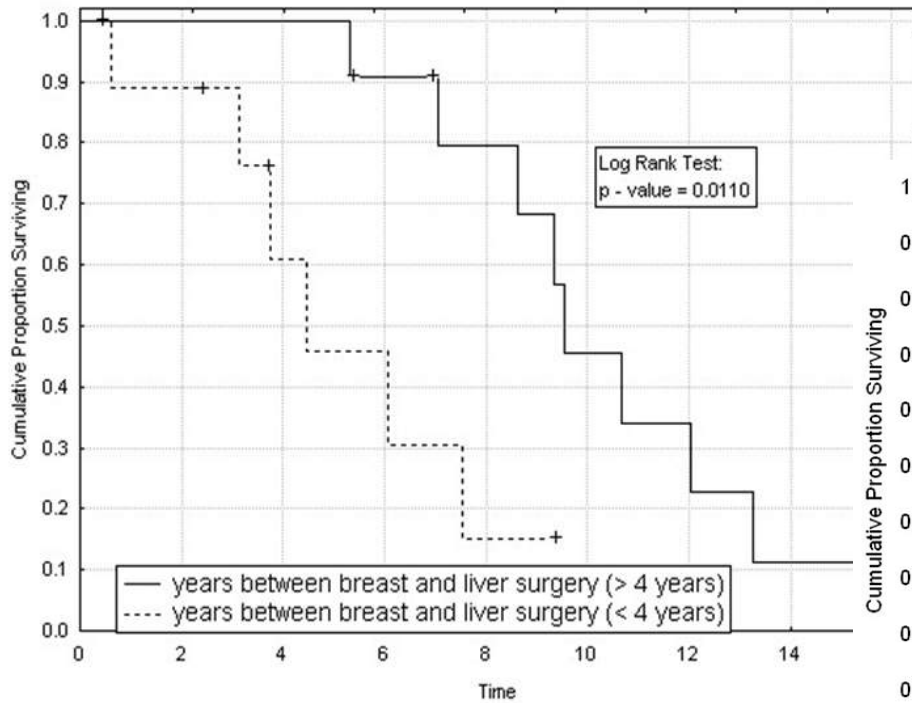
RECEPTOR STATUS

RFS - receptor status

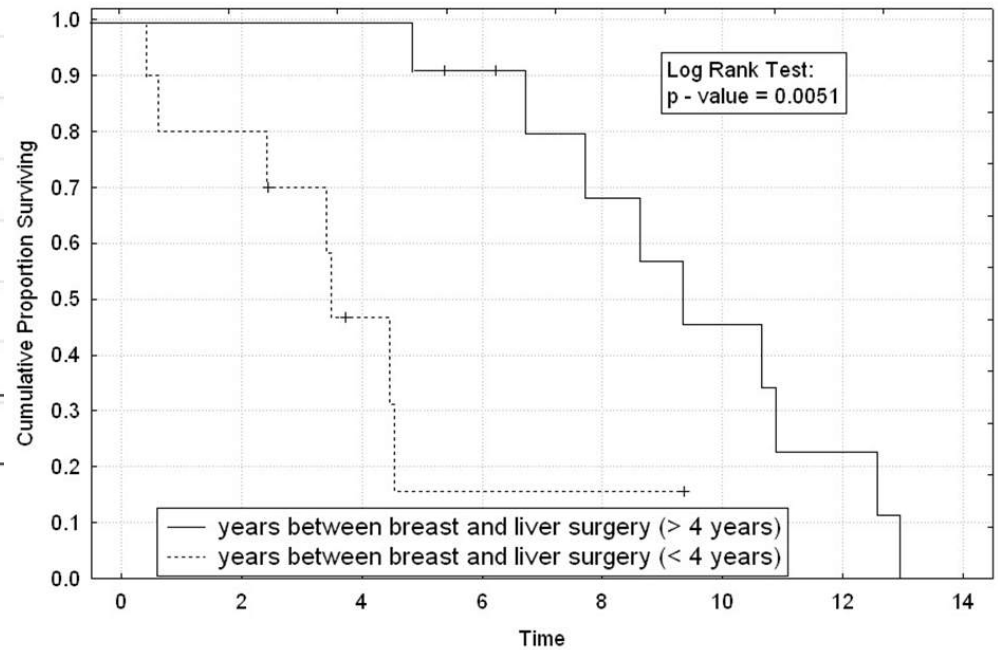


TIME INTERVAL

OS - time interval



RFS - time interval



PRE-OP TM RISK CUT-OFF FOR OS/RFS

Tumor marker	Cut off	P - value	HR	95% CI
CEA (µg/ml)	1.2/1.2	< 0.69/0.57	1.36/1.55	0.29 - 6.42/ 0.34 - 7.10
CA 15-3 (kIU/ml)	15/65	<0.04/< 0.08	0.17/0.16	0.03 - 0.96/ 0.02 - 1.27
CA 19-9 (kIU/ml)	50/50	<0.05/<0.01	5.61/8.68	1.0 - 31.35/ 1.69 - 44.65
TPA (IU/l)	90/90	< 0.05/<0.07	3.09/2.79	0.92 - 10.32/ 0.92 - 8.44
TPS (IU/l)	75/20	< 0.04/<0.06	7.96/3.15	0.72 - 87.95/ 0.97 - 10.23
TK (IU/l)	22.4/4.5	<0.13/<0.09	2.67/5.80	0.74 - 9.58/ 0.75 - 44.95
CYFRA 21-1 (µg/l)	0.6/0.6	< 0.05/0.14	0.06/0.18	0.004 - 0.97/ 0.02 - 1.73

POST-OP TM RISK CUT-OFF FOR OS/RFS

Tumor marker	Cut off	P - value	OS HR	95% CI
CEA (µg/ml)	16/16	< 0.13/ < 0.04	6.26/6.83	0.56 - 70.27/ 1.13 - 41.29
CA 19-9 (kIU/ml)	20/9	< 0.03/ < 0.01	4.73/7.23	1.15 - 19.43/ 1.93 - 27.45
TPA (IU/l)	10/10	< 0.24/ < 0.18	0.44/0.46	0.12 - 1.72/ 0.14 - 1.45
TPS (IU/l)	30/20	< 0.39/ < 0.01	1.61/4.49	0.53 - 4.85/ 1.39 - 14.45
TK (IU/l)	2.1/7.3	< 0.37/ < 0.07	2.61/3.17	0.32 - 21.53/ 0.93 - 10.79
CYFRA 21-1 (µg/l)	0.9/0.4	< 0.20/ < 0.02	2.44/8.17	6.22 - 9.54/ 1.04 - 64.06

IMPORTANT TM FOR OS, PFS

CA 19 - 9

CYFRA 21-1

TPS

- ⦿ Long - term survival: **49.6** mnths
- ⦿ Worse results in comparison to CLM
- ⦿ **PROBLEM of BCLM** - heterogeneity,
histopathological non-conformity - BC x BCLM
- tumor is not the same in the same patient

CONCLUSION

The risk factors for BCLM surgery are patient's age < 50 years, presence of extrahepatic metastases, hormone negative receptors in the primary tumour, diameter of BCLM ≥ 3.5 cm, < 4 yrs after BC surgery

RECOMMENDATION

Liver resection or RFA (MWA) multimodal treatment in patients with liver metastases are radically resectable or in patients who are not radically resectable. Liver surgery is also cost-effective compared with other modalities.

We are still on the start line, tumor biology (primary, secondary) will play significant role for our decision making in the next future.



treska@fnplzen.cz