



# PDTA lesioni focali epatiche

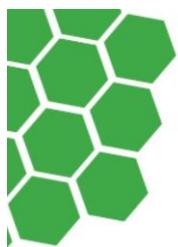
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Oncologia Medica  
Azienda Ospedaliero-Universitaria di Parma

Parma, 6 giugno 2017

# Casi discussi

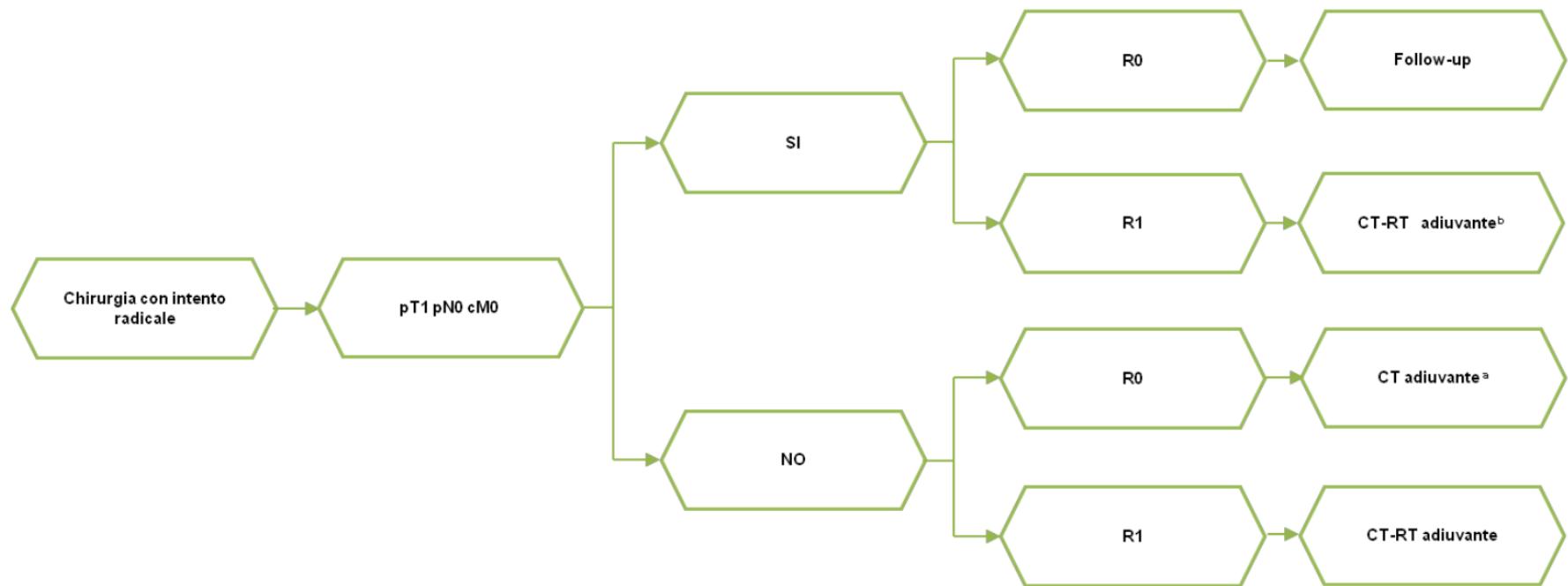
- **Colangiocarcinomi**
- **Epatocarcinomi**



# Linee guida

## TUMORI DELLE VIE BILIARI

Edizione 2016



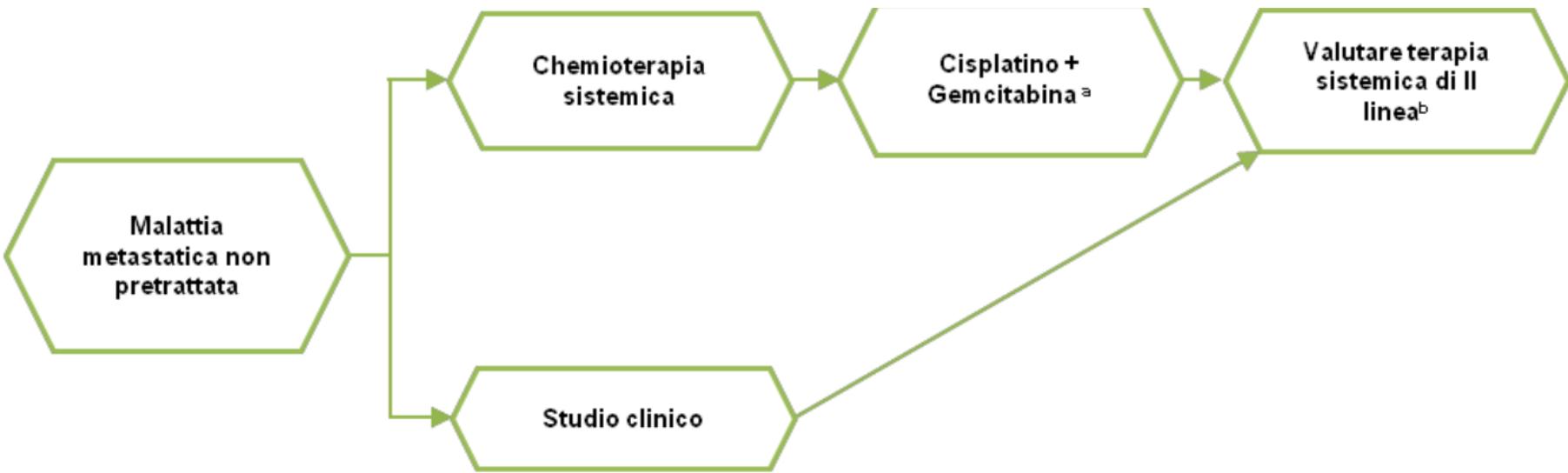
Takada T et al, 2002  
Horgan AM et al, 2012



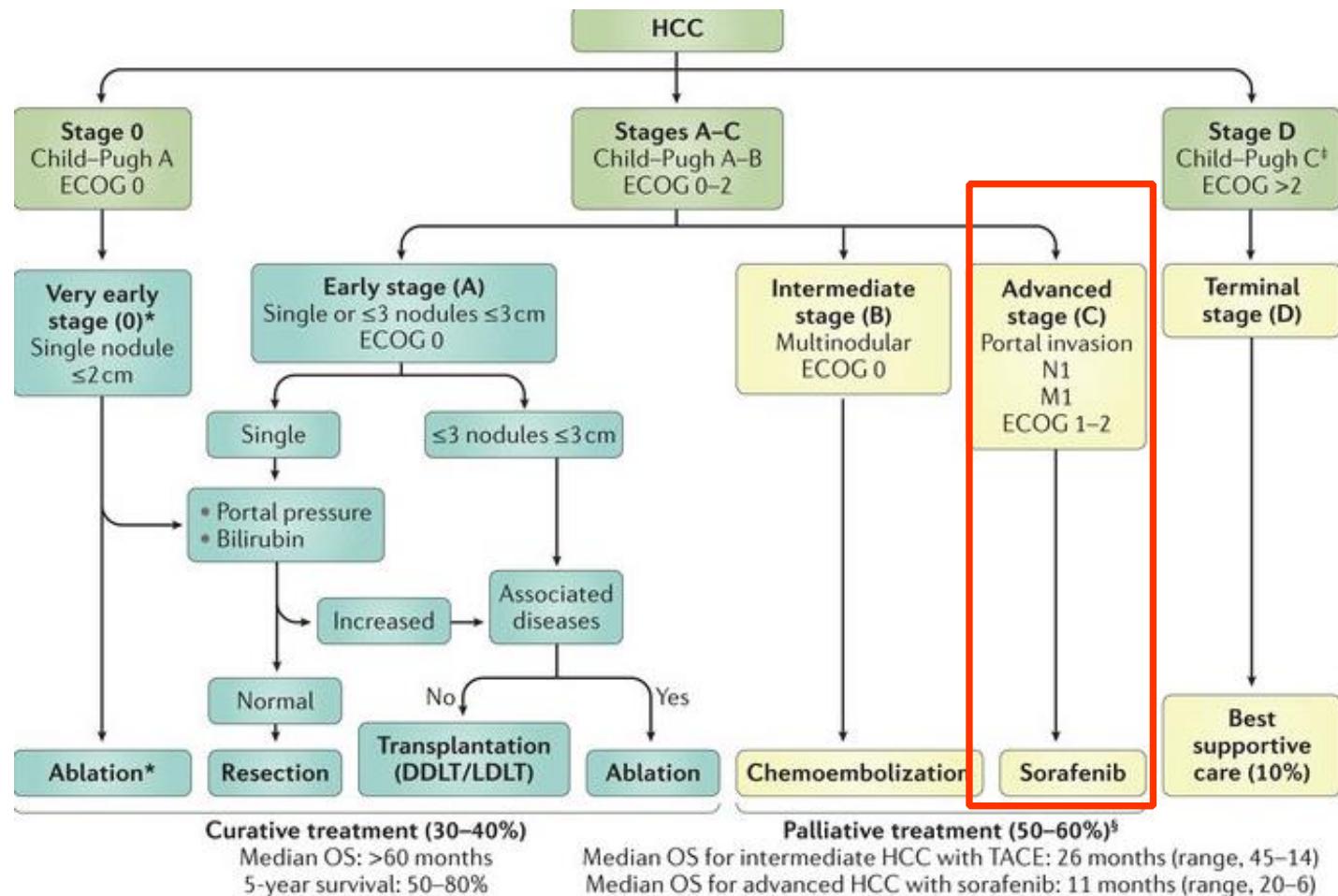
# Linee guida

## TUMORI DELLE VIE BILIARI

Edizione 2016



# BCLC staging system and therapeutic strategy: EASL–EORTC guidelines



Curative treatment (30–40%)

Median OS: >60 months

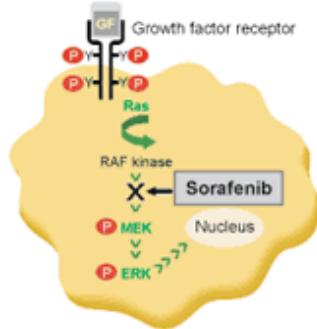
5-year survival: 50–80%

Palliative treatment (50–60%)‡

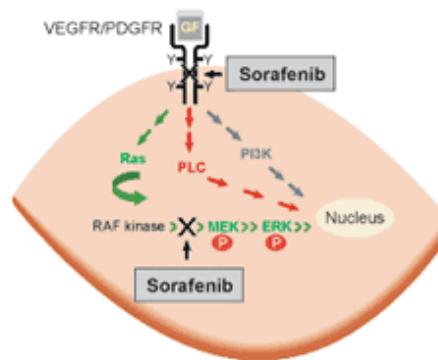
Median OS for intermediate HCC with TACE: 26 months (range, 45–14)

Median OS for advanced HCC with sorafenib: 11 months (range, 20–6)

# Sorafenib targets both tumor-cell proliferation and angiogenesis in vitro



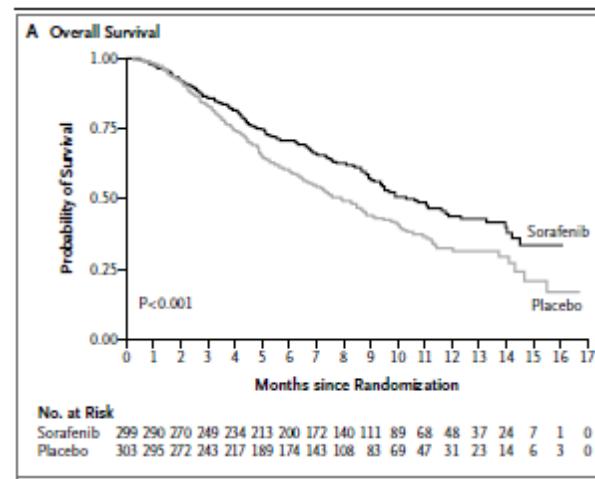
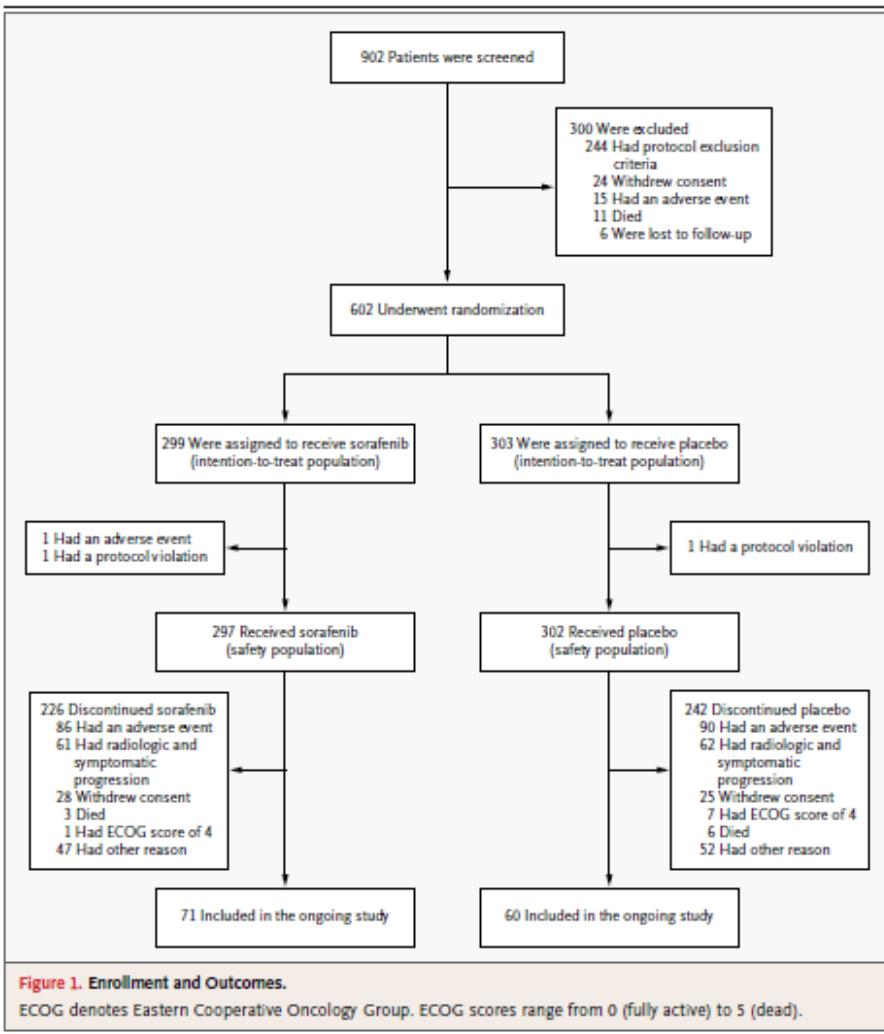
BAY 43-9006 inhibits tumor cell proliferation by targeting the RAF/MEK/ERK pathway at the level of RAF kinase.



BAY 43-9006 exerts an antiangiogenic effect by targeting the receptor tyrosine kinases VEGFR-2 and PDGFR and their associated signaling cascades.

## ORIGINAL ARTICLE

## Sorafenib in Advanced Hepatocellular Carcinoma



**Table 2. Summary of Efficacy Measures.\***

Outcome	Sorafenib (N = 299)	Placebo (N = 303)	Hazard Ratio (95% CI)	P Value
Overall survival (mo)			0.69 (0.55–0.87)	<0.001
Median	10.7	7.9		
95% CI	9.4–13.3	6.8–9.1		
1-yr survival rate (%)	44	33		0.009
Time to symptomatic progression (mo)†			1.08 (0.88–1.31)	0.77
Median	4.1	4.9		
95% CI	3.5–4.8	4.2–6.3		
Time to radiologic progression (mo)			0.58 (0.45–0.74)	<0.001
Median	5.5	2.8		
95% CI	4.1–6.9	2.7–3.9		
Level of response (%)‡				
Complete	0	0		NA
Partial	2	1		0.05
Stable disease	71	67		0.17
Disease-control rate (%)§	43	32		0.002

## ORIGINAL ARTICLE

## Sorafenib in Advanced Hepatocellular Carcinoma

**Table 3.** Incidence of Drug-Related Adverse Events (Safety Population).\*

Adverse Event	Sorafenib (N=297)			Placebo (N=302)			P Value	
	Any Grade	Grade 3	Grade 4	Any Grade	Grade 3	Grade 4	Any Grade	Grade 3 or 4
Overall incidence	80			52				
Constitutional symptoms								
Fatigue	22	3	1	16	3	<1	0.07	1.00
Weight loss	9	2	0	1	0	0	<0.001	0.03
Dermatologic events								
Alopecia	14	0	0	2	0	0	<0.001	NA
Dry skin	8	0	0	4	0	0	0.04	NA
Hand-foot skin reaction	21	8	0	3	<1	0	<0.001	<0.001
Pruritus	8	0	0	7	<1	0	0.65	1.0
Rash or desquamation	16	1	0	11	0	0	0.12	0.12
Other	5	1	0	1	0	0	<0.001	0.12
Gastrointestinal events								
Anorexia	14	<1	0	3	1	0	<0.001	1.00
Diarrhea	39	8	0	11	2	0	<0.001	<0.001
Nausea	11	<1	0	8	1	0	0.16	0.62
Vomiting	5	1	0	3	1	0	0.14	0.68
Voice changes	6	0	0	1	0	0	<0.001	NA
Hypertension	5	2	0	2	1	0	0.05	0.28
Liver dysfunction	<1	<1	0	0	0	0	0.50	0.50
Abdominal pain not otherwise specified	8	2	0	3	1	0	0.007	0.17
Bleeding	7	1	0	4	1	<1	0.07	1.00

\* Listed are adverse events, as defined by the National Cancer Institute Common Terminology Criteria (version 3.0), that occurred in at least 5% of patients in either study group. NA denotes not applicable.



# Linee guida EPATOCARCINOMA

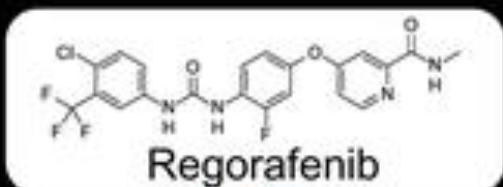
Dose piena	400 mg bis in die
Primo livello di riduzione	200 mg bis in die
Secondo livello di riduzione	200 mg bis in die ogni 2 giorni

Qualità dell'evidenza SIGN	Raccomandazione clinica	Forza della raccomandazione clinica
<b>B</b>	Nei pz con HCC avanzato e funzionalità epatica piuttosto compromessa (classe Child-Pugh B), il sorafenib non dovrebbe essere utilizzato. (115)	<b>Negativa debole</b>

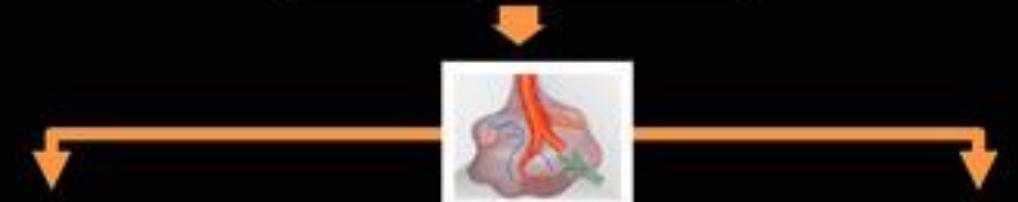
## Implication for clinical management

- Dose reductions due to adverse events 26% of the patients
- Dose interruptions due to adverse events 44% of the patients (11% permanent treatment discontinuation)





Regorafenib



Inhibition of  
proliferation

Kit  
PDGFR Ret



Inhibition of tumor  
microenvironment  
signaling

PDGFR- $\beta$   
FGFR



Inhibition of  
neoangiogenesis

VEGFR-1 to -3  
Tie2

## Regorafenib: an oral multikinase inhibitor



# Regorafenib for patients with hepatocellular carcinoma who progressed on sorafenib treatment (RESORCE): a randomised, double-blind, placebo-controlled, phase 3 trial

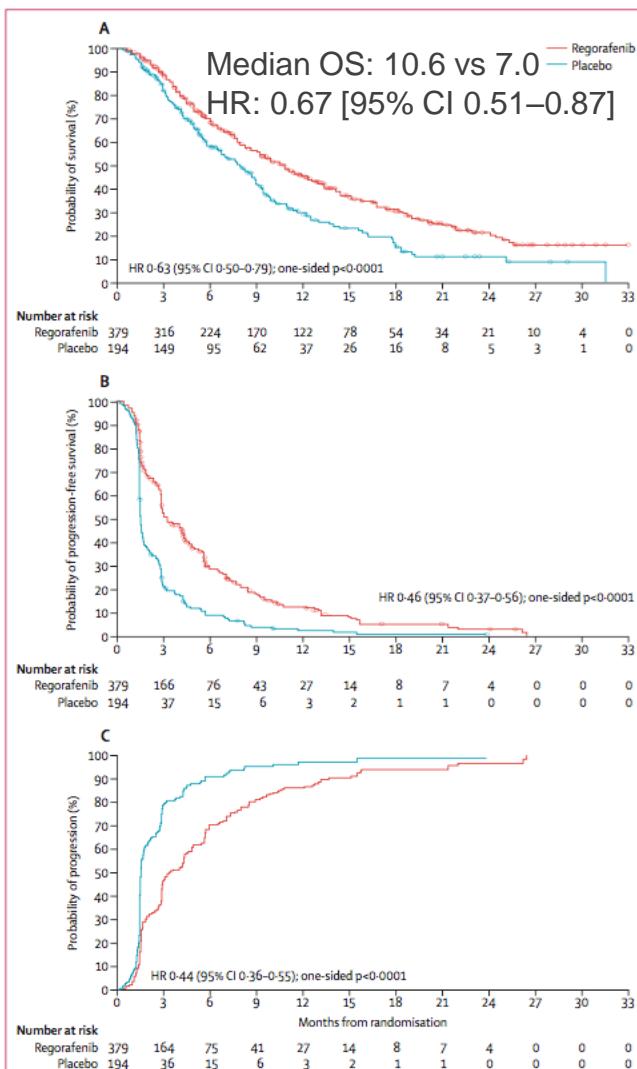


Figure 2: Kaplan-Meier analysis of overall survival (A), progression-free survival (mRECIST; B), and time to progression (mRECIST; C). mRECIST=modified RECIST for hepatocellular carcinoma.

	Regorafenib (n=379)	Placebo (n=194)
<b>Best overall response*</b>		
Complete response	2 (1%; <1-2)	0
Partial response	38 (10%; 7-14)	8 (4%; 2-8)
Stable disease	206 (54%; 49-59)	62 (32%; 26-39)
Non-complete response/ non-progressive disease	1 (<1%; 0-2)	0
Progressive disease	86 (23%; 19-27)	108 (56%; 48-63)
Not evaluable	19 (5%; 3-8)	8 (4%; 2-8)
Not assessed	27 (7%; 5-10)	8 (4%; 2-8)
<b>Clinical progression†</b>	86 (23%; 19-27)	40 (21%; 15-27)
<b>Objective response</b> (complete response + partial response)*	40 (11%)‡	8 (4%)‡
<b>Disease control*</b>	247 (65%)§	70 (36%)§

Data are n (%; 95% CI). \*Based on radiological review using modified Response Evaluation Criteria in Solid Tumors for HCC (mRECIST). †Defined as worsening of ECOG performance status or symptomatic deterioration including increase in liver function tests. ‡One-sided p=0.0047. §One-sided p<0.0001.

Table 2: Tumour response (efficacy population)

## New Targets and New Agents in Hepatocellular Carcinoma

Tumor  
angiogenesis

Sorafenib  
(1<sup>st</sup> line)

Regorafenib  
(2<sup>nd</sup> line)

Microenvironment signaling

Galunisertib  
(TGF $\beta$ -RI)

Tepotinib  
(c-MET)

BLU-554  
(FGF19/FGFR4)

Immune stroma

Nivolumab  
Pembrolizumab  
(PD-L1)

Ipilimumab  
Tremelimumab  
(CTLA4)

← Combinations →

# Nivolumab (nivo) in sorafenib (sor)-naive and -experienced pts with advanced hepatocellular carcinoma (HCC): CheckMate 040 study.

	Sor Naive		Sor Experienced			
	ESC + EXP (n=80)		ESC (n=37)		EXP (n=145)	
	INV	BICR	INV	BICR	INV	BICR
<b>ORR, n (%)<sup>a</sup></b>	18 (23)	16 (20)	6 (16)	7 (19)	28 (19)	21 (14)
<b>CR</b>	1 (1)	1 (1)	3 (8)	1 (3)	3 (2)	2 (1)
<b>PR</b>	17 (21)	15 (19)	3 (8)	6 (16)	25 (17)	19 (13)
<b>SD</b>	32 (40)	25 (31)	16 (43)	12 (32)	64 (44)	60 (41)
<b>PD</b>	26 (33)	32 (40)	12 (32)	13 (35)	47 (32)	56 (39)
<b>Not evaluable</b>	4 (5)	5 (6)	3 (8)	4 (11)	6 (4)	8 (6)
<b>DOR, median (95% CI), mo<sup>a</sup></b>	NR (6–NE)	17 (NE–NE)	17 (7–NE)	19 (3–NE)	12 (7–NE)	NR (11–NE)
<b>12-mo OS rate (95% CI), %</b>	73 (61–81)		58 (40–72)		60 (51–67)	

NR, not reached; NE, not estimable. <sup>a</sup>RECIST v1.1; mRECIST ORRs (BICR): sor naive, 24%; sor experienced, 22% (ESC), 10% (EXP)