

# ***OVERVIEW OF COLORECTAL AND GASTRIC CANCERS***

***Winter Cancer Symposium  
March 2021***

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*Associate Professor University of Central Florida, College of Medicine*

*Medical Director, GastroIntestinal Cancer Program*

*AdventHealth Cancer Institute*



# ***DISCLOSURES***

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BAYER : Speaker Program, Consulting

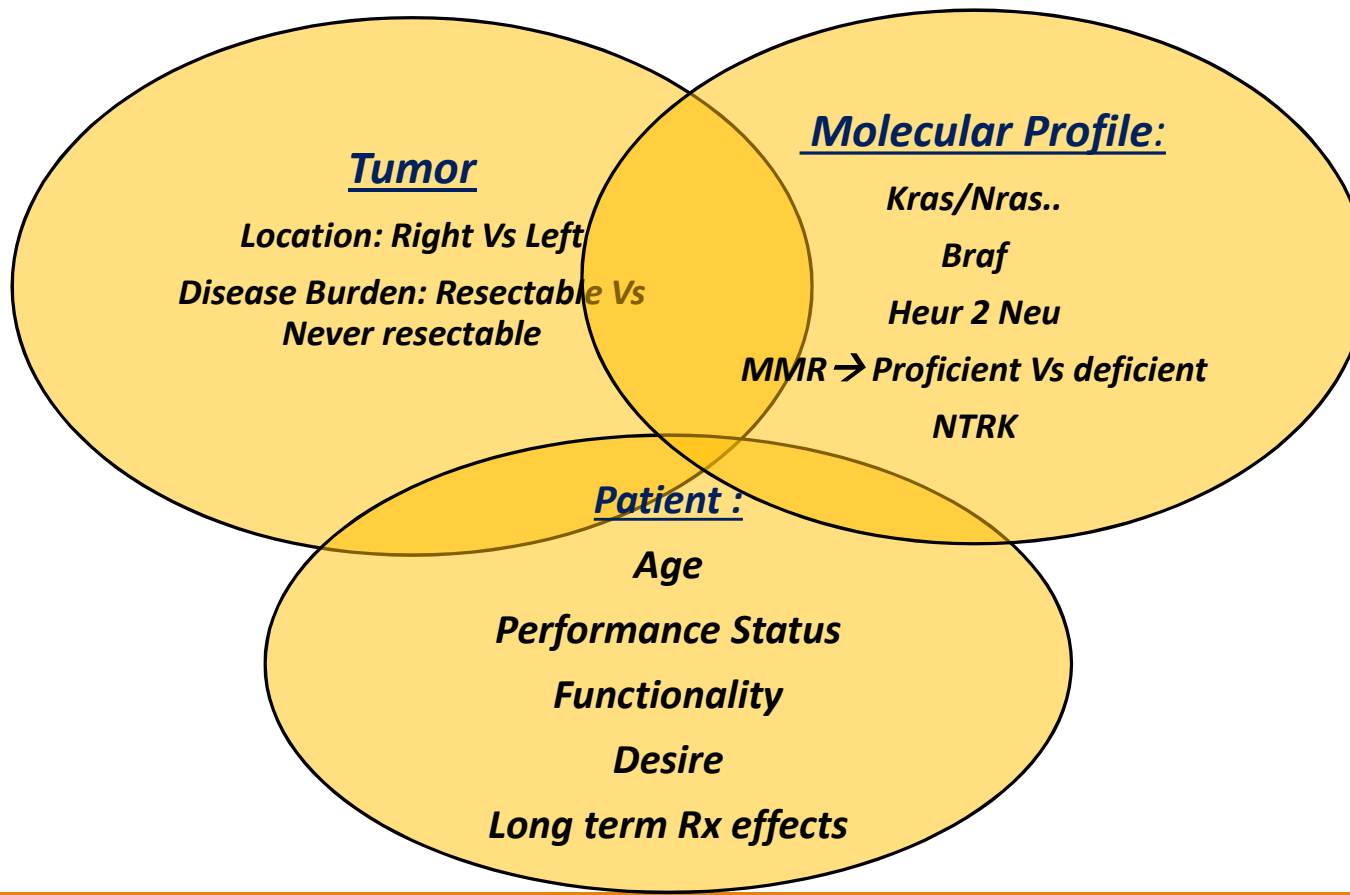
AMGEN : Speaker Program

LILLY : Speaker Program

10th Annual  
**WCS**<sup>TM</sup>  
WINTERCANCER  
SYMPOSIUM

March 5-7, 2021  
La Concha Renaissance Hotel San Juan  
San Juan, Puerto Rico

Conference Directors





1. Discuss Early stage Colorectal cancer

2. Where are in Rectal Cancer:

- TNT, Decision making while Playing with Dynamite
- Is Triplet Therapy ready for Primetime in Rectal cancer

3. TOSCA Trial : Impact of Age choosing 3 months Vs 6 months of adjuvant Therapy



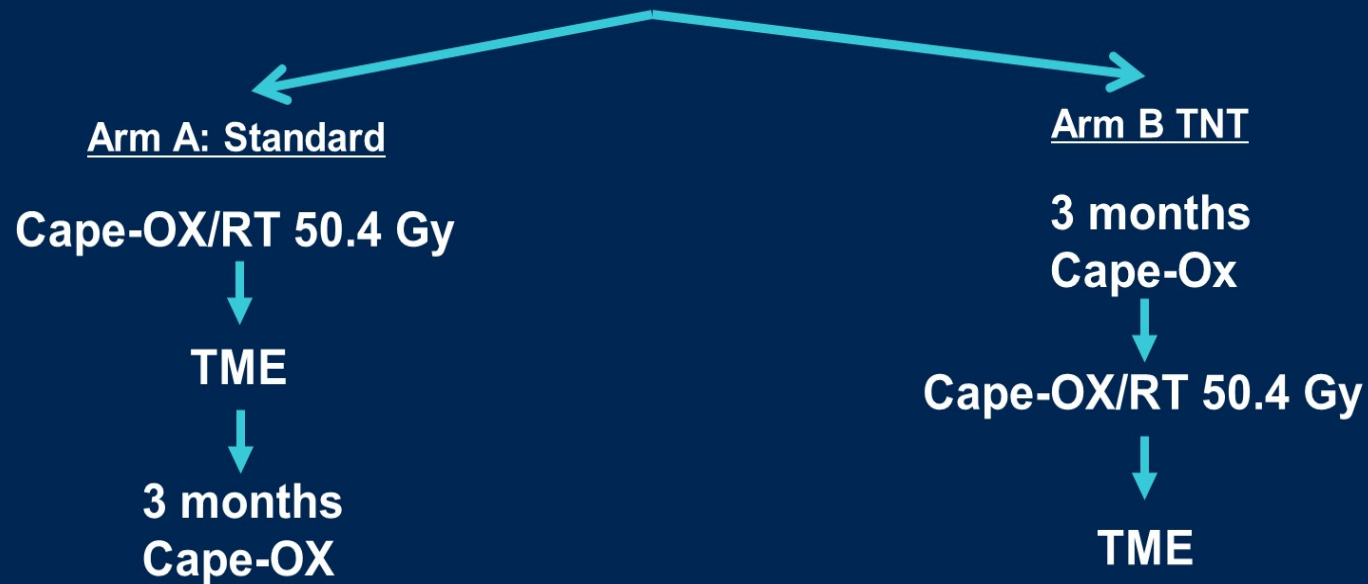
### Lessons from the Past:

1. Poor Compliance with adjuvant chemoRx after Surgery: 32-40%
2. Unclear the Benefit of chemoRx for selected Patients
3. Relapse rate:
  - Local: 6-9%
  - Distant: 30% 5 yrs
4. Longterm Toxicity: reported 30%

### Lessons for the Future:

1. Improved Tolerability
2. Better Compliance for all treatments
3. Tumor Biology
4. Improved Local & Systemic Control
4. Possibility of watch& wait Vs Surgery
5. Less time to Ileostomy reversal

# GCR-3: Standard vs. TNT (induction CT)



Fernandez-Martos et al. J Clin Oncol 2010  
Fernandez-Martos et al. Annals Oncol 2015

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Gastrointestinal  
Cancers Symposium

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PRESENTED BY: C.Fernandez-Martos

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Presented By Carlos Fernandez-Martos at 2021 Gastrointestinal Cancers Symposium



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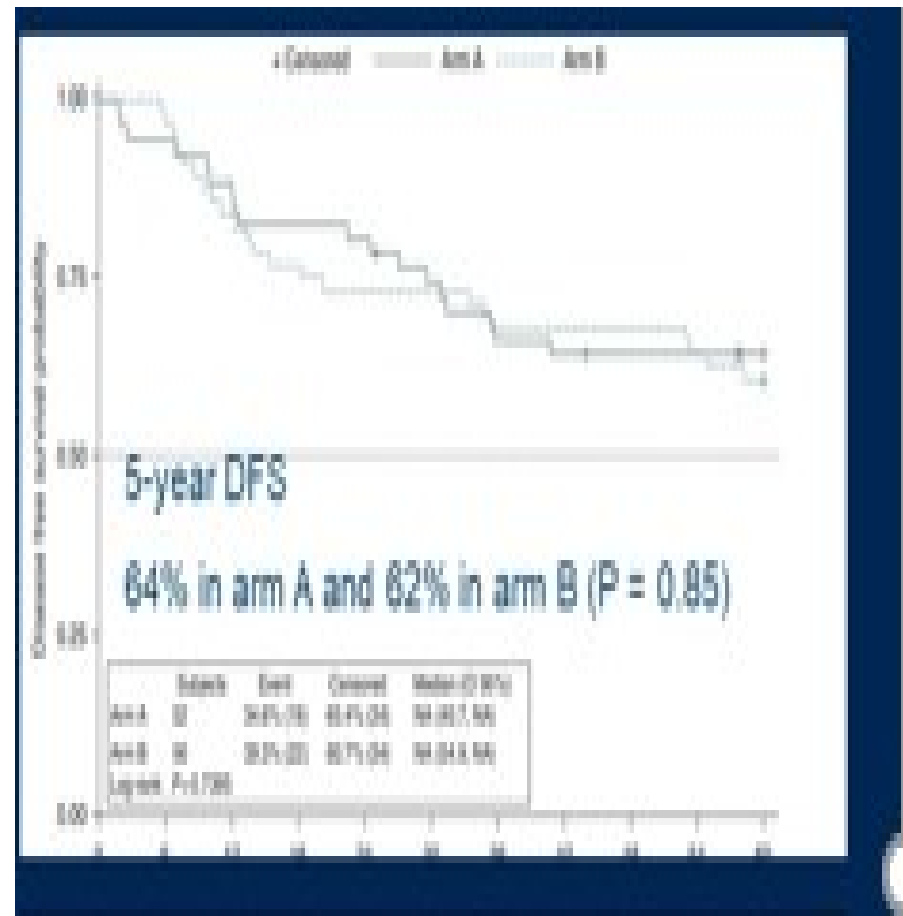
Phase	IIR pick-the-winner; F/U 69 m		
Number patients	108		
1° endpoint	pCR		
MRI risk criteria	mrT3(low, N+ ,CRM+); mrT4		
Tumor location	Middle and low third		
Interval CRT to surgery	5-6 weeks		
Results			
	Standard	TNT	p
CT G3-4 toxicity	54%	19%	.0004
Compliance CT (CAPOX x 4)	54%	91%	<.001
Compliance to RT	80%	85%	n.s
pCR	13%	14%	.94
5-y Local failure	2%	5%	.61

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# RAPIDO: Standard vs. TNT (Consolidation CT)



Van der Valk et al. Radioth and Oncol. 2020  
Bahadoer et al ASCO 2020

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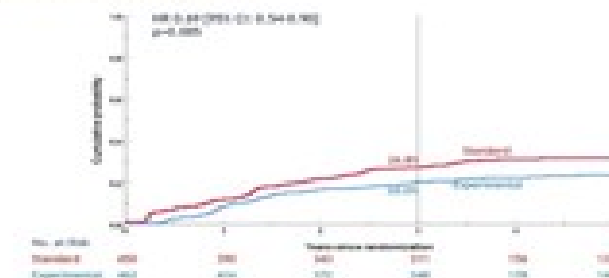
# 10th Annual WCS<sup>TM</sup> WINTERCANCER SYMPOSIUM

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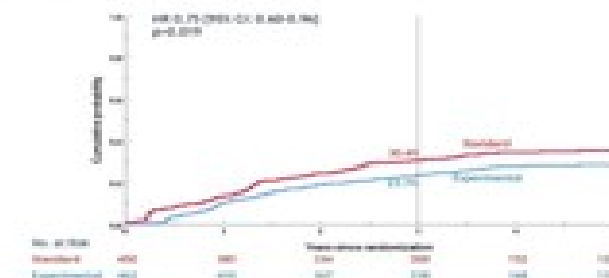
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Phase	III (1:1); F/U: 54 m		
Number patients	920		
1° endpoint	3-y DrTF		
MRI risk criteria	mrT4, mrN2, mrEMVI+, mrMRF+		
Tumor location	High, middle and low third		
Interval CRT to surgery	Standard: 8+/- 2 w; TNT 22-24 w		
<b>Results</b>			
	Standard	TNT	p
Toxicity ≥ G3 during preop	25%	48%	nr
Compliance CRT/SCRT	93%	100%	nr
Compliance 75% adj/consolidationCT	58%	84%	nr
Completed planned cycles	47%	67%	nr
pCR	14%	28%	<.001
Locoregional failure	8.7%	6%	.09

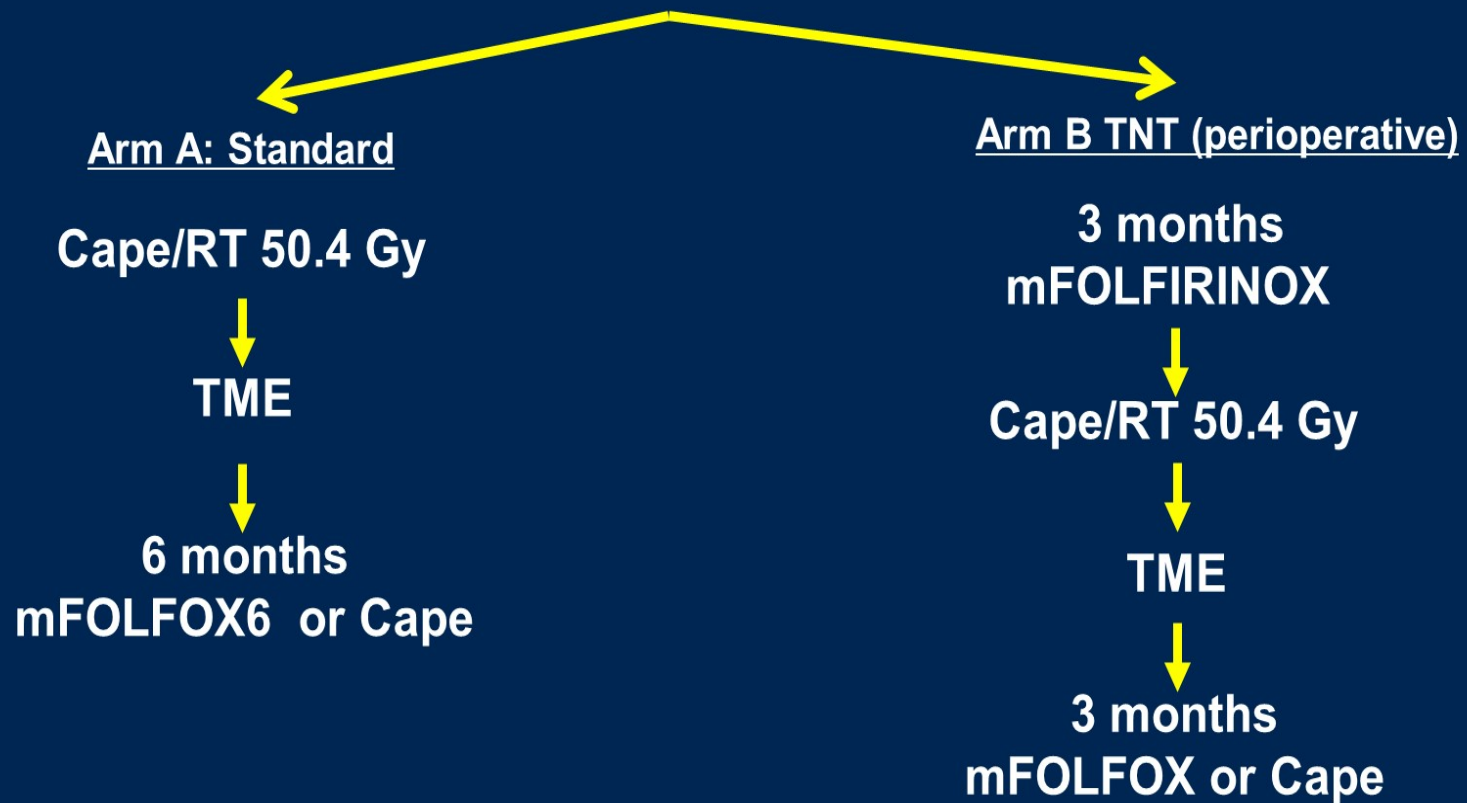
### Distant metastases



### Disease-related Treatment Failure



# PRODIGE 23: Standard vs TNT (induction+adj CT)



Conroy et al. ASCO 2020

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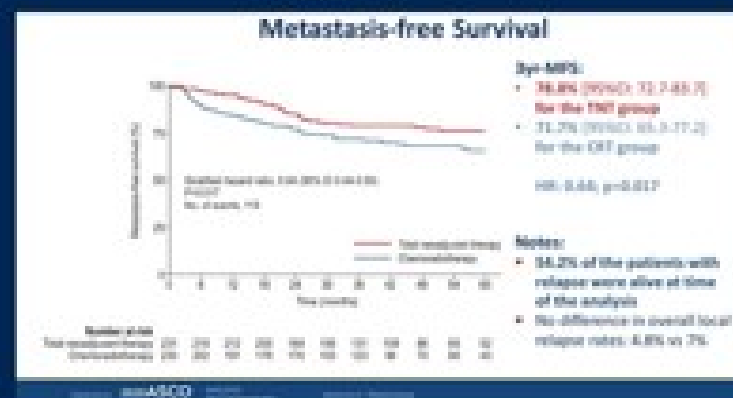
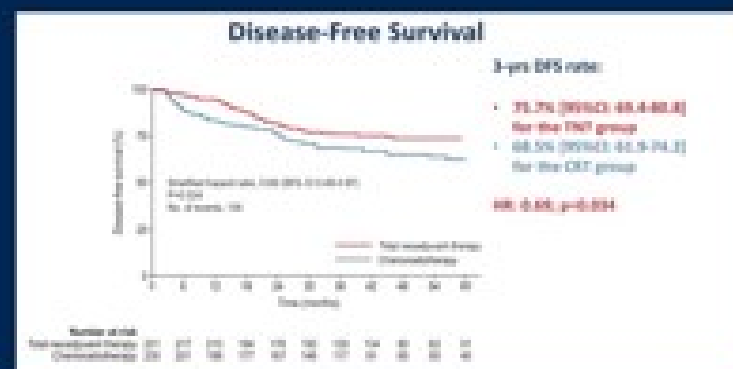
Presented By Carlos Fernandez-Martos at 2021 Gastrointestinal Cancers Symposium

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Phase	III ; F/U 46 m		
Number patients	461		
1° endpoint	3-y DFS		
MRI risk criteria	mrT3, mrT4		
Tumor location	High, middle and low third		
Interval CRT to surgery	7 weeks		
<b>Results</b>			
	Standard	TNT	p
Compliance (mFOLFIRINOX x 6)	-	92%	-
G3+ AEs adjuvant CT	74%	44%	<.001
All cycles completed adjuvant CT	75	80	ns
Compliance RT	98%	98%	ns
pCR	12%	27%	<.001





## **OXALIPLATIN PLUS FLUOROPYRIMIDINES AS ADJUVANT THERAPY FOR COLON CANCER IN ELDERLY PATIENTS: A SUBGROUP ANALYSIS FROM TOSCA TRIAL**

**G. ROSATI, FA. GALLI, S. LONARDI, K.F. DOTTI, M. RONZONI, M.G. ZAMPINO, M. BANZI, V. PUSCEDDU,  
F. PASINI, S. BOZZARELLI, N. PELLA, C. CODECÀ, V. MONTESARCHIO, A. MAMBRINI, A. DE STEFANO,  
L. CIUFFREDA, S.E. REBUZZI, FR. GALLI, D. BILANCIA, R. LABIANCA**

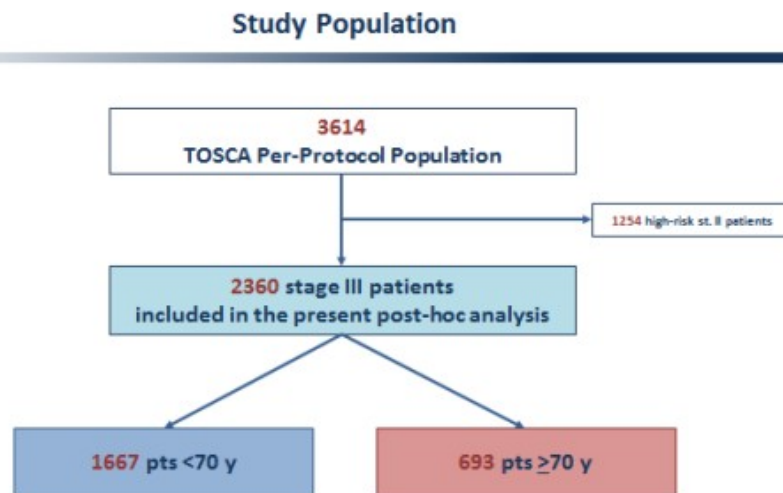
**ON BEHALF OF ALL TOSCA (THREE OR SIX COLON ADJUVANT) INVESTIGATORS**



# ***TOSCA TRIAL subgroup Analysis***

## ***(ESMO 2020)***

### TOSCA age study population

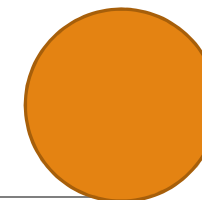


Post-hoc analysis of stage III

Stage III = 65% of total  
population available

30% of included group >70 yo

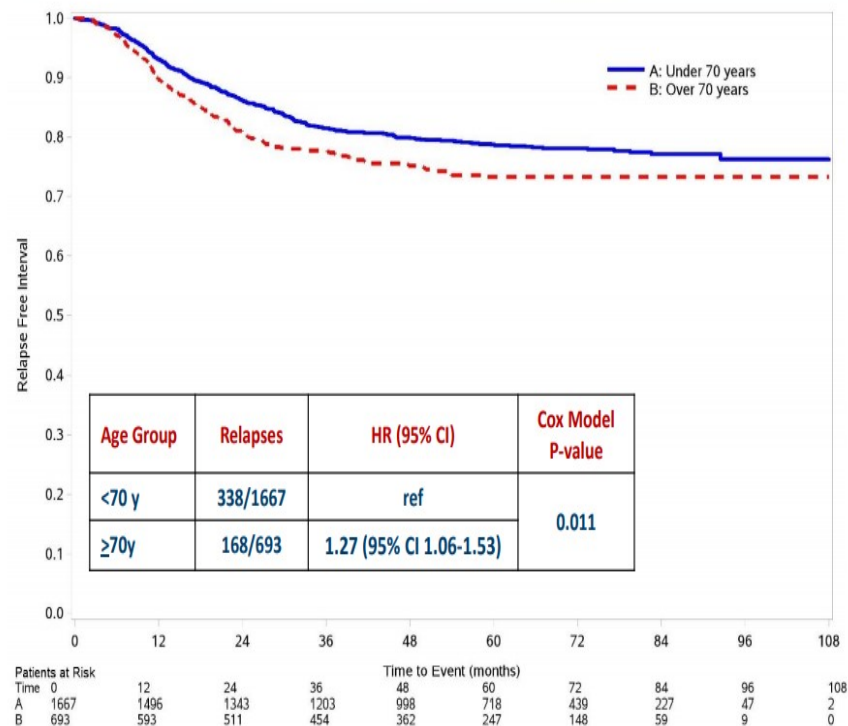
# TOSCA TRIAL subgroup Analysis (ESMO 2020)



## Events

	< 70 y. n = 1667	≥ 70 y. n = 693	Chi-square p-value
Follow-up (months)			-
Median	62.5	60.6	
Inter-quartile Range (1°-3°)	48.1-78.8	46.8-75.8	
<b>Relapse – n (%)</b>	<b>338 (20.3)</b>	<b>168 (24.2)</b>	<b>0.033</b>
Relapse site – n (%)			
Local	25 (7.5)	13 (7.7)	
Distant	293 (87.5)	142 (84.5)	
Both	17 (5.1)	13 (7.7)	
Missing	3	0	

## Primary End-Point: Relapse-Free Interval





# ***TOSCA TRIAL subgroup Analysis***

## ***(ESMO 2020)***

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- ❑ Patients 70 years or older :
- ❑ More PS 1
- ❑ More right sided cancers
- ❑ More T3-4
- ❑ Regimens equally distributed
- ❑ Patients 70 years or older :
- ❑ Statistically lower mean treatment duration, treatment completed, and greater rate of dose reduction
- ❑ Higher Relapse Rate %;  
**24.2 % v 20.3 % (p=0.033)**
- ❑ Relapse Free interval HR 1.27  
LR p=0.011
- ❑ In multivariate analysis impact of age was not significant  
**(HR 1.19 (95% CI 0.98-1.44) LR p=0.82**

# ***TOSCA TRIAL subgroup Analysis***

## ***(ESMO 2020)***



- ✓ TOSCA<sup>1</sup> is a phase III non-inferiority trial randomizing 3759 patients within the IDEA<sup>2</sup> collaboration investigating adjuvant treatment duration in colon cancer.
- ✓ The study failed to show noninferiority of 3 vs 6 months of treatment to the predefined margin of 20% relative increase.
- ✓ However, a qualitative, non statistically significant interaction between regimen and treatment duration was observed: for CAPOX, 3 months were as good as 6 months; for FOLFOX, 6 months added extra benefit.
- ✓ The results of TOSCA Trial were consistent with those of the pooled analysis IDEA on more than 12.800 patients enrolled in 6 studies.

<sup>1</sup> Sobrero A et al, J Clin Oncol 2018

<sup>2</sup> Grothey A et al, N Engl J Med 2018



# March 5-7, 2021


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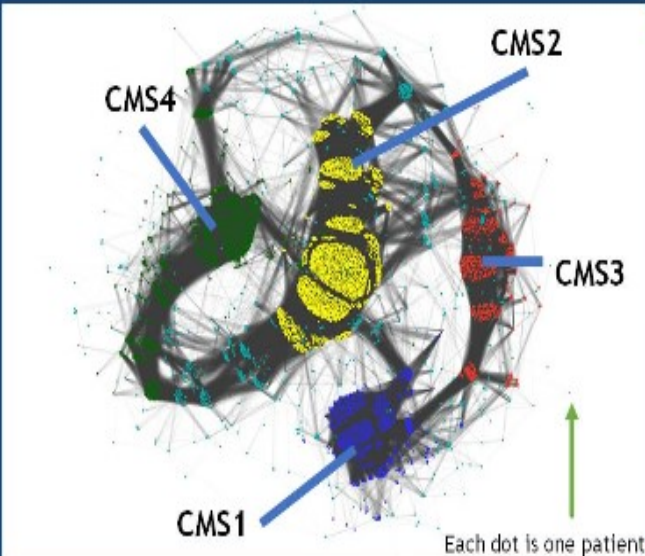
## 10th Annual WCS™

### WINTERCANCER SYMPOSIUM



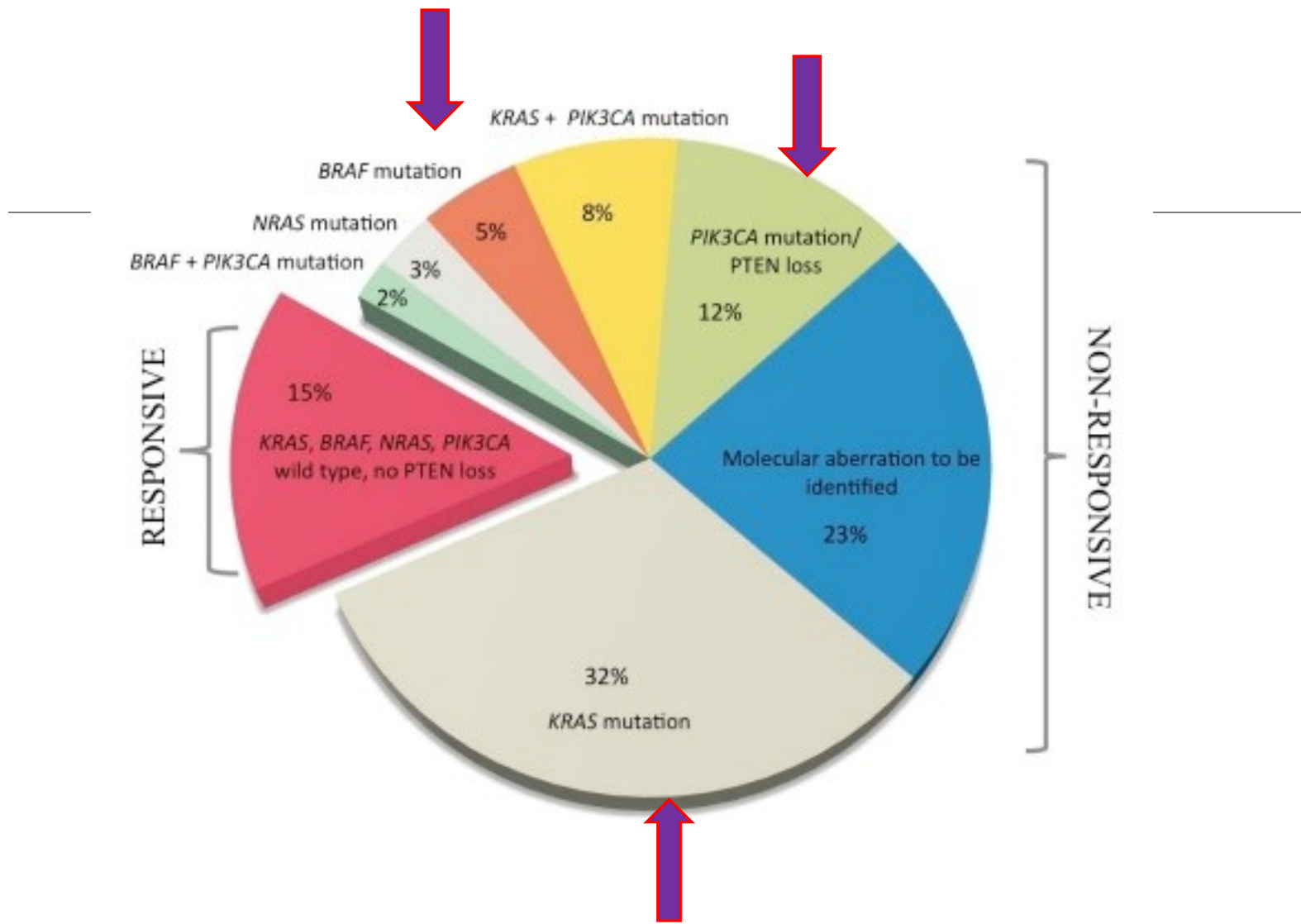
Conference Directors





Each dot is one patient

CMS1 MSI Immune	CMS2 Canonical	CMS3 Metabolic	CMS4 Mesenchymal
14%	37%	13%	23%
MSI, CIMP high Hypermutation	SCNA high	Mixed MSI status SCNA low, CIMP low	SCN high
<i>BRAF</i> mutations		<i>KRAS</i> mutations	
Immune infiltration and activation	WNT and MYC activation	Metabolic deregulation	Stromal infiltration TGF beta activation Angiogenesis
Worse survival after relapse	Better survival after relapse		Worse relapse-free and overall survival



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*The* NEW ENGLAND  
JOURNAL *of* MEDICINE


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Pembrolizumab in Microsatellite-Instability–High Advanced  
Colorectal Cancer

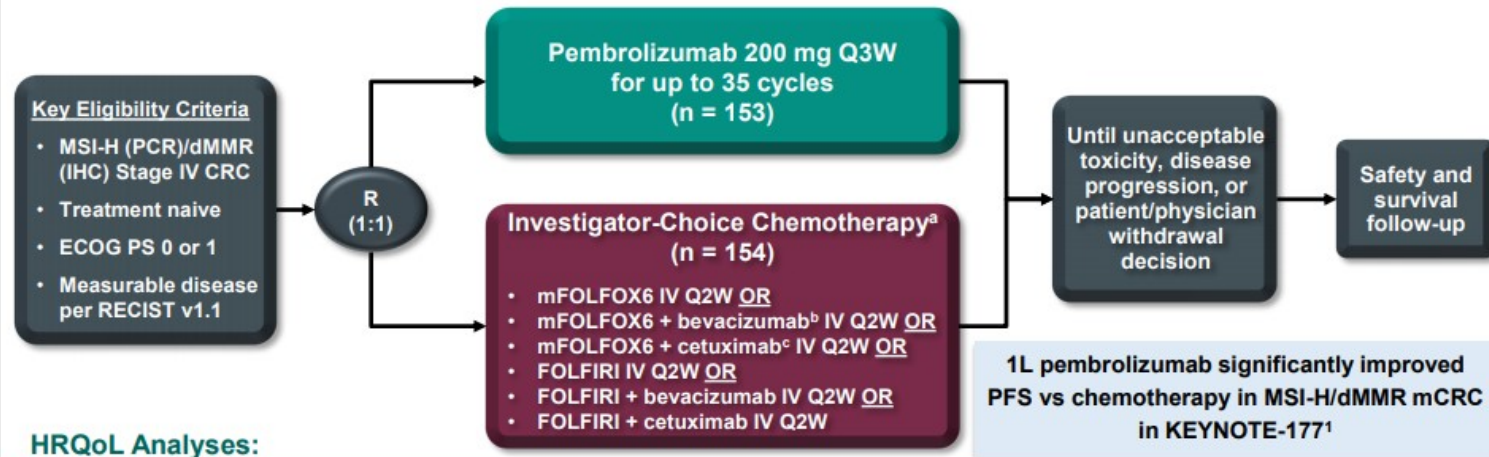
T. André, K.-K. Shiu, T.W. Kim, B.V. Jensen, L.H. Jensen, C. Punt, D. Smith, R. Garcia-Carbonero, M. Benavides,  
P. Gibbs, C. de la Fouchardiere, F. Rivera, E. Elez, J. Bendell, D.T. Le, T. Yoshino, E. Van Cutsem, P. Yang,  
M.Z.H. Farooqui, P. Marinello, and L.A. Diaz, Jr., for the KEYNOTE-177 Investigators\*





# KEYNOTE 177

## Phase 3 KEYNOTE-177 Study (NCT02563002)



### HRQoL Analyses:

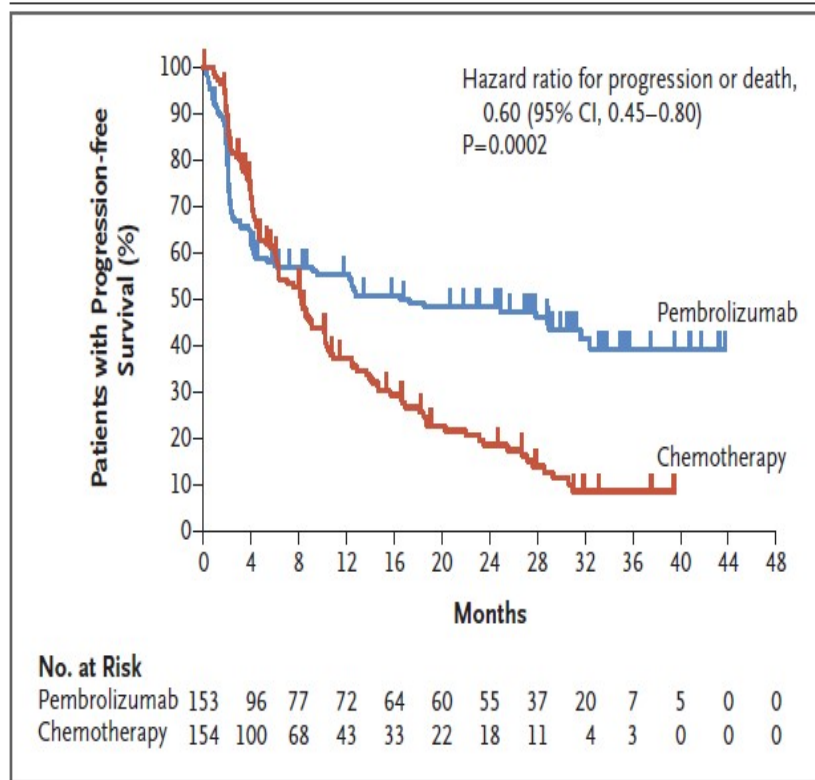
Prespecified exploratory PRO end points included

- Mean score change from baseline to week 18<sup>d</sup> in EORTC QLQ-C30, EORTC QLQ-CR29, and EQ-5D-3L scales/items
- Time to deterioration (TTD) in EORTC QLQ-C30 scales/items

PRO data were collected at baseline, during treatment, and 30 days after treatment discontinuation

<sup>a</sup>Chosen before randomization; <sup>b</sup>bevacizumab 5 mg/kg IV; <sup>c</sup>cetuximab 400 mg/m<sup>2</sup> over 2 hours then 250 mg/m<sup>2</sup> IV over 1 hour weekly; <sup>d</sup>week 18 was selected so a high proportion of patients would have completed PRO assessments (completion, 60%; compliance, ≥80%) and before the majority of patients were expected to have disease progression.  
1. Andre T et al. ASCO Annual Meeting; May 29-31, 2020.

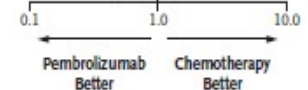




**Figure 1.** Progression-free Survival in Patients with MSI-H-dMMR Metastatic Colorectal Cancer.

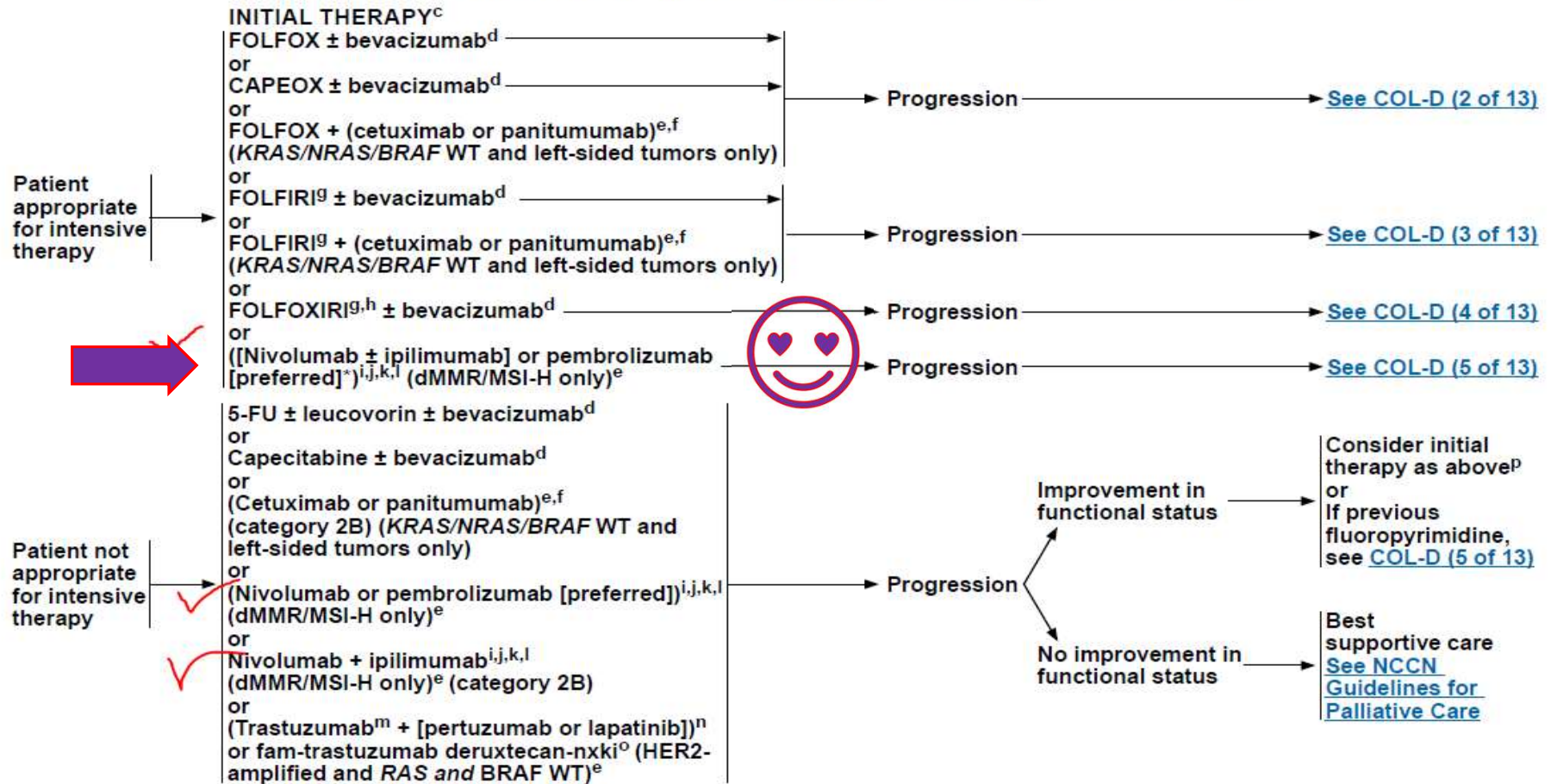
The NEW ENGLAND JOURNAL of MEDICINE

Subgroup	No. of Events/No. of Patients	Hazard Ratio (95% CI)
All patients	195/307	0.60 (0.45–0.80)
Age		
≤70 yr	132/217	0.52 (0.37–0.75)
>70 yr	63/90	0.77 (0.46–1.27)
Sex		
Male	91/153	0.59 (0.38–0.90)
Female	104/154	0.58 (0.39–0.87)
ECOG performance-status score		
0	90/159	0.37 (0.24–0.59)
1	105/148	0.84 (0.57–1.24)
Geographic region		
Asia	28/48	0.65 (0.30–1.41)
Western Europe or North America	146/222	0.62 (0.44–0.87)
Rest of the world	21/37	0.40 (0.16–0.98)
Stage		
Recurrent metachronous	87/154	0.53 (0.34–0.82)
Newly diagnosed	108/153	0.70 (0.47–1.04)
BRAF		
BRAF wild type	78/131	0.50 (0.31–0.80)
BRAF <sup>V600E</sup>	51/77	0.48 (0.27–0.86)
KRAS or NRAS		
All wild type	95/151	0.44 (0.29–0.67)
KRAS or NRAS mutant	51/74	1.19 (0.68–2.07)
Site of primary tumor		
Right	137/209	0.54 (0.38–0.77)
Left	50/88	0.81 (0.46–1.43)





**CONTINUUM OF CARE - SYSTEMIC THERAPY FOR ADVANCED OR METASTATIC DISEASE<sup>a,b</sup>**

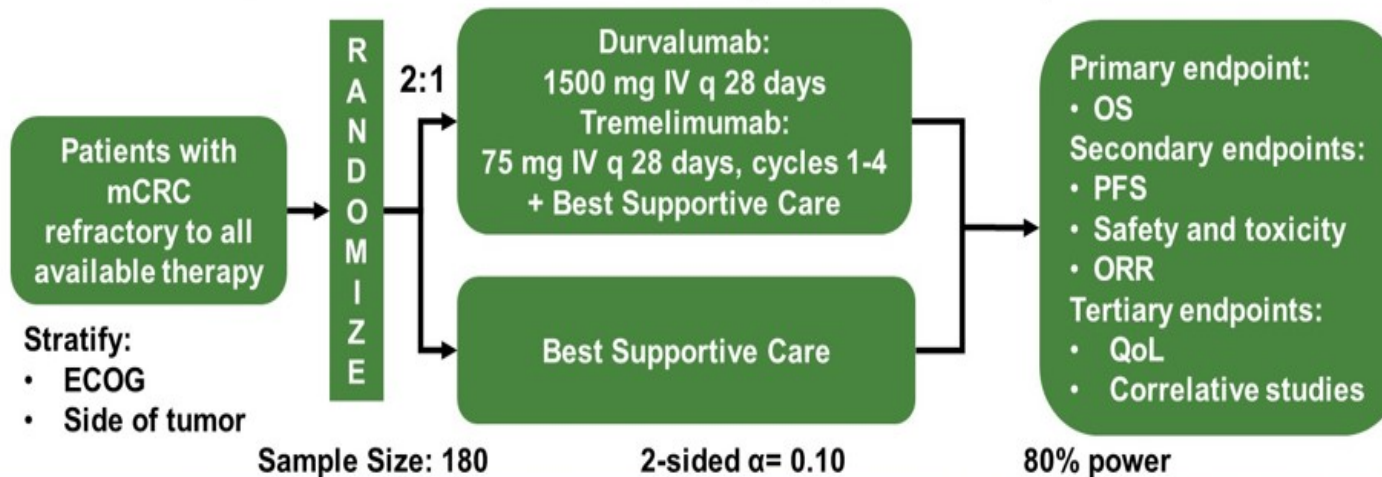


<sup>a</sup> Patients should be followed closely for 10 weeks to assess for response.

See footnotes on [COL-D \(7 of 13\)](#)

## **Tissue and plasma tumor mutation burden (TMB) as predictive biomarkers in the CCTG CO.26 trial of durvalumab + tremelimumab versus best supportive care in metastatic colorectal cancer**

- We compared tissue and plasma TMB as predictive biomarkers for immunotherapy benefit in patients with MSS mCRC from the CO.26 trial
  - Tissue TMB: derived from exomes (SureSelect All Exon v6) of archival samples and followed TMB Harmonization Project Guidelines with a 32.1 Mb TMB denominator
  - Plasma TMB: utilized the GuardantOMNI™ 500 gene, 2.1 Mb ctDNA panel



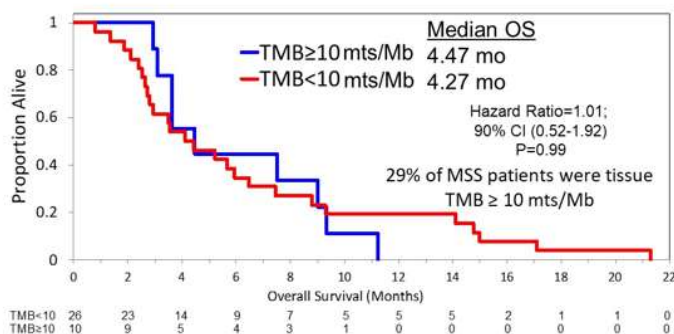




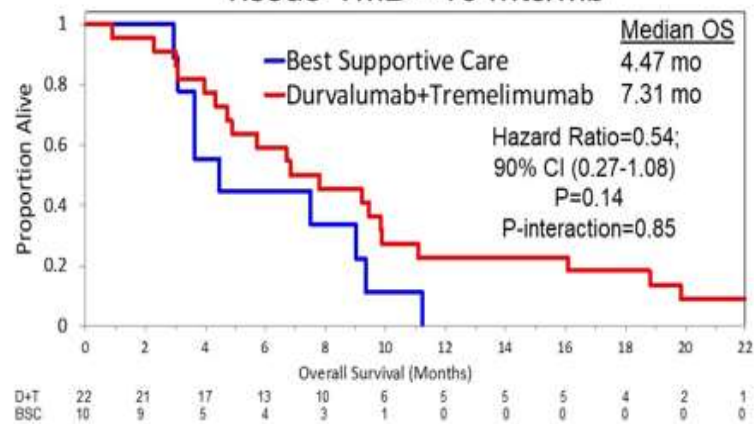
## OS : WITH BSC

## OS : DURVA/TREME

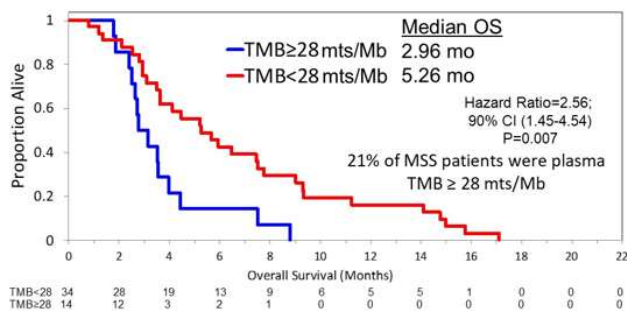
Overall Survival in Patients Receiving Best Supportive Care Stratified by Tissue TMB



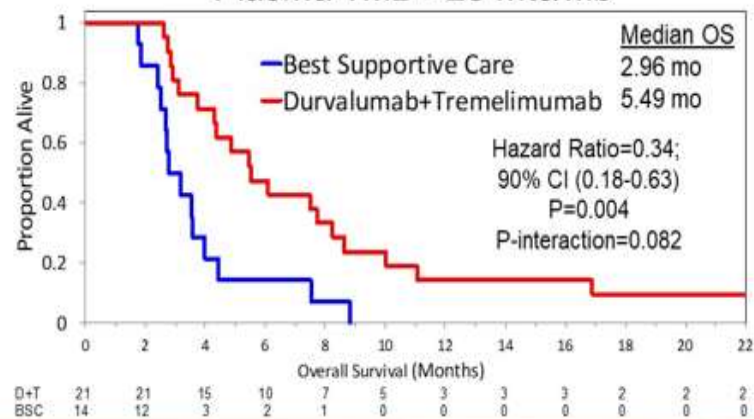
Tissue TMB ≥ 10 mts/Mb



Overall Survival in Patients Receiving Best Supportive Care Stratified by Plasma TMB



Plasma TMB ≥ 28 mts/Mb



# **TARGETING BRAF IN CRC**

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

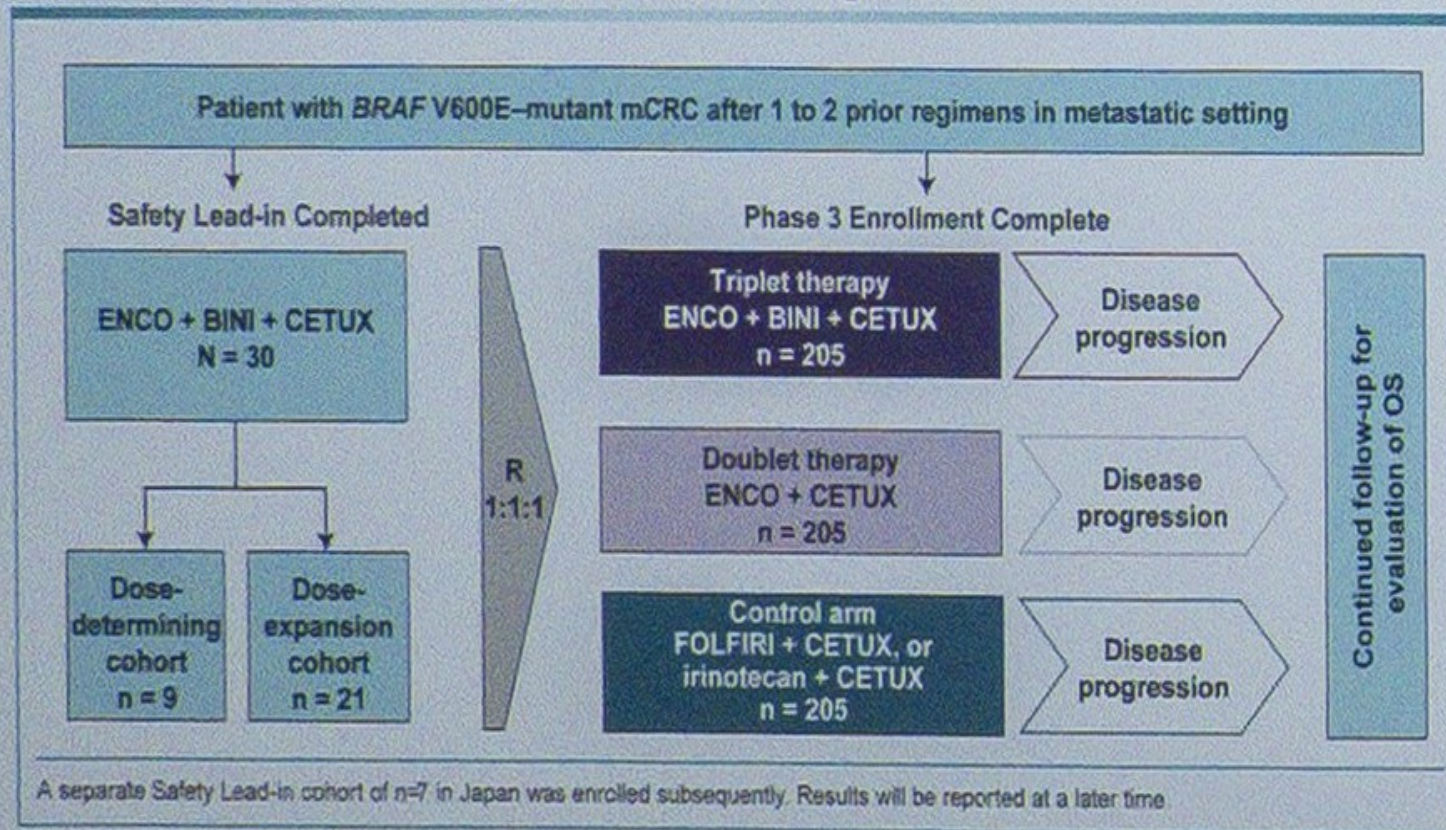
## **Encorafenib, Binimetinib, and Cetuximab in BRAF V600E–Mutated Colorectal Cancer**

S. Kopetz, A. Grothey, R. Yaeger, E. Van Cutsem, J. Desai, T. Yoshino, H. Wasan, F. Ciardiello, F. Loupakis, Y.S. Hong, N. Steeghs, T.K. Guren, H.-T. Arkenau, P. Garcia-Alfonso, P. Pfeiffer, S. Orlov, S. Lonardi, E. Elez, T.-W. Kim, J.H.M. Schellens, C. Guo, A. Krishnan, J. Dekervel, V. Morris, A. Calvo Ferrandiz, L.S. Tarpgaard, M. Braun, A. Gollerkeri, C. Keir, K. Maharry, M. Pickard, J. Christy-Bittel, L. Anderson, V. Sandor, and J. Tabernero

# TARGETING BRAF IN CRC

## (BEACON Trial)

Figure 1. The BEACON Study Clinical Trial Design

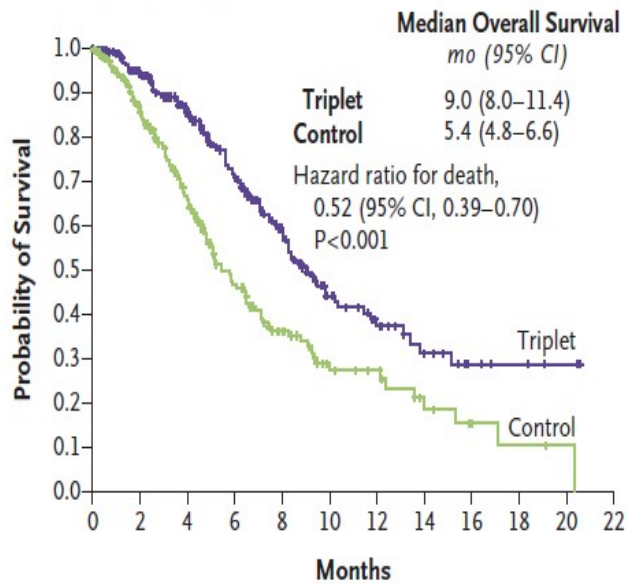




# TARGETING BRAF IN CRC

## (BEACON Trial)

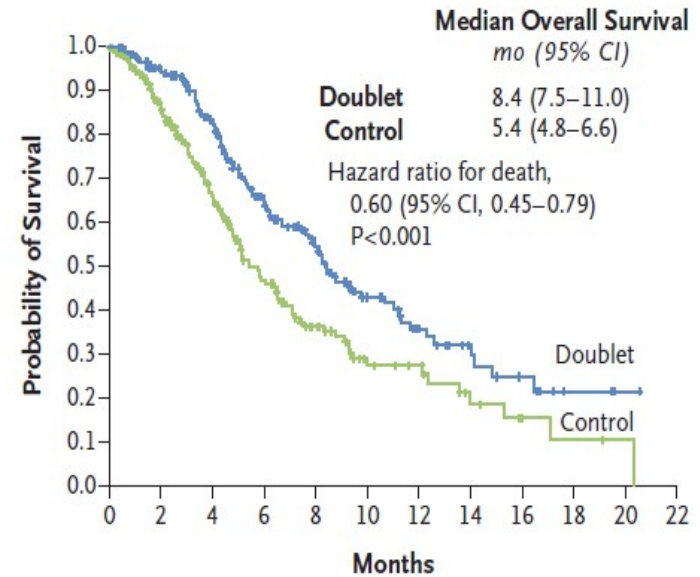
**A Overall Survival, Triplet Regimen vs. Control**



**No. at Risk**

Triplet	224	186	141	103	69	37	24	14	6	4	2	0
Control	221	158	102	60	34	18	15	7	4	2	1	0

**B Overall Survival, Doublet Regimen vs. Control**



**No. at Risk**

Doublet	220	184	133	87	57	33	21	12	8	3	1	0
Control	221	158	102	60	34	18	15	7	4	2	1	0

# *Novel targeted Therapy for CRC*

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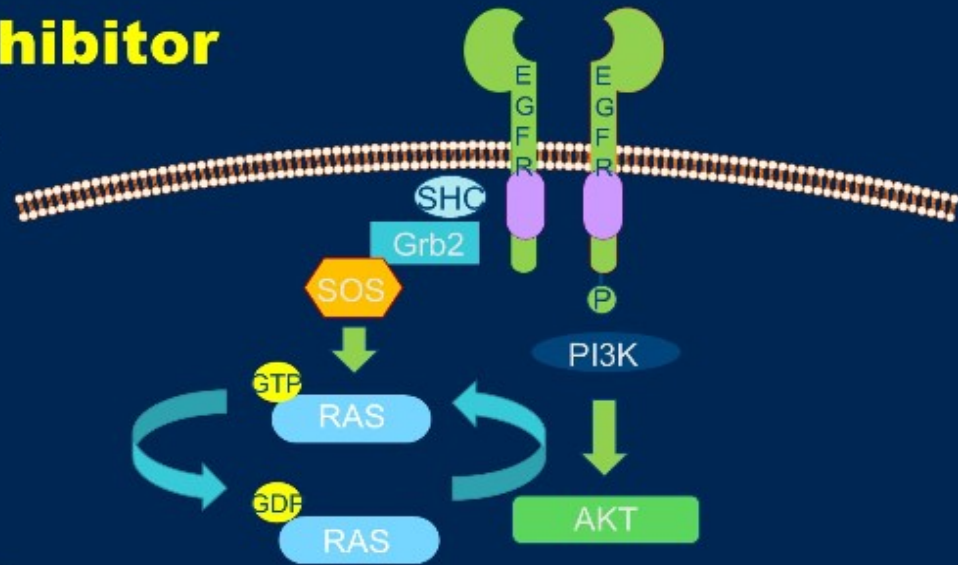
## **Colorectal Cancer**

Sotorasib	Small molecule inhibitor of KRAS G12C
Copanlisib (TPS)	PI3K inhibitor to reverse ICI resistance
Onvansertib (TPS)	PLK1, synthetic lethal with mutant KRAS
Peponsertib (TPS)	DNA dependent Protein Kinase DNA repair pathway

# TARGETING KRAS

## KRAS G12C Inhibitor

- Sotorasib (AMG510) is oral inhibitor of KRAS G12C mutant
- KRAS G12C favors KRAS in active GTP-bound state
- Sotorasib maintains mutant KRAS in inactive GDP-bound state



Fakih et al, ASCO 2020 ab4018

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### CONCLUSIONS:

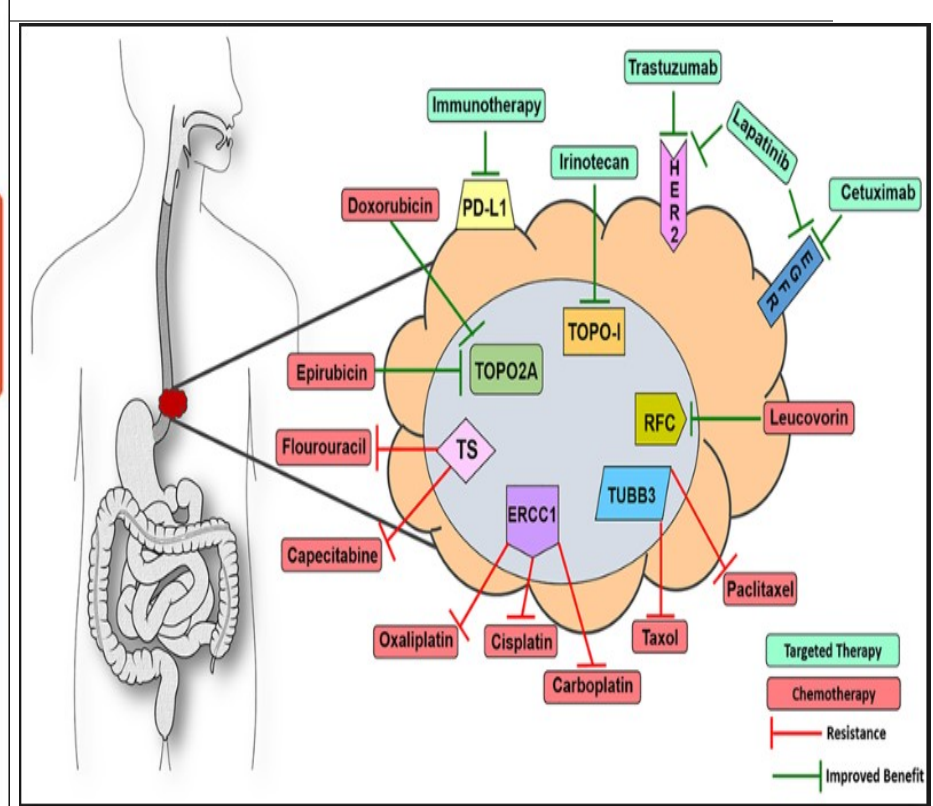
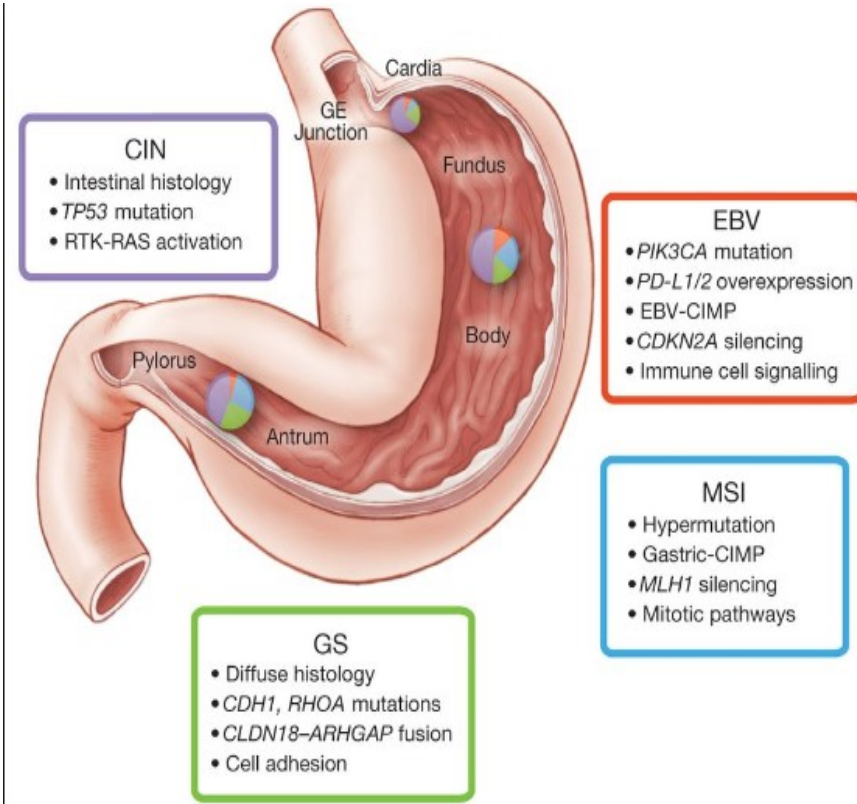
1. First-line therapy for MSI-H Metastatic colorectal cancer immunotherapy → A new standard of care.
  - Keynote 177: Med. PFS 16.5 Vs 8.2 m (P= 0.002) Pembro Vs Chemo Rx with Biologics
2. TOSCA trial subgroup analysis patients > 70:
  - Adjuvant Therapy Should be recommended to ALL Pts ( including > 70)
  - 3 m Vs 6 m based stratification T4 Vs T and N2 Vs N : FOLFOX Vs XELOX
3. Targeting Braf mutant CRC in Kras WT opened new treatment options
4. Need for new targeted therapy against Kras mutant CRC



# ***Gastric & Gastroesophageal Cancers***



# Gastroesophageal Cancers





# Gastric & Gastroesophageal Cancers

(Standard Treatment Options) WCS 2021

## MAGIC

Resectable adenocarcinoma of the stomach (n=372), GEJ (n=58) or lower esophagus (n=73)

ECF x 3 cycles → surgery → 3 cycles ECF

Surgery alone

Overall Survival:  
HR 0.75, p=0.009

Progression free Survival  
HR 0.66, p<0.001

## FLOT4

Resectable adenocarcinoma of the stomach or GEJ  
n=716

ECF/X x 3 cycles → surgery → 3 cycles ECF/X

FLOT x 4 cycles → surgery → 4 cycles FLOT

Overall Survival:  
50 months with FLOT  
35 months with ECF/X

Chemotherapy effectively confers a survival benefit in patients with localized esophageal and GE junctional cancer

Cunningham D et al, NEJM 2006  
Al-Batran SE et al, Lancet 2019

# Gastric & Gastroesophageal Cancers

WCS 2021

## CALGB 80803 (Alliance)—Survival Analysis

- PET directed combined modality treatment for esophageal cancer
  - FOLFOX → PET → FOLFOX/RT (R), Carbo/Taxol/RT (NR)
  - Carbo/Taxol → PET → Carbo/Taxol/RT (R), FOLFOX/RT (NR)
- Positive improvement in pCR rate in non-responders (1<sup>o</sup> endpoint)

Suggestion that switch therapy may improve outcomes in an appropriately selected population

Regimen	Median Overall Survival	4-year Survival Rate
Carbo/Taxol → FOLFOX (NR)	27.6 months	41.9%
FOLFOX → Carbo/Taxol (NR)	30.9 months	37.6%
Carbo/Taxol → Carbo/Taxol (R)	39.6 months	44.7%
FOLFOX → FOLFOX (R)	50.3 months	52.7%

Suggestion that induction chemotherapy may contribute in an appropriately selected population

Goodman KA et al, ASCO 2018

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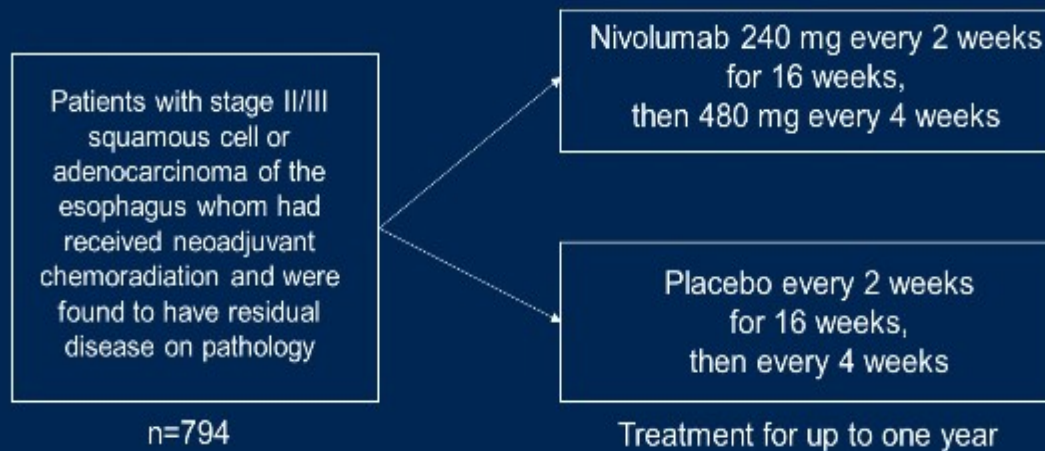
#GI21

# Gastric & Gastroesophageal Cancers

## WCS 2021

### Adjuvant Immunotherapy

- CheckMate 577 Trial



Significant improvement in disease free survival with the use of nivolumab, 22.4 months vs 11.0 months,  $p=0.0003$

Kelly RJ et al, ESMO 2020

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# GASTRIC CANCER

WCS 2021  
(JACCRO-GC 07 Adjuvant Therapy)

## **Abstract 159: Confirmed 3-year RFS and OS of the randomized trial of adjuvant **S-1** versus **S-1 plus docetaxel** after curative resection of pStage III gastric cancer (JACCRO GC-07).**

Kazuhiro Yoshida, Yasuhiro Kodera, Mitsugu Kochi, Takeshi Sano, Yoshihiro Kakeji, Wataru Ichikawa, Shintaro Kurahashi, Takahiro Toyokawa, Masato Nakamura, Kazumasa Fujitani, Mitsuhiro Ota, Yoichi Makari, Hironori Yamaguchi, Yoshinari Mochizuki, Mikihiro Kano, Atsushi Takeno, Masahiro Takeuchi and Masashi Fujii



Japan Clinical Cancer Research Organization (JACCRO)

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Gastrointestinal  
Cancers Symposium

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#GI21





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## Subgroup analyses of patients with microsatellite instability-high/mismatch repair-deficient metastatic colorectal cancer treated with nivolumab plus low-dose ipilimumab as first-line therapy: 2-year clinical update

Heinz-Josef Lenz,<sup>1</sup> Sara Lonardi,<sup>2</sup> Vittorina Zagonel,<sup>2</sup> Eric Van Cutsem,<sup>3</sup> Maria Luisa Limon,<sup>4</sup> Ka Yeung Mark Wong,<sup>5</sup> Alain Hendлиз,<sup>6</sup> Massimo Aglietta,<sup>7</sup> Pilar García-Alfonso,<sup>8</sup> Bart Neyns,<sup>9</sup> Gabriele Luppi,<sup>10</sup> Dana B. Cardin,<sup>11</sup> Tomislav Dragovich,<sup>12</sup> Usman Shah,<sup>13</sup> Sandzhar Abdullaev,<sup>14</sup> Arteid Memaj,<sup>14</sup> Michael James Overman<sup>15</sup>

# **GASTRIC CANCER WCS 2021**

(JACCRO-GC 07 Adjuvant Therapy)

## **Schema**

**pStage III  
gastric cancer**

**R**

### **S-1**

Cycles  $\geq 1$  (every 6 weeks)

S-1 80 mg/m<sup>2</sup> on Days 1–28

→ Continued up to one year post surgery

### **S-1/docetaxel**

Cycle 1 (3 weeks)

S-1 80 mg/m<sup>2</sup> on Days 1–14

Cycles 2–7 (every 3 weeks)

docetaxel 40 mg/m<sup>2</sup> on Day 1 and S-1 80 mg/m<sup>2</sup> on Days 1–14

Cycles  $\geq 8$  (every 6 weeks)

S-1 80 mg/m<sup>2</sup> on Days 1–28

→ Continued up to one year post surgery

Stratification:

- Stage (IIIA/IIIB/IIIC)
- Histological type  
(Differentiated/undifferentiated)
- Institution

Follow-up until the end of study

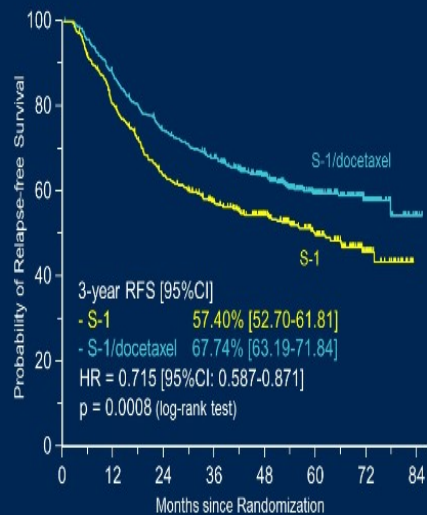
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# GASTRIC CANCER WCS 2021 JACCRO-GC 07

## Relapse-free Survival

ITT analysis set Population  
Data cut off: 9th Sept. 2020

Median follow up: 42.5 months  
(Range: 0.3-85.16)



No. at Risk	0	12	24	36	48	60	72	84
S-1	459	366	286	243	170	92	32	0
S-1/docetaxel	453	394	332	297	214	121	44	2

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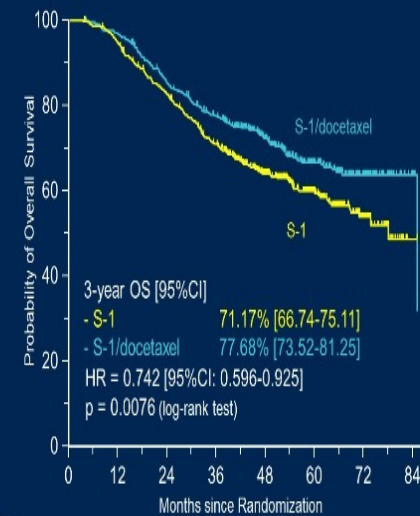
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#G121

## Overall Survival

ITT analysis set Population  
Data cut off: 9th Sept. 2020

Median follow up: 48.25 months  
(Range: 3.52-85.16)



No. at Risk	0	12	24	36	48	60	72	84
S-1	459	433	373	313	212	121	40	1
S-1/docetaxel	453	438	383	341	248	146	55	4

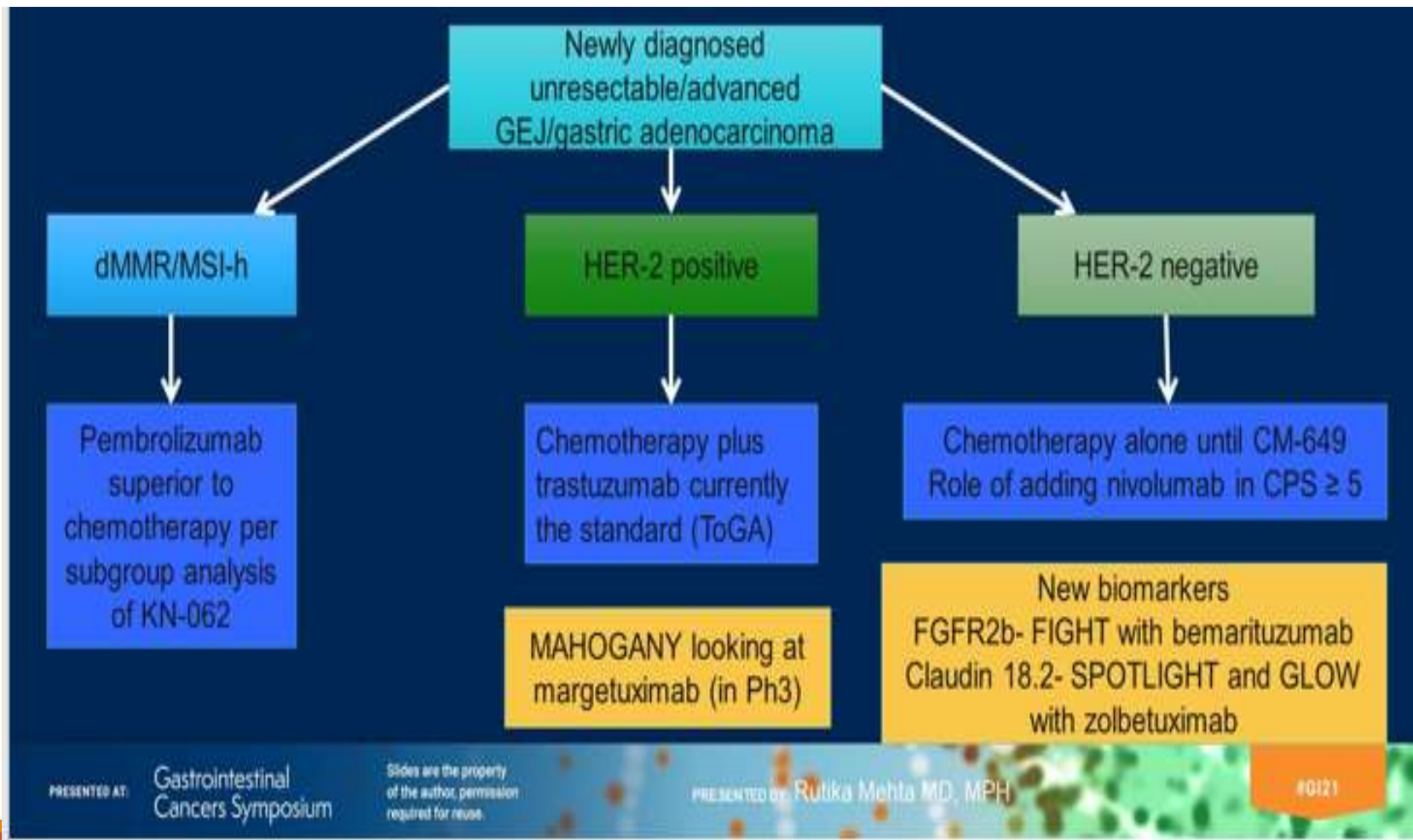
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#G121

# Management Stratification GE / Gastric Adenocarcinoma





# A double-blind randomized study of bemarituzumab (bema) plus mFOLFOX6 versus placebo plus mFOLFOX6 as first-line treatment for advanced gastric/gastroesophageal junction cancer (FIGHT)

Zev A Wainberg, Peter Enzinger, Yoon-Koo Kang, Kensai Yamaguchi, Shukui

## FIGHT Trial Design

### Key Eligibility Criteria

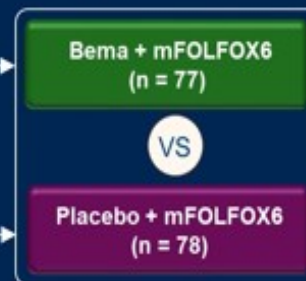
- No prior therapy for unresectable locally advanced or metastatic gastric/GEJ adenocarcinoma
- RECIST v1.1 evaluable disease
- FGFR2b overexpression by IHC and/or *FGFR2* gene amplification by ctDNA<sup>1</sup>
- ECOG 0/1
- HER2 not positive
- May receive 1 dose of mFOLFOX6

### Stratification Factors

- Geographic region
- Single dose of mFOLFOX6 during screening
- Prior adjuvant or neo-adjuvant chemotherapy

R  
1:1

Double blind, placebo controlled



- 1 Central testing: Immunohistochemical stain (Ventana): cut-off any 2+/3+; circulating tumor DNA (PGDx): cut-off 1.5X
- 2 15mg/kg Q2W with a single 7.5mg/kg dose on Cycle 1 Day 8<sup>2</sup>

### Primary endpoint

- Investigator-Assessed Progression-Free Survival

### Secondary endpoints

- Overall Survival
- Response Rate

### Statistical Plan

Trial initially designed as registrational Phase 3 (n=548) with 2-sided  $\alpha$  0.05. Amended after enrolling n = 155 to a proof-of-concept Phase 2 with pre-specified statistical assumptions of:

- Hierarchical sequential testing: PFS, then OS/ORR
- $\geq 84$  events to demonstrate benefit at a HR $\leq 0.76$  for PFS at 2-sided  $\alpha$  of 0.2

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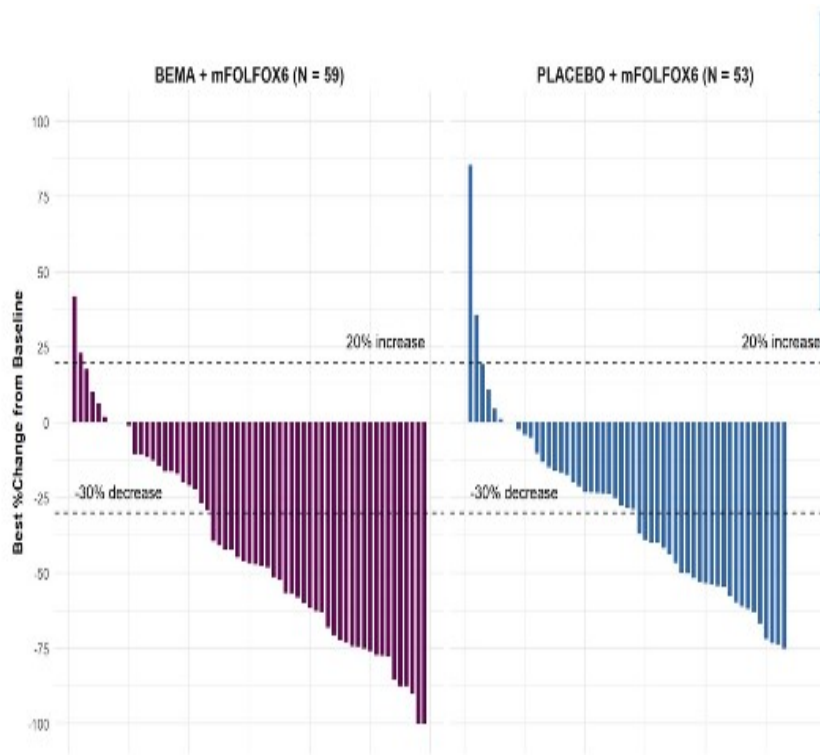
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# FIGHT TRIAL WCS 2021



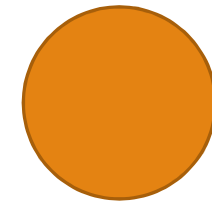
Only subjects with measurable disease at baseline and at least 1 evaluable scan postbaseline are included in the waterfall plot.  
 DOR = Duration of response; TTR = Time to response  
 \*1: estimated among subjects with measurable disease at baseline

Selected Adverse Events	Any Grade		Grade ≥ 3	
	Bema (N = 76)	Placebo (N = 77)	Bema (N = 76)	Placebo (N = 77)
Preferred Term	76 (100.0%)	76 (98.7%)	63 (82.9%)	57 (74.0%)

**Corneal AEs occurred in 67% patients receiving Bema (24% Grade 3).  
 40% patients still had unresolved corneal AEs at time of analysis  
 Median time to resolution ~7 months**

Platelet count decreased	14 (18.4%)	21 (27.3%)	1 (1.3%)	0
Aspartate aminotransferase increased	23 (30.3%)	15 (19.5%)	4 (5.3%)	2 (2.6%)
Alanine aminotransferase increased	22 (28.9%)	11 (14.3%)	2 (2.6%)	1 (1.3%)
Dry eye	20 (26.3%)	5 (6.5%)	2 (2.6%)	0

PRESENTED BY: Rutika Mehta MD, MPH



# Nivolumab plus chemotherapy versus chemotherapy as first-line treatment for advanced gastric cancer/gastroesophageal junction cancer/esophageal adenocarcinoma: first results of the CheckMate 649 study

Markus Moehler,<sup>1</sup> Kohei Shitara,<sup>2</sup> Marcelo Garrido,<sup>3</sup> Pamela Salman,<sup>4</sup> Lin Shen,<sup>5</sup> Lucjan Wyrwicz,<sup>6</sup> Kensei Yamaguchi,<sup>7</sup> Tomasz Skoczylas,<sup>8</sup> Arinilda Campos Bragagnoli,<sup>9</sup> Tianshu Liu,<sup>10</sup> Michael Schenker,<sup>11</sup> Patricio Yanez,<sup>12</sup> Mustapha Tehfe,<sup>13</sup> Valerie Poulart,<sup>14</sup> Dana Cullen,<sup>14</sup> Ming Lei,<sup>14</sup> Kaoru Kondo,<sup>14</sup> Mingshun Li,<sup>14</sup> Jaffer A. Ajani,<sup>15</sup> Yelena Y. Janjigian<sup>16</sup>

<sup>1</sup>Johannes-Gutenberg University Clinic, Mainz, Germany; <sup>2</sup>National Cancer Center Hospital East, Kashiwa, Japan; <sup>3</sup>Clinica San Carlos de Apoquindo, Pontificia Universidad Católica, Chile; <sup>4</sup>Fundación Arturo López Pérez, Providencia, Chile; <sup>5</sup>Beijing Cancer Hospital, Beijing, China; <sup>6</sup>Klinika Onkologii i Radioterapii, Narodowy Instytut Onkologii, Warszawa, Poland; <sup>7</sup>Cancer Institute Hospital of JFCR, Tokyo, Japan; <sup>8</sup>II Klinika Chirurgii Ogólnej, Gastroenterologicznej i Nowotworów Układu Pokarmowego, Medical University of Lublin, Lublin, Poland; <sup>9</sup>Fundacao Pio XII Hosp Cancer De Barretos, Barretos, Brazil; <sup>10</sup>Zhongshan Hospital Fudan University, Shanghai, China; <sup>11</sup>SF Nectarie Oncology Center, Craiova, Romania; <sup>12</sup>Universidad de La Frontera, Temuco, Chile; <sup>13</sup>Oncology Center - Centre Hospitalier de l'Université de Montreal, Montreal, QC, Canada; <sup>14</sup>Bristol Myers Squibb, Princeton, NJ, USA; <sup>15</sup>The University of Texas MD Anderson Cancer Center, Houston, TX, USA; <sup>16</sup>Memorial Sloan Kettering Cancer Center and Weill Cornell Medical College, New York, NY, USA

Presentation number LBA6



## CheckMate 649 study design

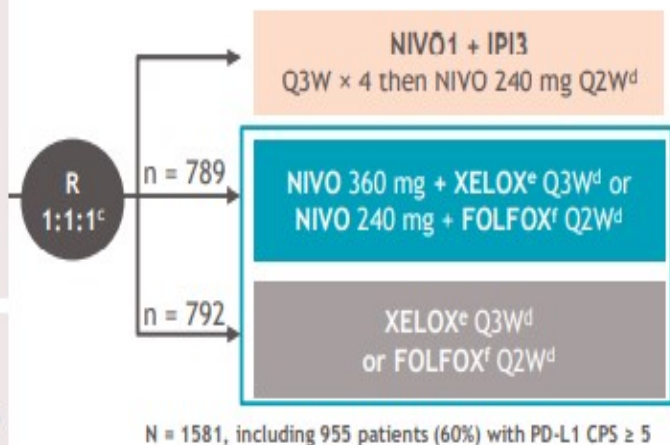
- CheckMate 649 is a randomized, open-label, phase 3 study<sup>a</sup>

### Key eligibility criteria

- Previously untreated, unresectable, advanced or metastatic gastric/GEJ/esophageal adenocarcinoma
- No known HER2-positive status
- ECOG PS 0-1

### Stratification factors

- Tumor cell PD-L1 expression ( $\geq 1\%$  vs  $< 1\%$ <sup>b</sup>)
- Region (Asia vs United States/Canada vs ROW)
- ECOG PS (0 vs 1)
- Chemo (XELOX vs FOLFOX)



### Dual primary endpoints:

- OS and PFS<sup>g</sup> (PD-L1 CPS  $\geq 5$ )

### Secondary endpoints:

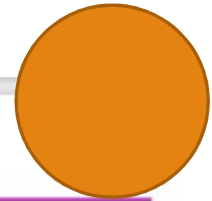
- OS (PD-L1 CPS  $\geq 1$  or all randomized)
- OS (PD-L1 CPS  $\geq 10$ )
- PFS<sup>g</sup> (PD-L1 CPS  $\geq 10$ , 1, or all randomized)
- ORR<sup>h</sup>

- At data cutoff (May 27, 2020), the minimum follow-up was 12.1 months<sup>h</sup>

<sup>a</sup>ClinicalTrials.gov number, NCT02872116; <sup>b</sup>< 1% includes indeterminate tumor cell PD-L1 expression; determined by PD-L1 IHC 28-8 pharmDx assay (Dako); <sup>c</sup>After NIVO + chemo arm was added and before new patient enrollment in the NIVO1+IPI3 group was closed; <sup>d</sup>Until documented disease progression (unless consented to treatment beyond progression for NIVO + chemo), discontinuation due to toxicity, withdrawal of consent, or study end. NIVO is given for a maximum of 2 years; <sup>e</sup>Oxaliplatin 130 mg/m<sup>2</sup> IV (day 1) and capecitabine 1000 mg/m<sup>2</sup> orally twice daily (days 1-14); <sup>f</sup>Oxaliplatin 85 mg/m<sup>2</sup>, leucovorin 400 mg/m<sup>2</sup>, and FU 400 mg/m<sup>2</sup> IV (day 1) and FU 1200 mg/m<sup>2</sup> IV daily (days 1-2); <sup>g</sup>BICR assessed; <sup>h</sup>Time from concurrent randomization of the last patient to NIVO + chemo vs chemo to data cutoff.

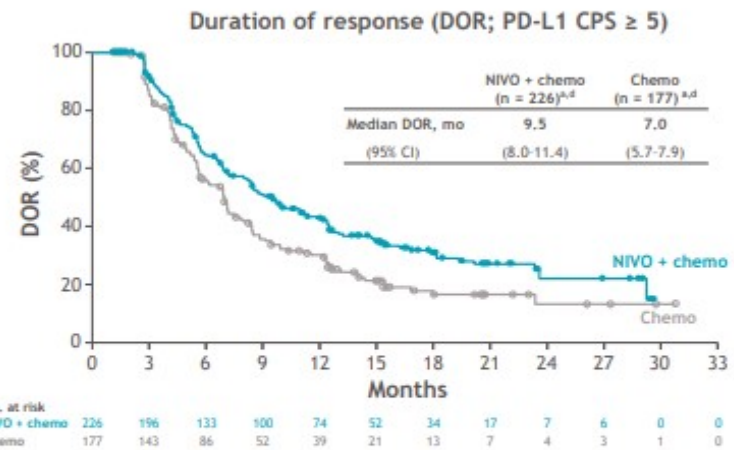


# CHECKMATE 649 ESMO 2020



## Response and duration of response

	PD-L1 CPS $\geq$ 5	
	NIVO + chemo (n = 378) <sup>a</sup>	Chemo (n = 391) <sup>a</sup>
ORR, %	60	45
95% CI	55-65	40-50
P value <sup>b</sup>	< 0.0001	
Best overall response, <sup>c</sup> %		
Complete response	12	7
Partial response	48	38
Stable disease	28	34
Progressive disease	7	11
Not evaluable	6	10
Median TTR (range), months	1.5 (0.8-10.2)	1.5 (1.0-7.1)



- ORR was higher with NIVO + chemo versus chemo, and responses were more durable

<sup>a</sup>Randomized patients who had target lesion measurements at baseline per BICR assessment; <sup>b</sup>ORR was not formally tested, the pre-specified P value is descriptive; <sup>c</sup>Percentages may not add up to 100% due to rounding; <sup>d</sup>Number of responders.



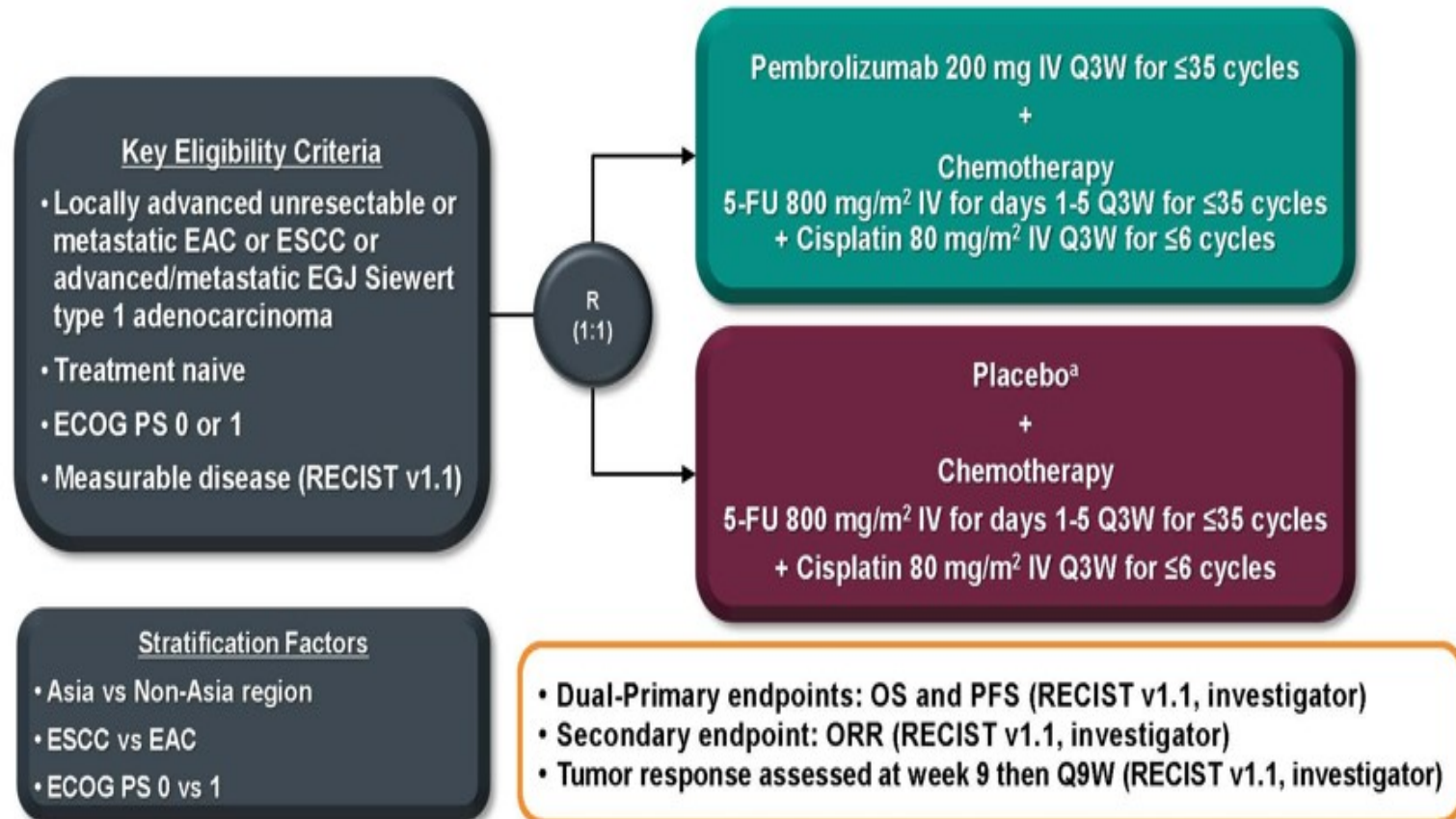
Kato KN590 ESMO 2020

# Pembrolizumab Plus Chemotherapy Versus Chemotherapy as First-Line Therapy in Patients With Advanced Esophageal Cancer: The Phase 3 KEYNOTE-590 Study

Ken Kato,<sup>1</sup> Jong-Mu Sun,<sup>2</sup> Manish A. Shah,<sup>3</sup> Peter Enzinger,<sup>4</sup> Antoine Adenis,<sup>5</sup> Toshihiko Doi,<sup>6</sup> Takashi Kojima,<sup>6</sup> Jean-Philippe Metges,<sup>7</sup> Zhigang Li,<sup>8</sup> Sung-Bae Kim,<sup>9</sup> Byoung Chul Cho,<sup>10</sup> Wasat Mansoor,<sup>11</sup> Shau-Hsuan Li,<sup>12</sup> Patrapim Sunpaweravong,<sup>13</sup> Maria Alsina Maqueda,<sup>14</sup> Eray Goekkurt,<sup>15</sup> Qi Liu,<sup>16</sup> Sukrut Shah,<sup>16</sup> Pooja Bhagia,<sup>16</sup> Lin Shen<sup>17</sup>

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# KEYNOTE-590 Study Design (NCT03189719)



<sup>a</sup>Saline IV Q3W for ≤35 cycles. All treatments were continued for the specified number of cycles or until disease progression, intolerable toxicity, withdrawal of consent, or physician decision; EAC, esophageal adenocarcinoma; EGJ, esophagogastric junction, ESCC, esophageal squamous cell carcinoma.



# Adjuvant nivolumab in resected esophageal or gastroesophageal junction cancer following neoadjuvant chemoradiation therapy: first results of the CheckMate 577 study

Ronan J. Kelly,<sup>1</sup> Jaffer A. Ajani,<sup>2</sup> Jaroslaw Kuzdzal,<sup>3</sup> Thomas Zander,<sup>4</sup> Eric Van Cutsem,<sup>5</sup> Guillaume Piessen,<sup>6</sup> Guillermo Mendez,<sup>7</sup> Josephine Feliciano,<sup>8</sup> Satoru Motoyama,<sup>9</sup> Astrid Lièvre,<sup>10</sup> Hope Uronis,<sup>11</sup> Elena Elimova,<sup>12</sup> Cecile Grootcholten,<sup>13</sup> Karen Geboes,<sup>14</sup> Jenny Zhang,<sup>15</sup> Lili Zhu,<sup>15</sup> Ming Lei,<sup>15</sup> Kaoru Kondo,<sup>15</sup> James M. Cleary,<sup>16</sup> Markus Moehler<sup>17</sup>

<sup>1</sup>The Charles A. Sammons Cancer Center at Baylor University Medical Center, Dallas, TX, USA; <sup>2</sup>The University of Texas MD Anderson Cancer Center, Houston, TX, USA; <sup>3</sup>Jagiellonian University, John Paul II Hospital, Cracow, Poland; <sup>4</sup>University Hospital of Cologne, Cologne, Germany; <sup>5</sup>University Hospitals Gasthuisberg, Leuven and KU Leuven, Leuven, Belgium; <sup>6</sup>University of Lille, Claude Huriez University Hospital, Lille, France; <sup>7</sup>Fundacion Favaloro, Buenos Aires, Argentina; <sup>8</sup>Johns Hopkins Sidney Kimmel Comprehensive Cancer Center, Baltimore, MD, USA; <sup>9</sup>Akita University Hospital, Akita, Japan; <sup>10</sup>CHU Pontchaillou, Rennes 1 University, Rennes, France; <sup>11</sup>Duke Cancer Institute, Durham, NC, USA; <sup>12</sup>Princess Margaret Cancer Centre, Toronto, ON, Canada; <sup>13</sup>Netherlands Cancer Institute-Antoni van Leeuwenhoek Hospital, Amsterdam, Netherlands; <sup>14</sup>UZ Gent, Gent, Belgium; <sup>15</sup>Bristol Myers Squibb, Princeton, NJ, USA; <sup>16</sup>Dana Farber Cancer Institute, Boston, MA, USA; <sup>17</sup>Johannes-Gutenberg University Clinic, Mainz, Germany

Presentation number LBA9





## CONCLUSIONS

1. the treatment Paradigm for gastric & Gastroesophageal cancer is an evolving Process
2. For Locally Advanced Gastric Ca/ GE adjuvant therapy still has role
3. The Alliance Trial: the better OS reaching 50.3 m with FOLFOX → FOLFOX/XRT
4. Adjuvant Nivolumab will be likely define a new standard of care in patients with residual disease after perioperative therapy & Surgery
5. Great Need for targeted Therapy against newer pathways/ receptors

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