Meet The Professor Optimizing the Selection and Sequencing of Therapy for Patients with Advanced Gastrointestinal Cancers

Tanios Bekaii-Saab, MD

Professor, Mayo Clinic College of Medicine and Science Program Leader, Gastrointestinal Cancer Mayo Clinic Cancer Center Consultant, Mayo Clinic in Arizona Phoenix, Arizona



Commercial Support

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Dr Love — Disclosures

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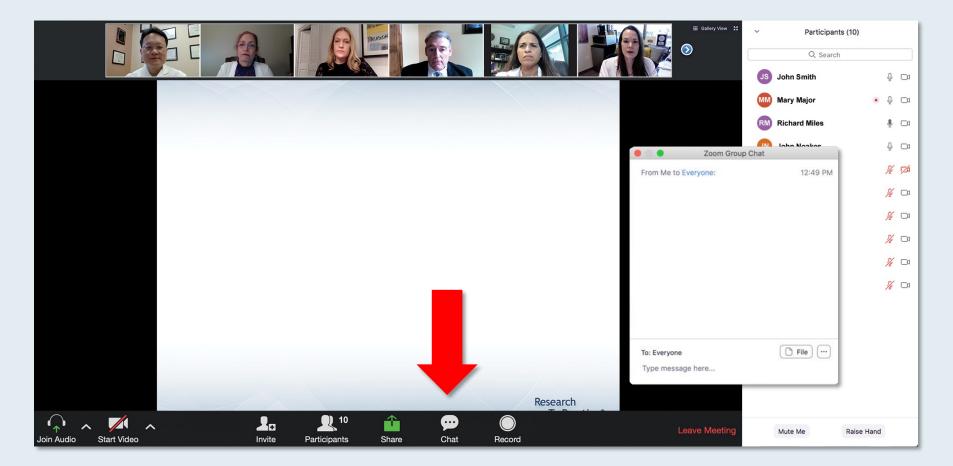


Dr Bekaii-Saab — Disclosures

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Inventions/Patents	WO/2018/183488, WO/2019/055687		



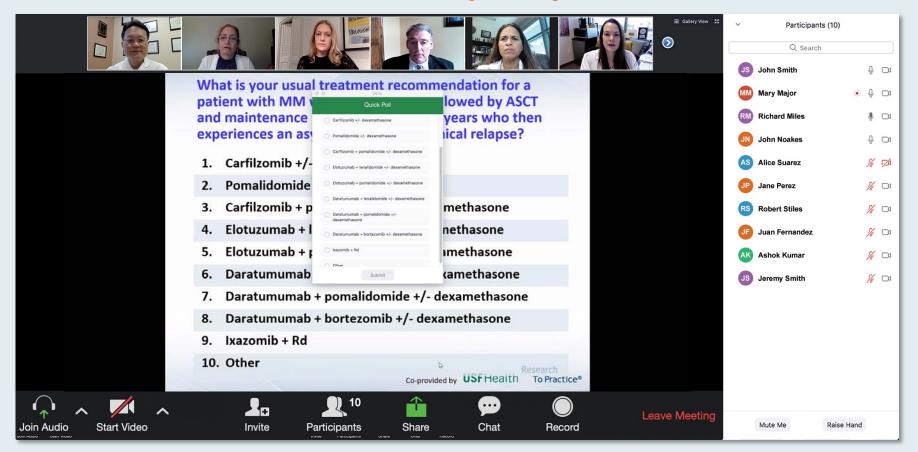
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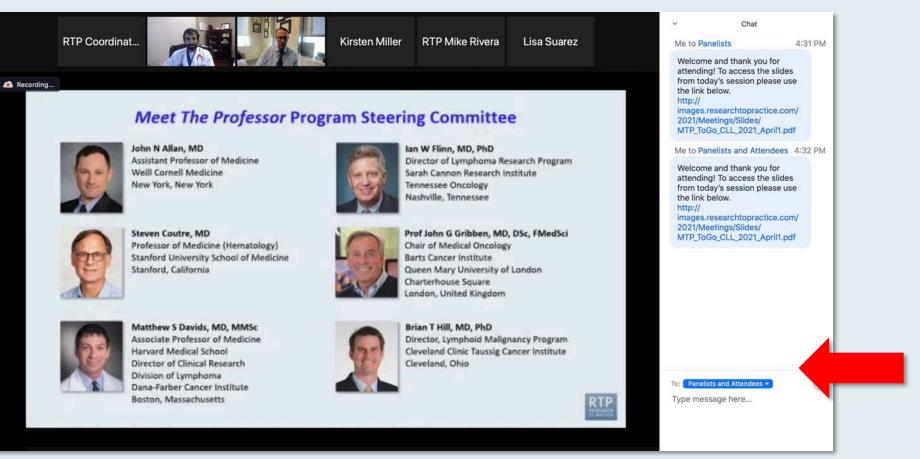


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Press Command (for Mac) or Control (for PC) and the + symbol. You may do this as many times as you need for readability.



ONCOLOGY TODAY WITH DR NEIL LOVE Advances in the Management

of Cholangiocarcinoma



DR MITESH BORAD MAYO CLINIC COMPREHENSIVE

CANCER CENTER









Dr Mitesh Borad Advances in the Mana Oncology Today with Dr Neil Love —

(15)

9 Exciting CME/MOC Events You Do Not Want to Miss

A Live Webinar Series Held in Conjunction with the 2021 ASCO Annual Meeting

Metastatic Castration-Resistant Prostate Cancer Tuesday, July 20 5:00 PM – 6:00 PM ET	Targeted Therapy for Non-Small Cell Lung Cancer Tuesday, July 27 5:00 PM – 6:00 PM ET	Colorectal and Gastroesophageal Cancers Tuesday, August 3 5:00 PM – 6:30 PM ET
Bladder Cancer Wednesday, July 21 5:00 PM – 6:00 PM ET	Immunotherapy and Other Nontargeted Approaches for Lung Cancer Wednesday, July 28 5:00 PM – 6:00 PM ET	Hepatocellular Carcinoma and Pancreatic Cancer Wednesday, August 4 5:00 PM – 6:30 PM ET
Endometrial and Cervical Cancers Monday, July 26 5:00 PM – 6:00 PM ET	Mantle Cell, Diffuse Large B-Cell and Hodgkin Lymphoma Monday, August 2 5:00 PM – 6:00 PM ET	Head and Neck Cancer Wednesday, August 11 5:00 PM – 6:00 PM ET



A Conversation with the Investigators: Metastatic Castration-Resistant Prostate Cancer

> Tuesday, July 20, 2021 5:00 PM – 6:00 PM ET

Faculty

Emmanuel S Antonarakis, MD Johann de Bono, MBChB, MSc, PhD Julie N Graff, MD



A Conversation with the Investigators: Bladder Cancer

Wednesday, July 21, 2021 5:00 PM – 6:00 PM ET

Faculty Petros Grivas, MD, PhD Daniel P Petrylak, MD Arlene Siefker-Radtke, MD



Meet The Professor Optimizing the Selection and Sequencing of Therapy for Patients with Renal Cell Carcinoma

> Thursday, July 22, 2021 5:00 PM – 6:00 PM ET

Faculty David F McDermott, MD



A Conversation with the Investigators: Endometrial and Cervical Cancers

Monday, July 26, 2021 5:00 PM – 6:00 PM ET

Faculty Mansoor Raza Mirza, MD David M O'Malley, MD Angeles Alvarez Secord, MD, MHSc



What General Medical Oncologists Want to Know About Targeted Therapy for Non-Small Cell Lung Cancer

> Tuesday, July 27, 2021 5:00 PM – 6:00 PM ET

Faculty

Professor Solange Peters, MD, PhD Zofia Piotrowska, MD, MHS Gregory J Riely, MD, PhD



What General Medical Oncologists Want to Know About Immunotherapy and Other Nontargeted Approaches for Lung Cancer

> Wednesday, July 28, 2021 5:00 PM – 6:00 PM ET

Faculty Mark Awad, MD, PhD David R Spigel, MD Heather Wakelee, MD



Thank you for joining us!

CME and MOC credit information will be emailed to each participant within 5 business days.



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Meet The Professor Program Participating Faculty



Dirk Arnold, MD, PhD

Director Asklepios Tumorzentrum Hamburg Asklepios Klinik Altona Hamburg, Germany



Johanna Bendell, MD Chief Development Officer Director, Drug Development Unit Nashville Sarah Cannon Research Institute Tennessee Oncology Nashville, Tennessee



Tanios Bekaii-Saab, MD

Professor, Mayo Clinic College of Medicine and Science Program Leader, Gastrointestinal Cancer Mayo Clinic Cancer Center Consultant, Mayo Clinic in Arizona Phoenix, Arizona



Daniel Catenacci, MD

Associate Professor, Department of Medicine Section of Hematology and Oncology Director, Interdisciplinary Gastrointestinal Oncology Program Assistant Director, Translational Research Comprehensive Cancer Center The University of Chicago Medical Center and Biological Sciences Chicago, Illinois



Meet The Professor Program Participating Faculty



Kristen K Ciombor, MD, MSCI Assistant Professor of Medicine Division of Hematology/Oncology Vanderbilt-Ingram Cancer Center Nashville, Tennessee



Wells A Messersmith, MD

Professor and Head, Division of Medical Oncology Associate Director for Translational Research University of Colorado Cancer Center Aurora, Colorado



Eileen M O'Reilly, MD Winthrop Rockefeller Endowed Chair in Medical Oncology Section Head, Hepatopancreaticobiliary and Neuroendocrine Cancers Co-Director, Medical Initiatives David M Rubenstein Center for Pancreatic Cancer Research Attending Physician, Member Memorial Sloan Kettering Cancer Center Professor of Medicine Weill Cornell Medical College New York, New York





Meet The Professor Program Participating Faculty



Alan P Venook, MD

The Madden Family Distinguished Professor of Medical Oncology and Translational Research Shorenstein Associate Director Program Development Helen Diller Family Comprehensive Cancer Center University of California, San Francisco San Francisco, California



Moderator

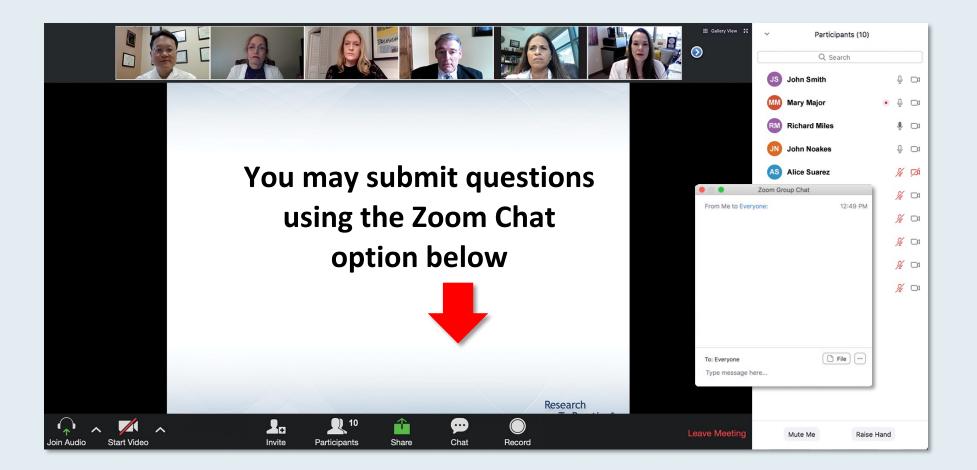
Neil Love, MD Research To Practice Miami, Florida



Zev Wainberg, MD, MSc Co-Director, GI Oncology Program Director of Early Phase Clinical Research Jonsson Comprehensive Cancer Center UCLA School of Medicine Los Angeles, California



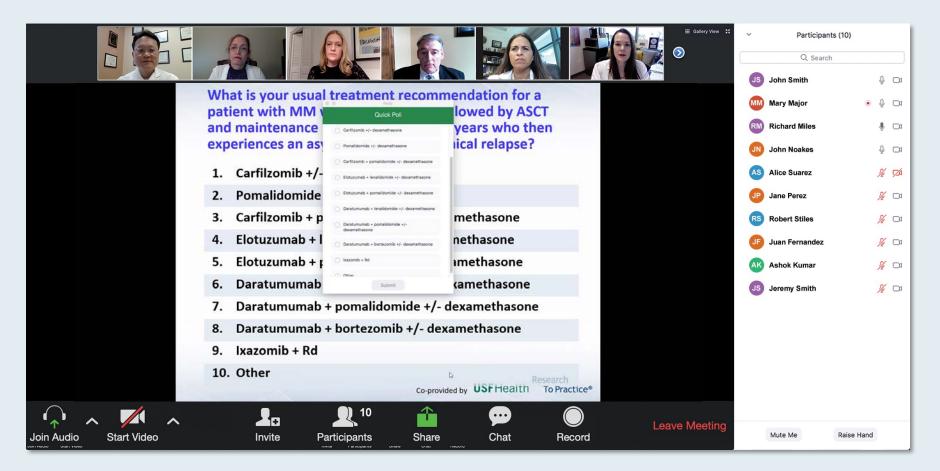
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Kristen K Ciombor, MD, MSCI Vanderbilt-Ingram Cancer Center Nashville, Tennessee



Sulfi Ibrahim, MD Reid Health Richmond, Indiana



Rahul Gosain, MD Guthrie Corning Cancer Center Corning, New York



Yanjun Ma, MD Tennessee Oncology Murfreesboro, Tennessee



Meet The Professor with Dr Bekaii-Saab

MODULE 1: Cases from Drs Ibrahim and Ma

- Dr Ibrahim: A 58-year-old man with HIV and esophageal cancer
- Dr Ma: A frail 78-year-old woman with metastatic gastric cancer and brain metastases PD-L1 CPS 15%, TMB 38.4 mut/Mb
- Dr Ibrahim: An 81-year-old man with metastatic gastroesophageal junction adenocarcinoma and a PD-L1 of 50%

MODULE 2: Beyond the Guidelines; Key Data – Gastroesophageal Cancers

MODULE 3: Cases from Dr Ciombor

- A 51-year-old woman with metastatic colorectal cancer (CRC) and discordant mismatch repair results
- A 53-year-old woman with microsatellite-stable metastatic CRC and a BRAF V600E mutation

MODULE 4: Beyond the Guidelines; Key Data – CRC

MODULE 5: Cases from Dr Gosain

- A 64-year-old man with metastatic sarcomatoid hepatocellular carcinoma (HCC) whose disease progressed from Child-Pugh A6 to B8 while on atezolizumab/bevacizumab
- A 66-year-old man with HCC and untreated hepatitis C

MODULE 6: Beyond the Guidelines; Key Data – HCC



Case Presentation – Dr Ibrahim: A 58-year-old man with HIV and esophageal cancer



Dr Sulfi Ibrahim

- PMH: HIV-1-positive (well controlled), significant CAD with placement of multiple stents in the past year
- Locally advanced esophageal adenocarcinoma
- Neoadjuvant chemoradiation therapy, with good response and resolution of dysphagia
 - Patient declines esophagectomy
- Recurrent disease in the esophagus only but no other evidence of disease
 - Patient continues to decline surgery
- Patient declines chemotherapy but willing to accept treatment with pembrolizumab (PD-L1: 15%)

Questions

- Is single-agent pembrolizumab an appropriate treatment choice in a patient who has disease confined to the esophagus? Is there any data for responses in such patients? Any other alternate treatment suggestions?
- His HIV-1 disease is controlled on antiretroviral medications are there any safety concerns for giving PD-L1 or PD-1 directed therapy in a patient with HIV?



Case Presentation – Dr Ma: A frail 78-year-old woman with metastatic gastric cancer and brain metastases – PD-L1 CPS 15%, TMB 38.4 mut/Mb



Dr Yanjun Ma

- 12/2019: EGD, EBUS, Stage IIIB adenocarcinoma of the gastric cardia
- 1/2020: Preoperative FLOT chemotherapy → Perforated diverticulitis requiring prolonged recovery
- 6/2020: Surgery, with 6-cm residual tumor, 10/23 positive nodes, negative surgical margins
 - Difficult post-operative recovery, decline in performance status, attempt at adjuvant chemo aborted
- Three months post-surgery restaging CT: Mild diffuse nodal progression, persistent personality changes
- Isolated right front lobe metastasis \rightarrow 9/2020: SBRT
- Clinical trial of SN38 toxin binding to HSP90 → 1/2021 restaging scan: Mixed response with persistent increase in brain metastasis and associated edema
- NGS and RNA fusion analysis: High TMB 38.4 mut/Mb, PD-L1 CPS ~15, and PI3K mutation



Case Presentation – Dr Ma: A frail 78-year-old woman with metastatic gastric cancer and brain metastases – PD-L1 CPS 15%, TMB 38.4 mut/Mb (continued)



Dr Yanjun Ma

Questions

- What is your strategy in patients who are too weak after preoperative chemotherapy and surgery to undergo postoperative chemotherapy? Would you suggest surveillance only, or something other than FLOT?
- Since she has a very high tumor mutation burden would you recommend FOLFOX/nivolumab, or singleagent pembrolizumab? Would you forgo FOLFOX and consider a taxane/ramucirumab?
- Would adjuvant nivolumab be an option?



Case Presentation – Dr Ibrahim: An 81-year-old man with metastatic GEJ adenocarcinoma and PD-L1 of 50%



Dr Sulfi Ibrahim

- Work up for progressive dysphagia: GEJ adenocarcinoma with metastases to the liver, PD-L1 50%
 - NGS: No other actionable mutations
- Nivolumab/capecitabine/oxaliplatin, with very good response and resolution of dysphagia
 - Oxaliplatin and capecitabine dose reduced due to his age
- Currently, receiving monthly maintenance nivolumab

Questions

 Is nivolumab/capecitabine/oxaliplatin the optimal regimen to have picked for this patient? Would a non-chemotherapy-containing regimen of ipilimumab and nivolumab have also been a reasonable choice?



Meet The Professor with Dr Bekaii-Saab

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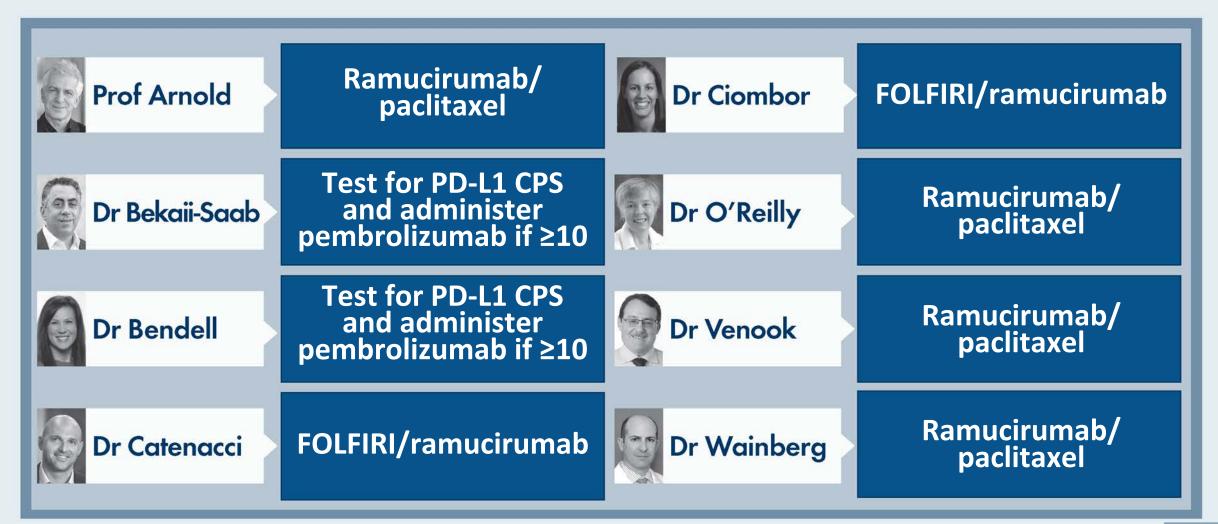
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MODULE 6: Beyond the Guidelines; Key Data – HCC

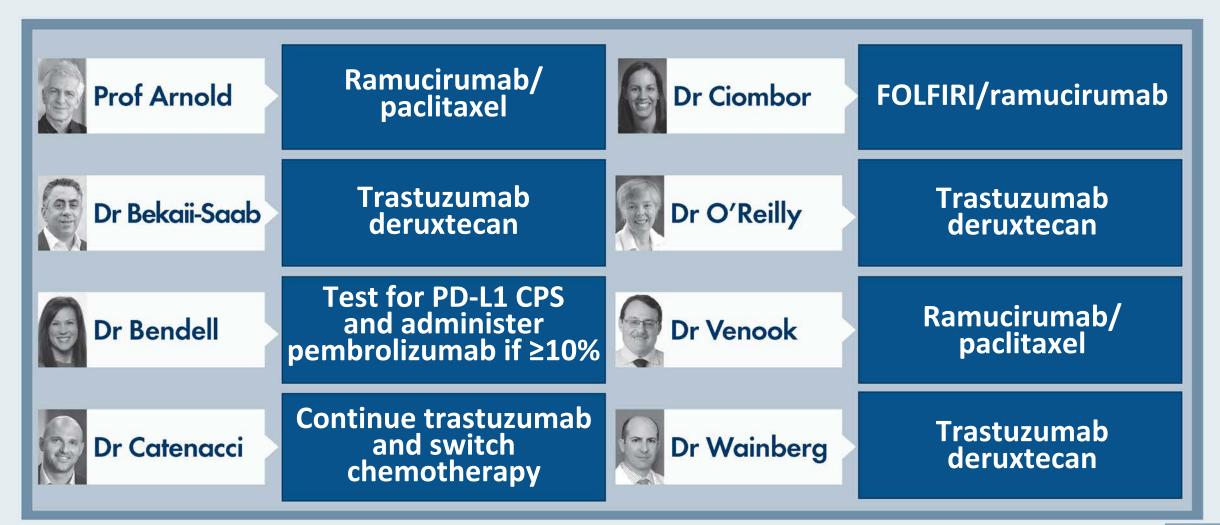


Regulatory and reimbursement issues aside, what would you currently recommend as second-line therapy for a patient with metastatic <u>HER2-negative</u>, MSS adenocarcinoma of the GEJ who has experienced disease progression on first-line <u>FOLFOX</u>?





Regulatory and reimbursement issues aside, what would you currently recommend as second-line therapy for a patient with metastatic <u>HER2-positive</u>, MSS adenocarcinoma of the GEJ who has experienced disease progression on first-line <u>FOLFOX/trastuzumab</u>?







Adjuvant nivolumab in resected esophageal or gastroesophageal junction cancer following neoadjuvant chemoradiotherapy: expanded efficacy and safety analyses from CheckMate 577

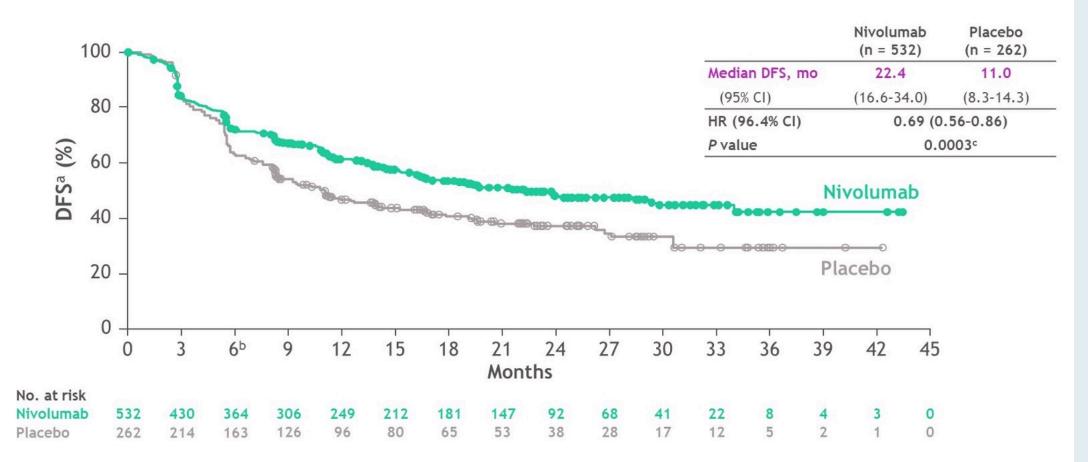
Ronan J. Kelly,¹ Jaffer A. Ajani,² Jaroslaw Kuzdzal,³ Thomas Zander,⁴ Eric Van Cutsem,⁵ Guillaume Piessen,⁶ Guillermo Mendez,⁷ Josephine Feliciano,⁸ Satoru Motoyama,⁹ Astrid Lièvre,¹⁰ Hope Uronis,¹¹ Elena Elimova,¹² Cecile Grootscholten,¹³ Karen Geboes,¹⁴ Jenny Zhang,¹⁵ Samira Soleymani,¹⁵ Ming Lei,¹⁵ Prianka Singh,¹⁵ James M. Cleary,¹⁶ Markus Moehler¹⁷

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

> RTP RESEARCH TO PRACTICE

Abstract number 4003

CheckMate 577: Disease-Free Survival



Nivolumab provided superior DFS with a 31% reduction in the risk of recurrence or death and a doubling in median DFS versus placebo



FDA Approves Pembrolizumab in Combination with Chemotherapy for Esophageal or GEJ Carcinoma Press Release – March 22, 2021

"On March 22, 2021, the Food and Drug Administration approved pembrolizumab in combination with platinum and fluoropyrimidine-based chemotherapy for patients with metastatic or locally advanced esophageal or gastroesophageal (GEJ) (tumors with epicenter 1 to 5 centimeters above the gastroesophageal junction) carcinoma who are not candidates for surgical resection or definitive chemoradiation.

Efficacy was evaluated in KEYNOTE-590 (NCT03189719), a multicenter, randomized, placebocontrolled trial that enrolled 749 patients with metastatic or locally advanced esophageal or gastroesophageal junction carcinoma who were not candidates for surgical resection or definitive chemoradiation.

The recommended pembrolizumab dose for esophageal cancer is 200 mg every 3 weeks or 400 mg every 6 weeks."

https://www.fda.gov/drugs/resources-information-approved-drugs/fda-approves-pembrolizumab-esophageal-or-gejcarcinoma?utm_medium=email&utm_source=govdelivery



Pembrolizumab plus Chemotherapy versus Chemotherapy as First-Line Therapy in Patients with Advanced Esophageal Cancer: The Phase 3 KEYNOTE-590 Study

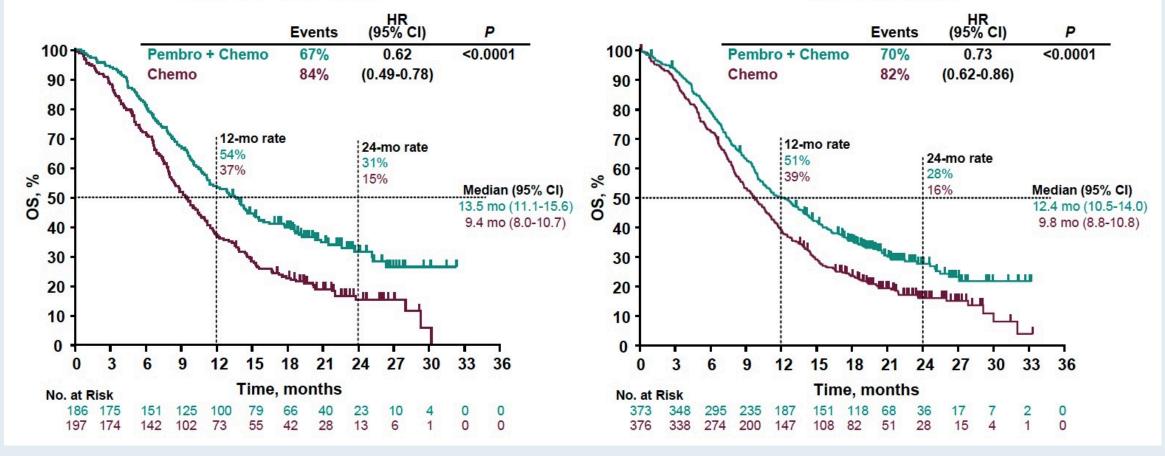
Kato K et al. ESMO 2020;Abstract LBA8_PR.



KEYNOTE-590: Overall Survival

PD-L1 CPS ≥10

All Patients



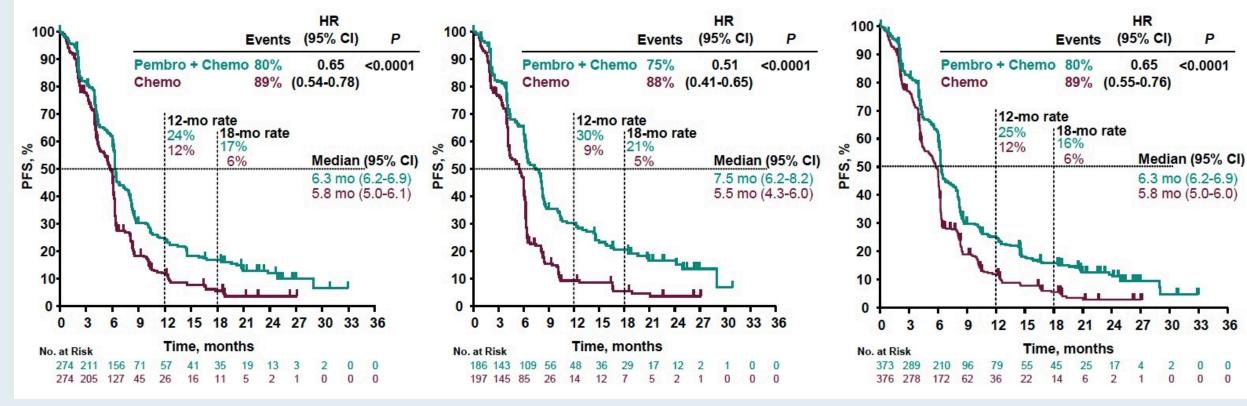


KEYNOTE-590: Progression-Free Survival

ESCC

PD-L1 CPS ≥10







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FDA Approves Nivolumab with Chemotherapy for Front-Line Advanced Gastric Cancer Press Release – April 16, 2021

"The FDA approved nivolumab in combination with certain types of chemotherapy for the frontline treatment of patients with advanced or metastatic gastric cancer, gastroesophageal junction cancer and esophageal adenocarcinoma, making it the first approved immunotherapy for this patient population.

The agency based the approval on data from the randomized, multicenter, open-label phase 3 CheckMate-649 trial, designed to evaluate nivolumab – a monoclonal antibody that inhibits tumor growth by enhancing T-cell function – plus chemotherapy in 1,581 patients with previously untreated advanced or metastatic gastric cancer, gastroesophageal junction cancer and esophageal adenocarcinoma. Of the 789 patients treated in the nivolumab arm, median overall survival was 13.8 months, compared with 11.6 months for patients who received chemotherapy alone."

https://www.cancernetwork.com/view/fda-approves-nivolumab-plus-chemo-for-frontline-advanced-gastriccancer?utm_source=sfmc&utm_medium=email&utm_campaign=4.16.21_CN_Breaking&eKey=Z2tlbGx5QHJlc2VhcmNodG9wcm FjdGljZS5jb20=





First-line nivolumab plus chemotherapy vs chemotherapy in advanced gastric cancer/ gastroesophageal junction cancer/esophageal adenocarcinoma: expanded efficacy and safety data from CheckMate 649

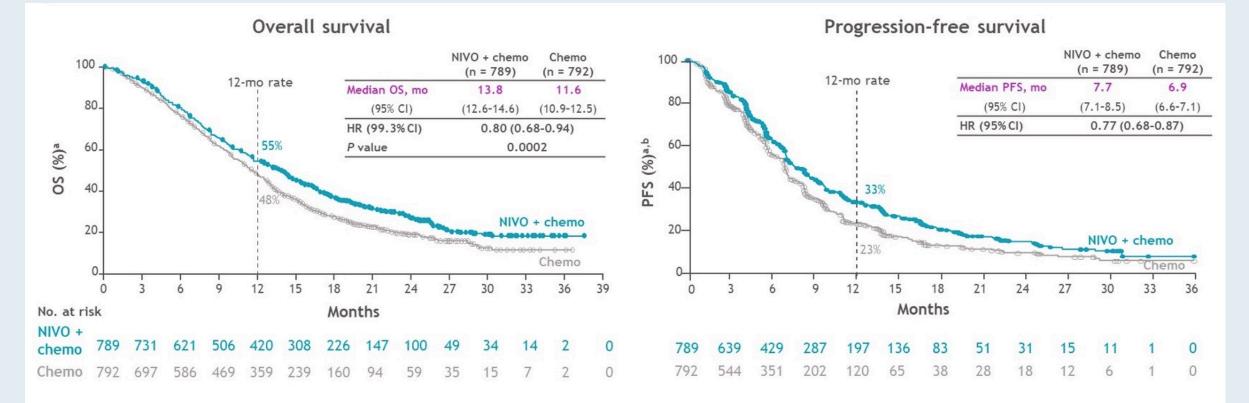
<u>Markus Moehler</u>,¹ Kohei Shitara,² Marcelo Garrido,³ Pamela Salman,⁴ Lin Shen,⁵ Lucjan Wyrwicz,⁶ Kensei Yamaguchi,⁷ Tomasz Skoczylas,⁸ Arinilda Campos Bragagnoli,⁹ Tianshu Liu,¹⁰ Michael Schenker,¹¹ Patricio Yanez,¹² Mustapha Tehfe,¹³ Mingshun Li,¹⁴ Dana Cullen,¹⁴ Samira Soleymani,¹⁴ Ming Lei,¹⁴ Hong Xiao,¹⁴ Yelena Y. Janjigian,¹⁵ Jaffer A. Ajani¹⁶

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

Abstract Number 4002



CheckMate 649 Dual Primary Endpoints: PFS and OS



- Superior OS benefit and clinically meaningful PFS improvement in all randomized patients with NIVO + chemo vs chemo
- Median OS with NIVO + chemo vs chemo in patients with PD-L1 CPS ≥ 5 was 14.4 vs 11.1 months and median PFS was 7.7 vs 6.0 months¹



Moehler M et al. ASCO 2021;Abstract 4002.



Nivolumab plus ipilimumab or nivolumab plus chemotherapy versus chemotherapy as first-line treatment for advanced esophageal squamous cell carcinoma: first results of the CheckMate 648 study

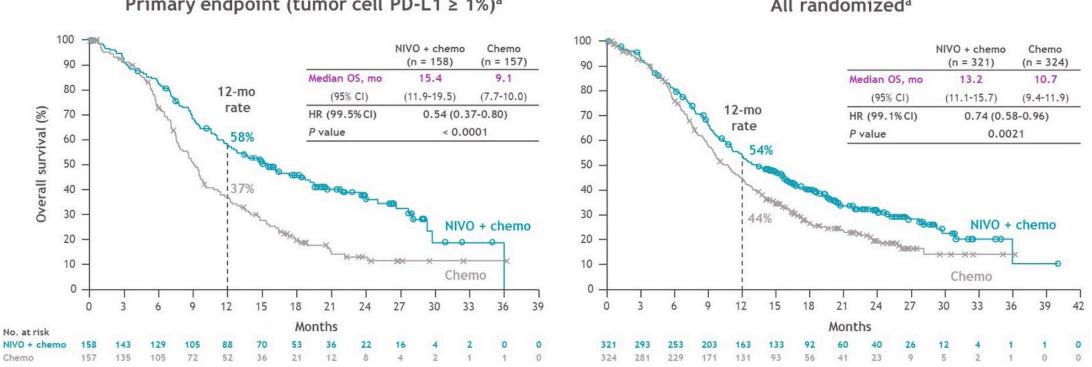
<u>Ian Chau</u>,¹ Yuichiro Doki,² Jaffer A. Ajani,³ Jianming Xu,⁴ Lucjan Wyrwicz,⁵ Satoru Motoyama,⁶ Takashi Ogata,⁷ Hisato Kawakami,⁸ Chih-Hung Hsu,⁹ Antoine Adenis,¹⁰ Farid el Hajbi,¹¹ Maria Di Bartolomeo,¹² Maria Ignez Braghiroli,¹³ Eva Holtved,¹⁴ Ioannis Xynos,¹⁵ Xuan Liu,¹⁵ Ming Lei,¹⁵ Kaoru Kondo,¹⁵ Ken Kato,¹⁶ Yuko Kitagawa¹⁷

¹Royal Marsden Hospital, London & Surrey, UK; ²Osaka University Graduate School of Medicine, Osaka, Japan; ³The University of Texas MD Anderson Cancer Center, Houston, TX; ⁴Affiliated Hospital Cancer Center, Academy of Military Medical Sciences, Beijing, China; ⁵Klinika Onkologii i Radioterapii, Narodowy Instytut Onkologii, Warszawa, Poland; ⁶Akita University Hospital, Akita, Japan; ⁷Kanagawa Cancer Center, Kanagawa, Japan; ⁸Kindai University Faculty of Medicine, Osakasayama, Japan; ⁹National Taiwan University Hospital, Taipei, Taiwan; ¹⁰Institut du Cancer de Montpellier, Montpellier, France; ¹¹Centre Oscar Lambret, Lille, France; ¹²Fondazione IRCCS Instituto Nazionale dei Tumori, Milan, Italy; ¹³Institute of Cancer of São Paulo, University of São Paulo, São Paulo, Brazil; ¹⁴Odense University Hospital, Odense, Denmark; ¹⁵Bristol Myers Squibb, Princeton, NJ; ¹⁶National Cancer Center Hospital, Tokyo, Japan; ¹⁷Keio University School of Medicine, Tokyo, Japan

Abstract Number LBA4001



CheckMate 648: Overall Survival in Patients with PD-L1 ≥ 1% (Primary Endpoint Along with PFS in PD-L1 \geq 1%) and in ITT



Primary endpoint (tumor cell PD-L1 \ge 1%)^a

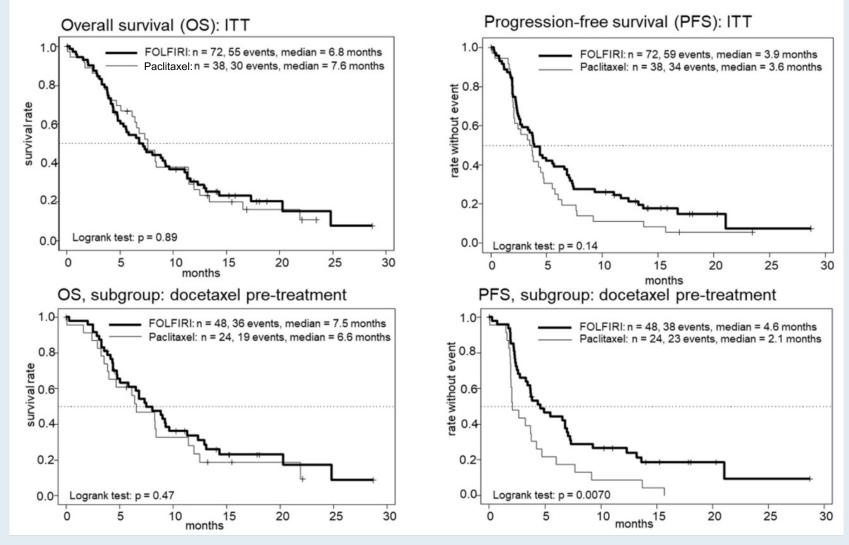
All randomized^a

- Superior OS with NIVO + chemo vs chemo in tumor cell PD-L1 \geq 1% and all randomized populations
 - Tumor cell PD-L1 \geq 1%: 46% reduction in the risk of death and a 6.3-month improvement in median OS
 - All randomized: 26% reduction in the risk of death and a 2.5-month improvement in median OS



Chau I et al. ASCO 2021; Abstract LBA4001.

Phase II RAMIRIS Trial of Second-Line Ramucirumab plus FOLFIRI – Patients with Advanced or Metastatic Gastroesophageal Adenocarcinoma with or without Prior Docetaxel





Lorenzen S et al. ASCO 2020; Abstract 4514.

FDA Approves Trastuzumab Deruxtecan for HER2-Positive Gastric Adenocarcinomas

Press Release – January 15, 2021

"On January 15, 2021, the Food and Drug Administration approved fam-trastuzumab deruxtecan-nxki for adult patients with locally advanced or metastatic HER2-positive gastric or gastroesophageal (GEJ) adenocarcinoma who have received a prior trastuzumab-based regimen.

Efficacy was evaluated in a multicenter, open-label, randomized trial (DESTINY-Gastric01, NCT03329690) in patients with HER2-positive locally advanced or metastatic gastric or GEJ adenocarcinoma who had progressed on at least two prior regimens, including trastuzumab, a fluoropyrimidine- and a platinum-containing chemotherapy. A total of 188 patients were randomized (2:1) to receive fam-trastuzumab deruxtecan-nxki 6.4 mg/kg intravenously every 3 weeks or physician's choice of either irinotecan or paclitaxel monotherapy."

https://www.fda.gov/drugs/drug-approvals-and-databases/fda-approves-fam-trastuzumab-deruxtecan-nxki-her2-positive-gastric-adenocarcinomas



2021 ASCO ANNUAL MEETING

DESTINY-Gastric01

Trastuzumab deruxtecan (T-DXd; DS-8201) in patients with human epidermal growth factor receptor 2–positive advanced gastric cancer or gastroesophageal junction adenocarcinoma: final overall survival results from a randomized, multicenter, open-label, phase 2 study (DESTINY-Gastric01)

Kensei Yamaguchi

The Cancer Institute Hospital of JFCR, Tokyo, Japan June 2021

Abstract 4048

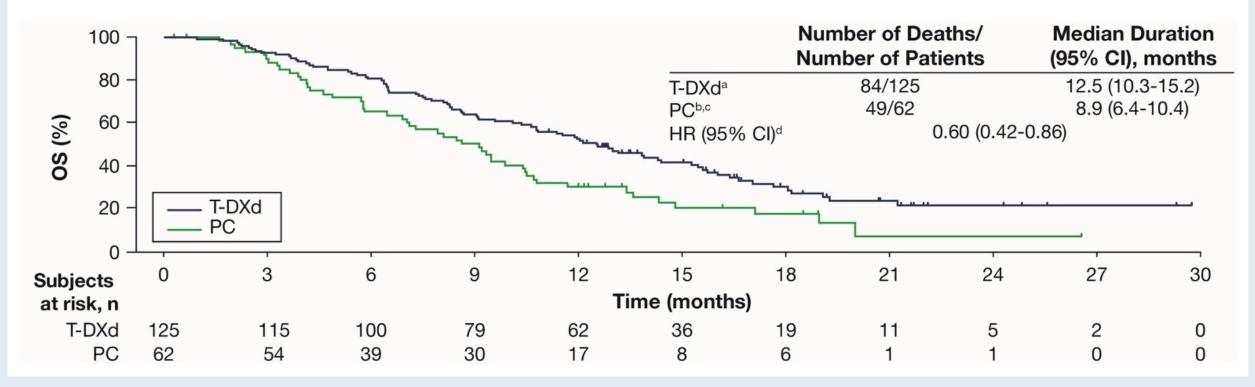
ON BEHALF OF THE DESTINY-Gastric01 INVESTIGATORS

Additional authors: Yung-Jue Bang, Satoru Iwasa, Naotoshi Sugimoto, Min-Hee Ryu, Daisuke Sakai, Hyun Cheol Chung, Hisato Kawakami, Hiroshi Yabusaki, Jeeyun Lee, Kaku Saito Yoshinori Kawaguchi, Takahiro Kamio, Akihito Kojima, Masahiro Sugihara, Kohei Shitara





DESTINY-Gastric01: Final Overall Survival Analysis



As in the primary analysis (101 OS events; 54.0% maturity), in this updated analysis (133 OS events; 71.1% maturity), T-DXd showed superior antitumor activity compared to PC



Yamaguchi K et al. ASCO 2021; Abstract 4048.

DESTINY-Gastric01: Selected Adverse Events

20 20	T-DXd n = 125			PC Overall n = 62		
	Grade			Grade		
Preferred Term, %	Any	3	4	Any	3	4
Neutrophil count						
decreased ^b	64.8	38.4	12.8	35.5	16.1	8.1
Nausea	63.2	5.6	0	46.8	1.6	0
Decreased appetite	60.8	16.8	0	45.2	12.9	0
Anemia ^c	57.6	38.4	0	30.6	21.0	1.6
Platelet count decreased ^d	40.0	9.6	1.6	6.5	1.6	1.6
White blood cell	10.0	0.0	1.0	0.0	1.0	1.0
count decreased ^e	38.4	20.8	0	35.5	8.1	3.2



DESTINY-Gastric01 AEs of Special Interest: Interstitial Lung Disorder

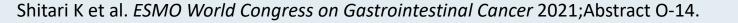
- 16 patients (12.8%) had T-DXd-related ILD, as determined by an independent adjudication committee
 - There were 13 grade 1 or 2, two grade 3, one grade 4, and no grade 5 events
 - There were four ILD events since the primary analysis; one grade 1 and three grade 2
 - Among the 16 total ILD events, the median time to first onset was 102.5 days (range, 36-638 days)
- There was one T-DXd-related death from pneumonia (non-ILD), as reported in the primary analysis



DESTINY-Gastric01: Exploratory Biomarker Analysis of Overall Survival in HER2-Positive or HER2-Low Advanced Gastric or GEJ Cancer

Exploratory Biomarker in Primary HER2-Positive Cohort	Median Overall Survival		
Plasma HER2 amplification Not Amplified Amplified	12.1 mo 13.0 mo		
Plasma HER2 copy number* Above 6.0 Below 6.0	21.2 mo 12.0 mo		
Exploratory Biomarker in Exploratory HER2-Low Cohort			
Plasma HER2 extracellular domain** Above 11.6 ng/mL Below 11.6 ng/mL	10.1 mo 4.3 mo		

*An exploratory cutoff (copy number = 6.0) value was determined, which minimized p-value, estimated by log-rank test. Below 6.0 includes patients without amplification; **An exploratory cutoff value of 11.6 ng/mL in exploratory cohorts was determined, which minimized p-value, estimated by log-rank test.





FDA Grants Accelerated Approval to Pembrolizumab with Trastuzumab and Chemotherapy as First-Line Therapy for HER2-Positive Gastric Cancer Press Release – May 5, 2021

"On May 5, 2021, the Food and Drug Administration granted accelerated approval to pembrolizumab in combination with trastuzumab, fluoropyrimidine- and platinum-containing chemotherapy for the first-line treatment of patients with locally advanced unresectable or metastatic HER2 positive gastric or gastroesophageal junction (GEJ) adenocarcinoma.

Approval was based on the prespecified interim analysis of the first 264 patients of the ongoing KEYNOTE-811 (NCT03615326) trial, a multicenter, randomized, double-blind, placebo-controlled trial in patients with HER2-positive advanced gastric or gastroesophageal junction (GEJ) adenocarcinoma who had not previously received systemic therapy for metastatic disease. Patients were randomized (1:1) to receive pembrolizumab 200 mg or placebo every 3 weeks, in combination with trastuzumab and either fluorouracil plus cisplatin or capecitabine plus oxaliplatin.

The main efficacy measure for this analysis was overall response rate (ORR) assessed by blinded independent review committee. The ORR was 74% in the pembrolizumab arm and 52% in the placebo arm (one-sided p-value < 0.0001, statistically significant). The median duration of response (DoR) was 10.6 months for patients treated with pembrolizumab and 9.5 months for those in the placebo arm."

https://www.fda.gov/drugs/drug-approvals-and-databases/fda-grants-accelerated-approval-pembrolizumab-her2-positive-gastric-cancer





Pembrolizumab Plus Trastuzumab and Chemotherapy for HER2+ Metastatic Gastric or Gastroesophageal Junction Cancer: Initial Findings of the Global Phase 3 KEYNOTE-811 Study

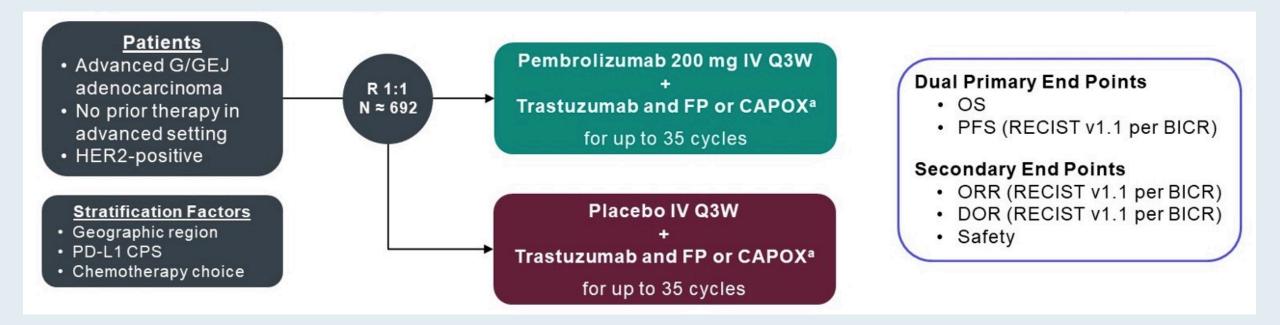
Yelena Y. Janjigian,¹ Akihito Kawazoe,² Patricio Yañez,³ Suxia Luo,⁴ Sara Lonardi,⁵ Oleksii Kolesnik,⁶ Olga Barajas,⁷ Yuxian Bai,⁸ Lin Shen,⁹ Yong Tang,¹⁰ Lucjan S. Wyrwicz,¹¹ Kohei Shitara,² Shukui Qin,¹² Eric Van Cutsem,¹³ Josep Tabernero,¹⁴ Lie Li,¹⁵ Chie-Schin Shih,¹⁵ Pooja Bhagia,¹⁵ Hyun Cheol Chung,¹⁶ on behalf of the KEYNOTE-811 Investigators

¹Memorial Sloan Kettering Cancer Center, New York, NY, USA; ²National Cancer Center Hospital East, Kashiwa, Japan; ³Universidad de La Frontera, James Lind Cancer Research Center, Temuco, Chile; ⁴Henan Cancer Hospital, the Affiliated Cancer Hospital of Zhengzhou University, Zhengzhou, China; ⁵Istituto Oncologico Veneto IOV-IRCCS, Padova, Italy; ⁶Medical Center "Oncolife", Zaporizhzhia, Ukraine; ⁷Arturo López Pérez Foundation, Santiago, Chile; ⁸Harbin Medical University Cancer Hospital, Harbin, China; ⁹Key Laboratory of Carcinogenesis and Translational Research (Ministry of Education/Beijing), Peking University Cancer Hospital & Institute, Beijing, China; ¹⁰Cancer Hospital Affiliated to Xinjiang Medical University, Xinjiang, China; ¹¹Maria Sklodowska-Curie Memorial Cancer Center and Institute of Oncology, Warsaw, Poland; ¹²Cancer Center of People's Liberation Army, Nanjing, China; ¹³University Hospitals Gasthuisberg and KU Leuven, Leuven, Belgium; ¹⁴Vall d'Hebron Hospital Campus and Institute of Oncology (VHIO), IOB-Quiron, UVic-UCC, Barcelona, Spain; ¹⁵Merck & Co., Inc., Kenilworth, NJ, USA; ¹⁶Yonsei Cancer Center, Yonsei University College of Medicine, Seoul, South Korea

ESMO World Congress on Gastrointestinal Cancer 2021; Abstract LBA4.



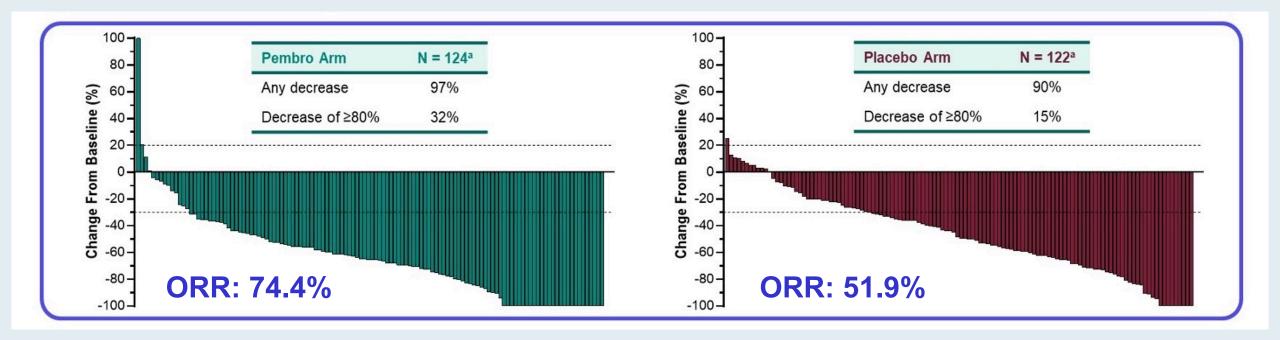
KEYNOTE-811 Phase III Study Design





Janjigian YY et al. ESMO World Congress on Gastrointestinal Cancers 2021; Abstract LBA4.

KEYNOTE-811: Confirmed Response at First Interim Analysis





Janjigian YY et al. ESMO World Congress on Gastrointestinal Cancer 2021; Abstract LBA4.

Meet The Professor with Dr Bekaii-Saab

MODULE 1: Cases from Drs Ibrahim and Ma

- Dr Ibrahim: A 58-year-old man with HIV and esophageal cancer
- Dr Ma: A frail 78-year-old woman with metastatic gastric cancer and brain metastases PD-L1 CPS 15%, TMB 38.4 mut/Mb
- Dr Ibrahim: An 81-year-old man with metastatic gastroesophageal junction adenocarcinoma and a PD-L1 of 50%

MODULE 2: Beyond the Guidelines; Key Data – Gastroesophageal Cancers

MODULE 3: Cases from Dr Ciombor

- A 51-year-old woman with metastatic colorectal cancer (CRC) and discordant mismatch repair results
- A 53-year-old woman with microsatellite-stable metastatic CRC and a BRAF V600E mutation

MODULE 4: Beyond the Guidelines; Key Data – CRC

MODULE 5: Cases from Dr Gosain

- A 64-year-old man with metastatic sarcomatoid hepatocellular carcinoma (HCC) whose disease progressed from Child-Pugh A6 to B8 while on atezolizumab/bevacizumab
- A 66-year-old man with HCC and untreated hepatitis C

MODULE 6: Beyond the Guidelines; Key Data – HCC



Case Presentation – Dr Ciombor: A 51-year-old woman with metastatic CRC and discordant MMR results



Dr Kristen Ciombor

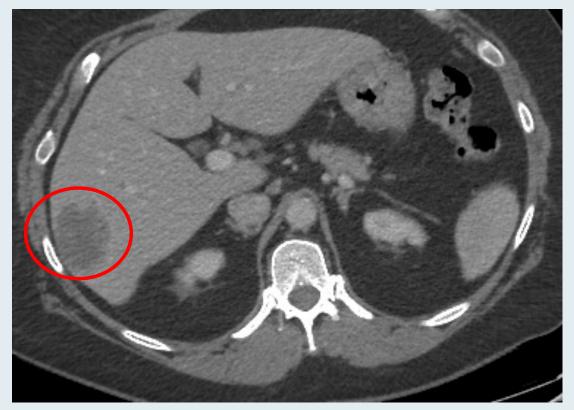
- PMH: HTN, DM, rectal bleeding
- Colonoscopy: 5-cm rectal cancer; MRI Pelvis: Multiple unresectable liver metastases
 Primary: MMR proficient; Liver metastases: MMR deficient
- Nivolumab/ipilimumab x 2 cycles, with CEA 44.5 \rightarrow 2.1, marked improvement in liver and rectum
 - Appendicitis \rightarrow diagnosed with adrenal insufficiency, thyroiditis (levothyroxine, high-dose steroids)
- Liver metastasectomy, with only one focus of cancer remaining in right liver parenchyma
- Molecular profiling (Blood, rectal tumor): MSS, TMB 5-6
- Short course of $RT \rightarrow TME$
- Continued improvement in rectal tumor despite no systemic therapy since 11/2020



Case Presentation – Dr Ciombor: A 51-year-old woman with metastatic CRC and discordant MMR results

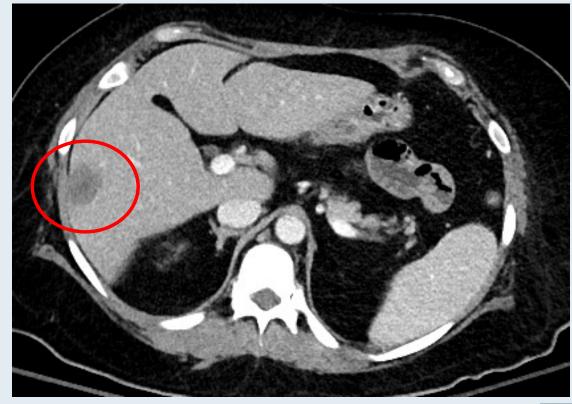


Dr Kristen Ciombor



Hepatic Metastasis

Continued Shrinkage of Hepatic Metastasis after Nivolumab/Ipilimumab x 2





Case Presentation – Dr Ciombor: A 53-year-old woman with MSS metastatic CRC and a BRAF V600E mutation

- Presents with de novo metastatic CRC, with a right-sided colon primary, CEA: 52.7
- NGS: MSS, KRAS/NRAS wild type, BRAF V600E mutation, FGFR1 amplification
- FOLFOX/bevacizumab, with great response x 10 cycles
 - Oxaliplatin discontinued due to PN, bevacizumab discontinued due to mucosal bleeding
- At PD: Encorafenib/panitumumab x 8 months
- FOLFIRI \rightarrow FOLFOXIRI \rightarrow yttrium-90

Questions

- This patient was started on FOLFOX/bevacizumab, but subsequent molecular data showed that she was KRAS/NRAS wild type but BRAF V600E mutant. Would that change what you were doing as first-line therapy, even though she is feeling better and her CEA is starting to drop? Would you escalate therapy to FOLFOXIRI/bev?
- In patients with BRAF V600E-mutant colorectal cancer do you use BRAF inhibition in the first line setting or second line and beyond? Based on the BEACON CRC data, are you using doublet therapy with anti-EGFR and BRAF inhibitors? Are you adding the MEK inhibitor in? Are there certain subtypes in which you might consider the triplet?



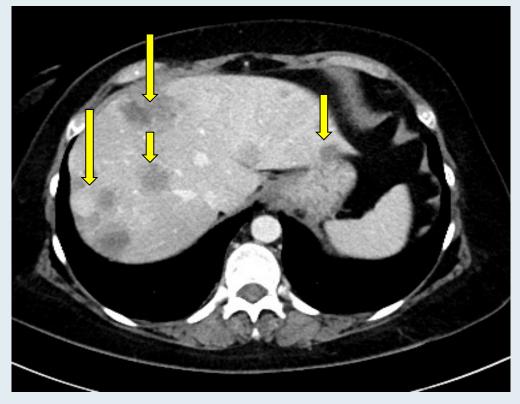
Dr Kristen Ciombor

Case Presentation – Dr Ciombor: A 53-year-old woman with MSS metastatic CRC and a BRAF V600E mutation

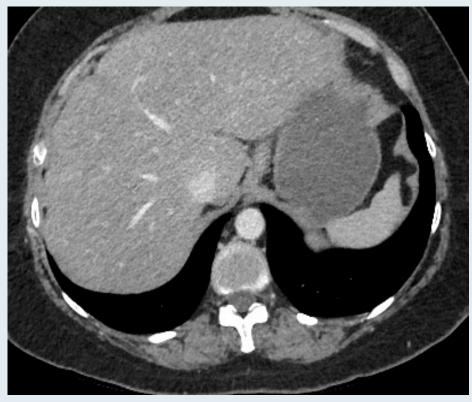


Dr Kristen Ciombor

Multiple Liver Lesions Before FOLFOX/Bevacizumab



Best Response to FOLFOX/Bev → 5-FU Maintenance





Meet The Professor with Dr Bekaii-Saab

MODULE 1: Cases from Drs Ibrahim and Ma

- Dr Ibrahim: A 58-year-old man with HIV and esophageal cancer
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- A 66-year-old man with HCC and untreated hepatitis C

MODULE 6: Beyond the Guidelines; Key Data – HCC

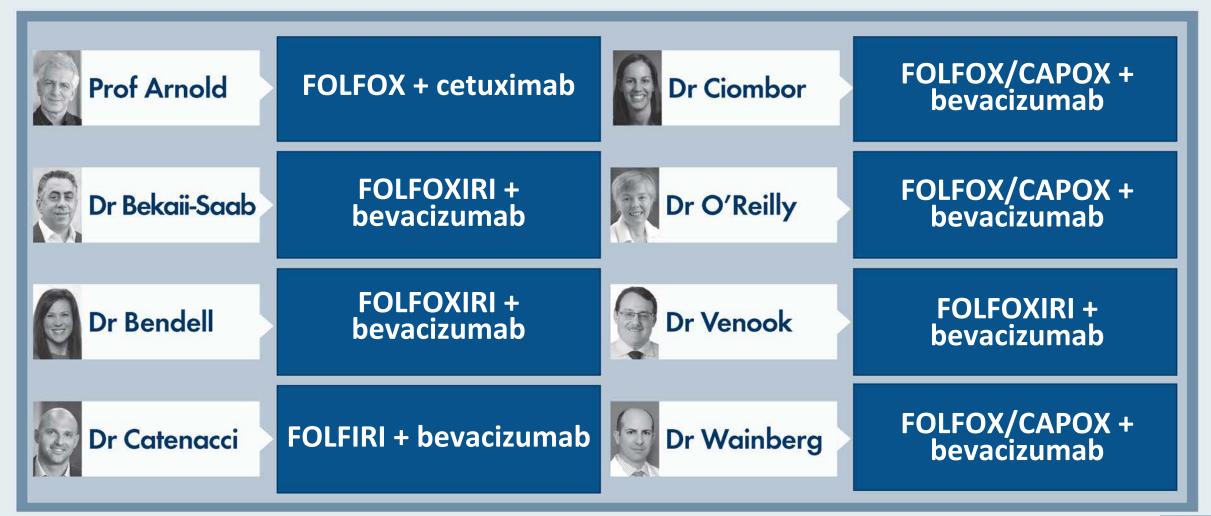


What is your usual first-line treatment recommendation for a <u>clinically</u> <u>stable 60-year-old</u> patient with <u>left-sided</u>, MSS, pan-RAS wild-type, <u>BRAF wild-type</u> metastatic colorectal cancer (mCRC)?

- 1. Chemotherapy
- 2. Chemotherapy + anti-VEGF antibody
- 3. Chemotherapy + anti-EGFR antibody
- 4. Chemotherapy + immunotherapy
- 5. Other



What is your usual first-line treatment recommendation for a <u>clinically stable 60-year-old</u> patient with <u>left-sided</u>, MSS, pan-RAS wild-type, <u>BRAF wild-type</u> metastatic colorectal cancer (mCRC)?





What is your usual first-line treatment recommendation for a clinically stable 60-year-old patient with left-sided, pan-RAS wild-type, BRAF wild-type, MSI-high mCRC?

- 1. Pembrolizumab
- 2. Nivolumab
- 3. Nivolumab/ipilimumab
- 4. Chemotherapy
- 5. Chemotherapy + anti-VEGF antibody
- 6. Chemotherapy + anti-EGFR antibody
- 7. Chemotherapy + immunotherapy
- 8. Other

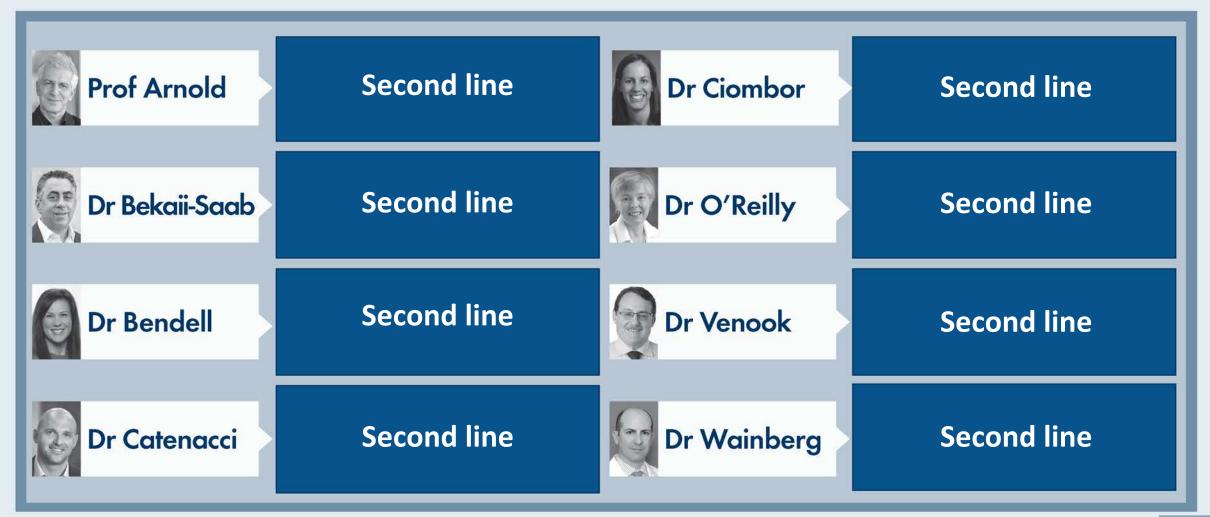


What is your usual first-line treatment recommendation for a <u>clinically stable 60-year-old</u> patient with left-sided, pan-RAS wild-type, BRAF wild-type, <u>MSI-high</u> mCRC?





Regulatory and reimbursement issues aside, for a patient with pan-RAS wild-type mCRC with a BRAF V600E mutation, in what line of therapy would you generally administer BRAF-targeted therapy?





For a patient with mCRC with a BRAF V600E mutation to whom you would administer BRAF-targeted therapy, what would be your preferred treatment?

- 1. Irinotecan + vemurafenib + EGFR antibody
- 2. Dabrafenib + trametinib + EGFR antibody
- 3. Encorafenib + binimetinib + EGFR antibody
- 4. Encorafenib + EGFR antibody
- 5. Other



For a patient with mCRC with a BRAF V600E mutation to whom you would administer BRAF-targeted therapy, what would be your preferred treatment?

Prof Arnold	Encorafenib + cetuximab	Dr Ciombor	Encorafenib + panitumumab
Dr Bekaii-Saab	Encorafenib + panitumumab	Dr O'Reilly	Encorafenib + cetuximab
Dr Bendell	Encorafenib + panitumumab	Dr Venook	Encorafenib + panitumumab
Dr Catenacci	Encorafenib + cetuximab	Dr Wainberg	Encorafenib + cetuximab



Encorafenib Plus Cetuximab as a New Standard of Care for Previously Treated BRAF V600E— Mutant Metastatic Colorectal Cancer: Updated Survival Results and Subgroup Analyses from the BEACON Study

Josep Tabernero, MD, PhD¹; Axel Grothey, MD²; Eric Van Cutsem, MD, PhD³; Rona Yaeger, MD⁴; Harpreet Wasan, MD⁵;

Takayuki Yoshino, MD, PhD⁶; Jayesh Desai, MBBS⁷; Fortunato Ciardiello, MD, PhD⁸; Fotios Loupakis, MD, PhD⁹;

Yong Sang Hong, MD, PhD¹⁰; Neeltje Steeghs, MD, PhD¹¹; Tormod Kyrre Guren, MD, PhD¹²; Hendrik-Tobias Arkenau, MD, PhD¹³;

Pilar Garcia-Alfonso, MD¹⁴; Elena Elez, MD, PhD¹; Ashwin Gollerkeri, MD¹⁵; Kati Maharry, PhD¹⁵; Janna Christy-Bittel, MSN¹⁵; and

Scott Kopetz, MD, PhD¹⁶

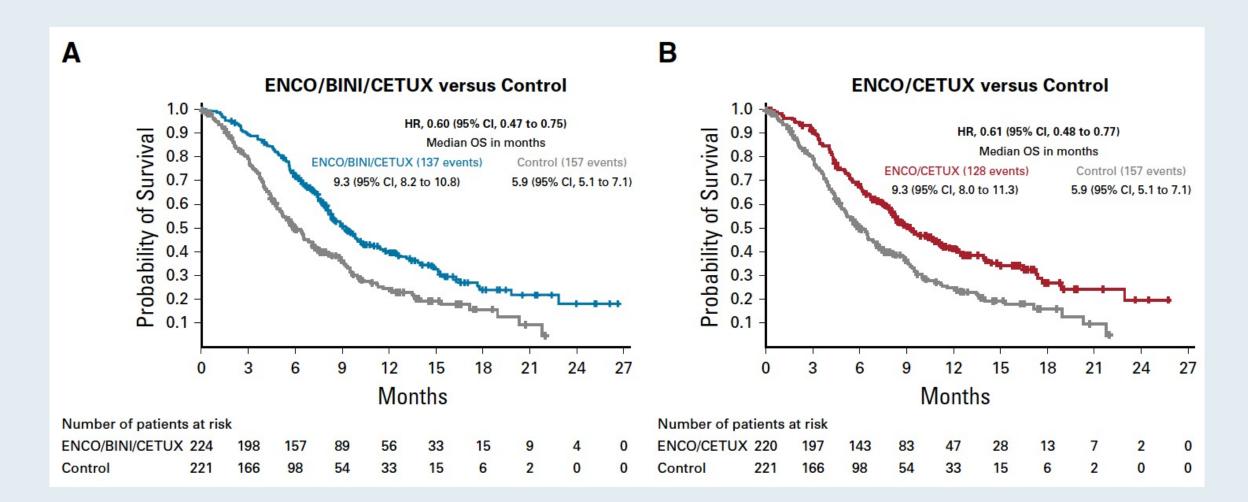
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J Clin Oncol 2021;39(4):273-84.



BEACON: Overall Survival Results



Tabanero J et al. J Clin Oncol 2021;39(4):273-84.



ANCHOR CRC: a single-arm, phase 2 study of encorafenib, binimetinib plus cetuximab in previously untreated *BRAF*^{V600E}-mutant metastatic colorectal cancer

<u>Eric Van Cutsem</u>*, Julien Taieb, Rona Yaeger, Takayuki Yoshino, Evaristo Maiello, Elena Elez Fernandez, Jeroen Dekervel, Paul Ross, Ana Ruiz Casado, Janet Graham, Takeshi Kato, Jose Carlos Ruffinelli, Thierry André, Edith Carrière Roussel, Isabelle Klauck, Mélanie Groc, Axel Grothey, Jean-Claude Vedovato, Josep Tabernero

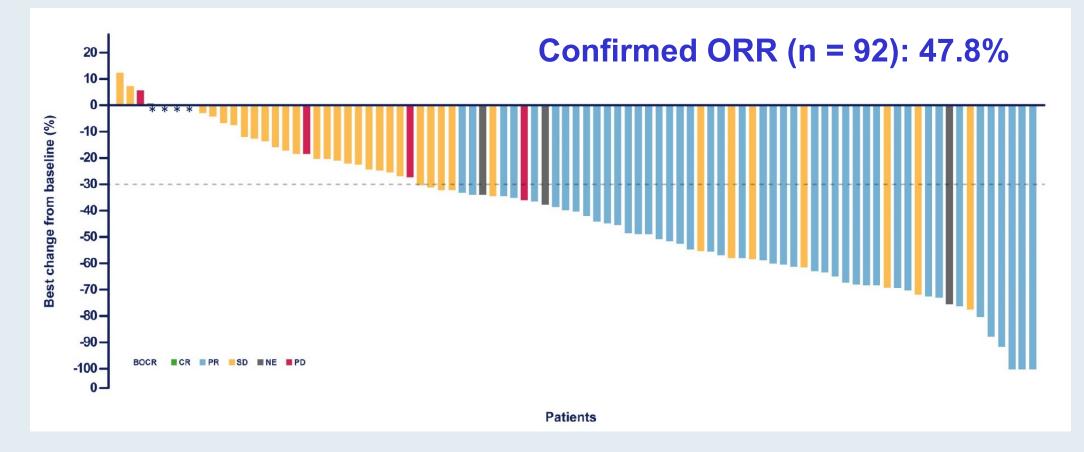
* University Hospitals Leuven, Belgium

ANCHOR CRC: encor<u>A</u>fenib, bi<u>N</u>imetinib and <u>C</u>etuximab in subjects wit<u>H</u> previ<u>O</u>usly untreated B<u>R</u>AF-mutant <u>C</u>olo<u>R</u>ectal <u>C</u>ancer

ESMO World Congress on Gastrointestinal Cancer 2021; Abstract O-10.



ANCHOR CRC: Results Summary



- OS was 17.2 mos (with a median follow-up of 14.4 mos)
- The triplet combination was well-tolerated and there were no unexpected toxicities



Van Cutsem E et al. ESMO World Congress on Gastrointestinal Cancer 2021; Abstract O-10.

BREAKWATER Study Design

An open-label, multicenter, randomized phase 3 study of 1st line encorafenib plus cetuximab with or without chemotherapy versus standard of care therapy in patients with metastatic *BRAF* V600E-mutant mCRC

Safety lead-in

Patients with *BRAF*^{V600E} mutant mCRC with 0 to 1 prior regimens in the metastatic setting

Phase 3

Arm A**

Encorafenib + cetuximab, N=290

Arm B**

Encorafenib + cetuximab + FOLFOX or

FOLFIRI^β, N=290

Control arm§

Physician's choice: FOLFOX, FOLFIRI,

FOLFOXIRI, CAPOX, all ± anti-VEGF

antibody, N=290

Patients with *BRAF^{V600E}* mutant mCRC and no prior systemic therapy in the metastatic setting

Encorafenib + cetuximab + mFOLFOX6 N=30 Encorafenib + cetuximab + FOLFIRI N=30

Dosages

- Encorafenib, 300 mg PO QD
- Cetuximab, 500 mg/m² IV Q2W
- FOLFOX, full dose IV Q2W
- FOLFIRI, full dose IV Q2W

OTHER ENDPOINTS

Incidence of DLTs, adverse events, dose modifications/discontinuations due to AEs

Randomize 1:1:1*

PK including drug-drug interactions

*Stratified by: ECOG PS 0 v. 1, Region US/Canada v. Western Europe v. ROW **Same dosing as SLI; ^βFOLFOX or FOLFIRI based on SLI results; [§] No crossover. ClinicalTrials.gov Identifier: NCT04607421

Van Cutsem E et al. ESMO World Congress on Gastrointestinal Cancer 2021; Abstract O-10.

PRIMARY ENDPOINTS PFS (BICR) Arm A vs Control AND PFS (BICR) Arm B vs Control (BICR, blinded independent central review)

KEY SECONDARY ENDPOINTS OS Arm A vs Control AND OS Arm B vs Control





FDA Approves New Dosing Regimen for Cetuximab Press Release – April 6, 2021

"On April 6, 2021, the Food and Drug Administration approved a new dosage regimen of 500 mg/m² as a 120-minute intravenous infusion every two weeks (Q2W) for cetuximab for patients with K-Ras wild-type, EGFR-expressing colorectal cancer (mCRC) or squamous cell carcinoma of the head and neck (SCCHN).

The approval was based on population pharmacokinetic (PK) modeling analyses that compared the predicted exposures of cetuximab 500 mg Q2W to observed cetuximab exposures in patients who received cetuximab 250 mg weekly. The application was also supported by pooled analyses of overall response rates, progression-free survival, and overall survival (OS) from published literature in patients with CRC and SCCHN, and OS analyses using real-world data in patients with mCRC who received either the weekly cetuximab or Q2W regimens. In these exploratory analyses, the observed efficacy results were consistent across dosage regimens and supported the results of the population PK modeling analyses.

The most common adverse reactions (incidence ≥25%) to cetuximab are cutaneous adverse reactions (including rash, pruritus, and nail changes), headache, diarrhea, and infection."

https://www.fda.gov/drugs/drug-approvals-and-databases/fda-approves-new-dosing-regimen-cetuximab



BioDrugs (2020) 34:349-362

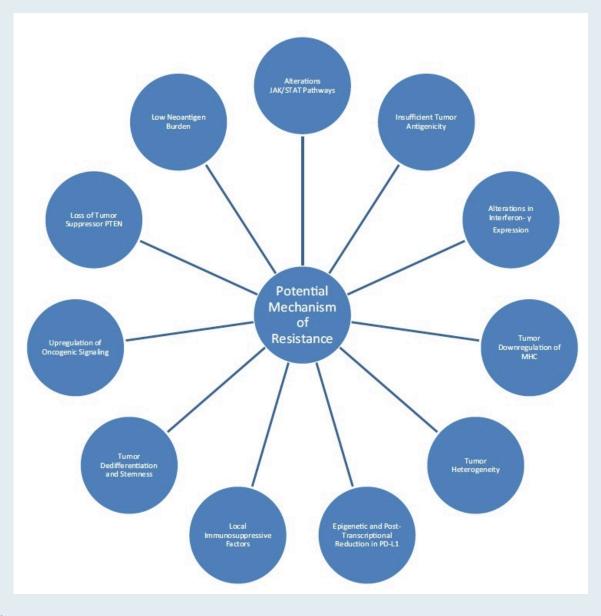
REVIEW ARTICLE

The Role of Immune Checkpoint Inhibitors in Colorectal Adenocarcinoma

Daniel R. Almquist¹ · Daniel H. Ahn¹ · Tanios S. Bekaii-Saab¹



Potential Mechanisms of Resistance to ICI Therapies in CRC





Almquist DR et al. BioDrugs 2020;34(3):349-62.

Oncologist 2021;[Online ahead of print].

Oncologist[®]

Gastrointestinal Cancer

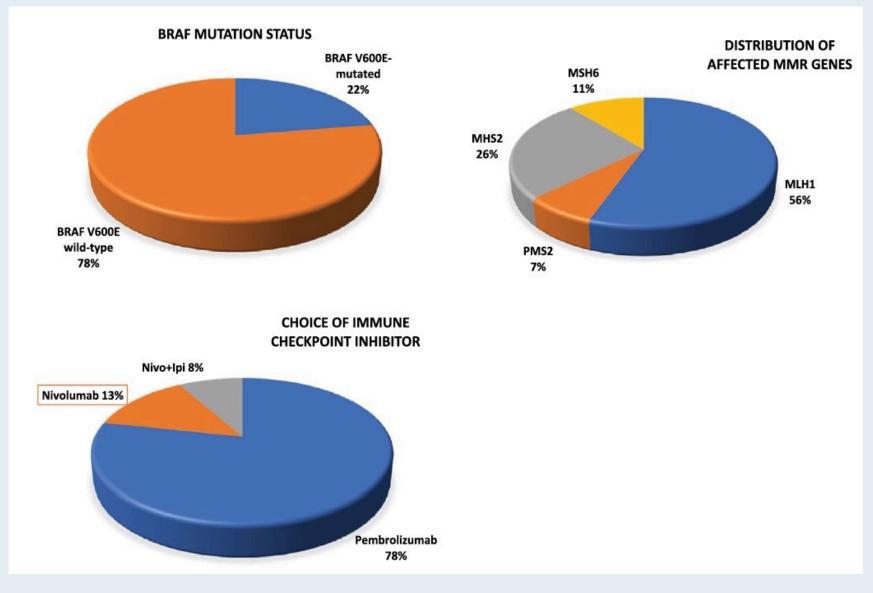
Mismatch Repair (MMR) Gene Alteration and BRAF V600E Mutation Are Potential Predictive Biomarkers of Immune Checkpoint Inhibitors in MMR-Deficient Colorectal Cancer

Ibrahim Halil Sahin D,^a Subir Goyal,^b Yoanna Pumpalova,^c Mohamad B. Sonbol,^d Satya Das,^e Sigurdis Haraldsdottir,^f Daniel Ahn,^d Kristen K. Ciombor,^e Zhengjia Chen,^b Amber Draper,^b Jordan Berlin,^e Tanios Bekaii-Saab,^d Gregory B. Lesinski,^b Bassel F. El-Rayes,^b Christina Wu^b

^aH. Lee Moffitt Cancer Center and Research Institute, Tampa, Florida, USA; ^bEmory University School of Medicine, Winship Cancer Institute, Atlanta, Georgia, USA; ^cStanford University Cancer Institute, Stanford, California, USA; ^dMayo Clinic, Rochester, Minnesota, USA; ^eVanderbilt University Ingram Cancer Center, Nashville, Tennessee, USA; ^fDana-Farber Cancer Institute, Boston, Massachusetts, USA



Distribution of Clinical and Molecular Variables in the Cohort of Interest





Sahin IH et al. Oncologist 2021;[Online ahead of print].



Final Overall Survival for the Phase 3 KN177 Study: Pembrolizumab Versus Chemotherapy in Microsatellite Instability-High/Mismatch Repair Deficient Metastatic Colorectal Cancer

Thierry André,¹ Kai-Keen Shiu,² Tae Won Kim,³ Benny Vittrup Jensen,⁴ Lars Henrik Jensen,⁵ Cornelis Punt,⁶ Denis Smith,⁷ Rocio Garcia-Carbonero,⁸ Julia Alcaide-Garcia,⁹ Peter Gibbs,¹⁰ Christelle de la Fouchardiere,¹¹ Fernando Rivera,¹² Elena Elez,¹³ Johanna Bendell,¹⁴ Dung T. Le,¹⁵ Takayuki Yoshino,¹⁶ Wenyan Zhong,¹⁷ David Fogelman,¹⁸ Patricia Marinello,¹⁸ Luis A. Diaz Jr¹⁹

¹Sorbonne Université and Hôpital Saint Antoine, Paris, France; ²University College Hospital, NHS Foundation Trust, London, United Kingdom; ³Asan Medical Center, University of Ulsan, Seoul, Republic of Korea; ⁴Herlev and Gentofte Hospital, Herlev, Denmark; ⁵University Hospital of Southern Denmark, Vejle, Denmark; ⁶Amsterdam University Medical Centers, University of Amsterdam, Amsterdam, Netherlands; ⁷Bordeaux University Hospital, Bordeaux, France; ⁸Hospital Universitario 12 de Octubre, Imas12, CNIO, UCM, Madrid, Spain; ⁹Hospital Regional Universitario de Malaga, Malaga, Spain; ¹⁰Western Health, St Albans, Australia; ¹¹Léon Bérard Center, Lyon, France; ¹²Hospital Universitario Marques de Valdecilla, IDIVAL, Santander, Spain; ¹³Vall d'Hebron Institute of Oncology, Barcelona, Spain; ¹⁴Sarah Cannon Research Institute/Tennessee Oncology, Nashville, TN, USA; ¹⁵Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD, USA; ¹⁶National Cancer Center Hospital East, Kashiwa, Japan; ¹⁷MSD China, Beijing, China; ¹⁸Merck & Co., Inc. Kenilworth, NJ, USA; ¹⁹Memorial Sloan Kettering Cancer Center, New York, NY, USA

ESMO World Congress on Gastrointestinal Cancer 2021; Abstract O-8.



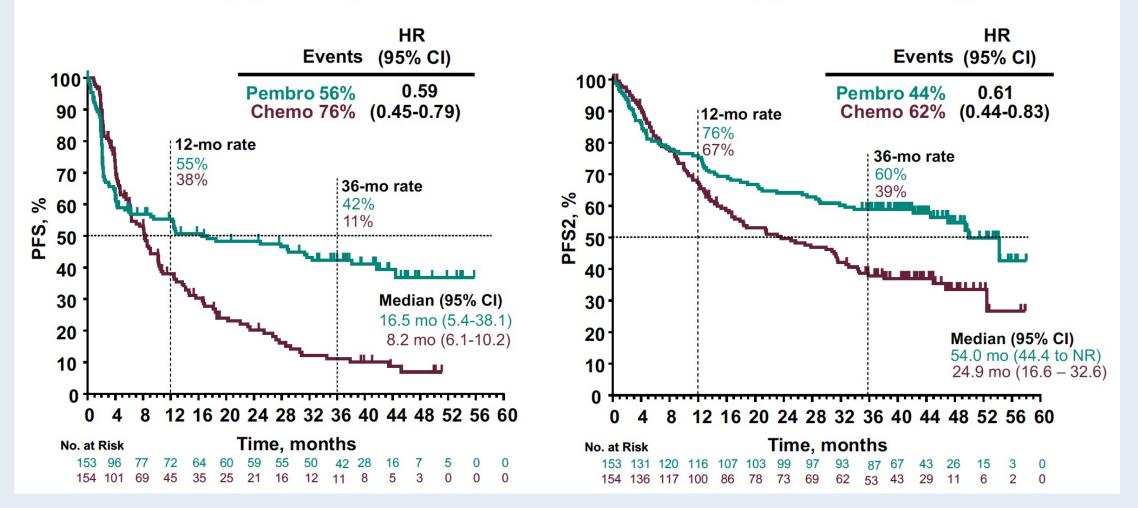
KEYNOTE-177: Progression-Free Survival

PFS2

PFS

Time from randomization to progression or any cause death

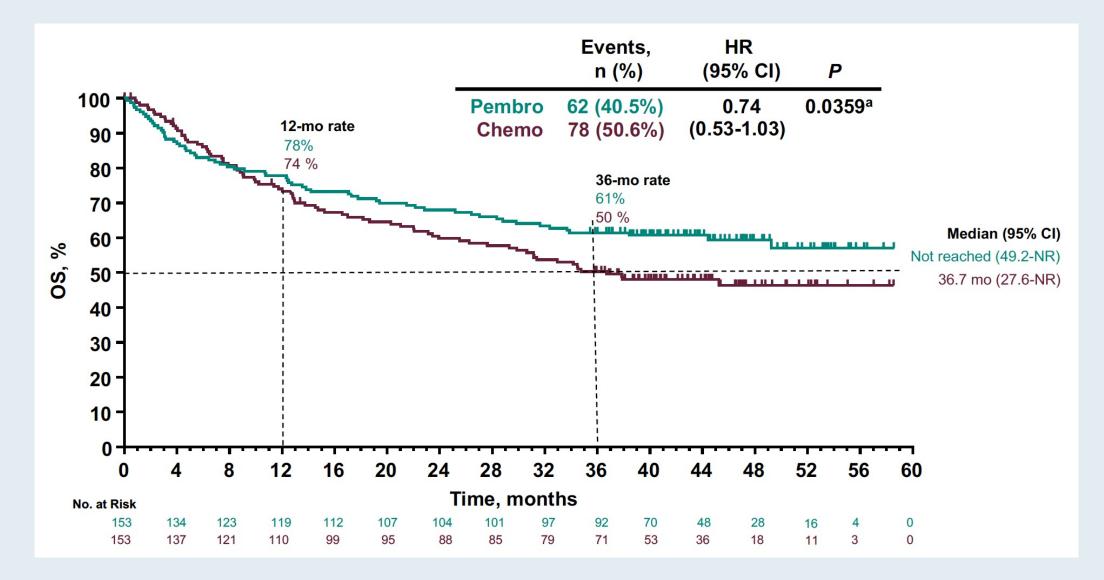
Time from randomization to progression on next line therapy or any cause death





Andre T et al. ESMO World Congress on Gastrointestinal Cancer 2021; Abstract O-8.

KEYNOTE-177: Overall Survival





Andre T et al. ESMO World Congress on Gastrointestinal Cancer 2021; Abstract O-8.



NIVOLUMAB PLUS LOW-DOSE IPILIMUMAB IN PREVIOUSLY TREATED PATIENTS WITH MICROSATELLITE INSTABILITY-HIGH/ MISMATCH REPAIR-DEFICIENT METASTATIC COLORECTAL CANCER: 4-YEAR FOLLOW-UP FROM CHECKMATE 142

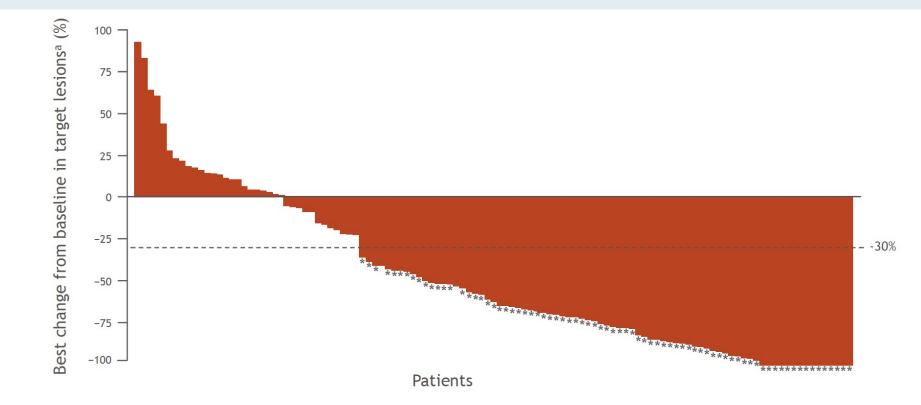
<u>Thierry André</u>,¹ Sara Lonardi,² Ka Yeung Mark Wong,³ Heinz-Josef Lenz,⁴ Fabio Gelsomino,⁵ Massimo Aglietta,⁶ Michael A. Morse,⁷ Eric Van Cutsem,⁸ Ray McDermott,⁹ Andrew Hill,¹⁰ Michael B. Sawyer,¹¹ Alain Hendlisz,¹² Bart Neyns,¹³ Sandzhar Abdullaev,¹⁴ Arteid Memaj,¹⁴ Ming Lei,¹⁴ Scott Kopetz,¹⁵ Michael Overman¹⁵

¹Hôpital Saint Antoine, Assistance Publique Hôpitaux de Paris and Sorbonne Université, Paris, France; ²Istituto Oncologico Veneto IOV-IRCSS, Padova, Italy; ³Westmead Hospital, Sydney, NSW, Australia; ⁴University of Southern California Norris Comprehensive Cancer Center, Los Angeles, CA, USA; ⁵University Hospital of Modena, Modena, Italy; ⁶Candiolo Cancer Institute and University of Torino Medical School, Candiolo, Italy; ⁷Duke University Medical Center, Durham, NC, USA; ⁸University Hospitals Gasthuisberg/ Leuven and KU Leuven, Leuven, Belgium; ⁹St Vincent's University Hospital and Cancer Trials Ireland, Dublin, Ireland; ¹⁰Tasman Oncology Research, Ltd., Southport, QLD, Australia; ¹¹Cross Cancer Institute and University of Alberta, Edmonton, AB, Canada; ¹²Institut Jules Bordet, Brussels, Belgium; ¹³Universitair Ziekenhuis Brussel, Brussels, Belgium; ¹⁴Bristol Myers Squibb, Princeton, NJ, USA; ¹⁵MD Anderson Cancer Center, Houston, TX, USA

ESMO World Congress on Gastrointestinal Cancer 2021; Abstract SO-27.



CheckMate 142: 4-Year Update of Nivolumab/Ipilimumab as First-Line Therapy in MSI-H/dMMR mCRC



• Most patients (79%) had a reduction in tumor burden from baseline

- Median PFS and OS were not reached
- 48-month PFS rate: 53%
- 48-month OS rate: 70.5%

Andre T et al. World Congress on Gastrointestinal Cancer 2021; Abstract SO-27.



Trastuzumab Deruxtecan (T-DXd; DS-8201) in Patients With HER2-expressing Metastatic Colorectal Cancer: Final Results From a Phase 2, Multicenter, Open-label Study (DESTINY-CRC01)

Takayuki Yoshino; National Cancer Center Hospital East, Kashiwa, Japan

June 7, 2021

2021 ASCO

Additional authors: Maria Di Bartolomeo, Kanwal Raghav, Toshiki Masuishi, Fotios Loupakis, Hisato Kawakami, Kensei Yamaguchi, Tomohiro Nishina, Zev Wainberg, Elena Elez, Javier Rodriguez, Marwan Fakih, Fortunato Ciardiello, Kapil Saxena, Kojiro Kobayashi, Emarjola Bako, Yasuyuki Okuda, Gerold Meinhardt, Axel Grothey, Salvatore Siena

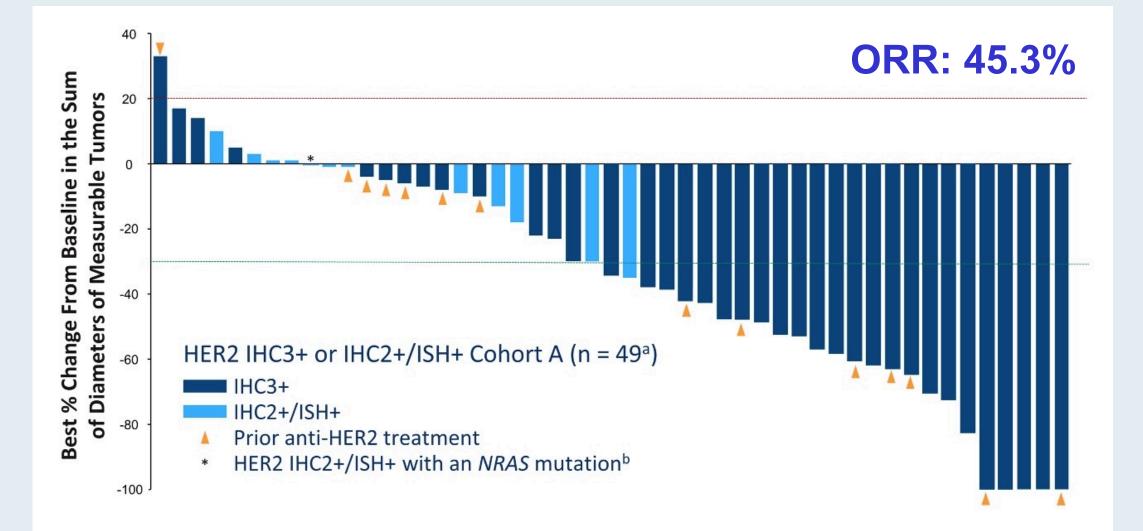
On behalf of the DESTINY-CRC01 investigators

Abstract 3505



DESTINY-CRC01

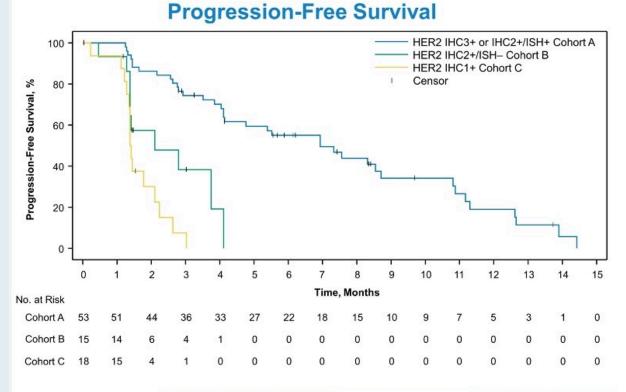
DESTINY-CRC01: Best Change in Tumor Size in Cohort A





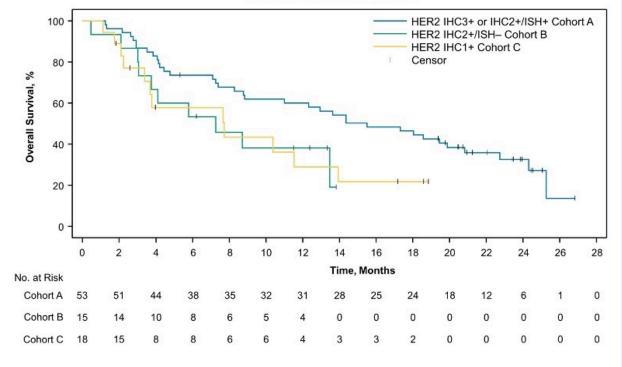
Yoshino T et al. ASCO 2021; Abstract 3500.

DESTINY-CRC01: Progression-Free and Overall Survival



	HER2 IHC3+ or IHC2+/ISH+	HER2 IHC2+/ISH–	HER2 IHC1+
	Cohort A (n = 53)	Cohort B (n = 15)	Cohort C (n = 18)
mPFS (95% CI), months	6.9 (4.1-8.7)	2.1 (1.4-4.1)	1.4 (1.3-2.1)

Overall Survival



	HER2 IHC3+ or IHC2+/ISH+	HER2 IHC2+/ISH–	HER2 IHC1+
	Cohort A (n = 53)	Cohort B (n = 15)	Cohort C (n = 18)
mOS (95% CI), months	15.5 (8.8-20.8)	7.3 (3.0-NE)	7.7 (2.2-13.9)



DESTINY-CRC01 AEs of Special Interest: Interstitial Lung Disease

All Patients (N=86)	n (%)
Grade 1	0
Grade 2	4 (4.7)
Grade 3	1 (1.2)
Grade 4	0
Grade 5	3 (3.5) ^a
Any Grade/Total	8 (9.3) ^{b,c}

Adjudicated drug-related ILDs:

- Median time to adjudicated onset was 61.0 days (range, 9-165 days)
- 8 of 8 patients received corticosteroids
- 4 patients with grade 2 recovered and 1 patient with grade 3 did not recover (later died due to disease progression)
- Median time from adjudicated onset date to initiation of steroid treatment in the 8 ILD cases was 3.5 days, (range 0-50)

Grade 5 ILDs:

 In the 3 fatal cases adjudicated as drug-related ILD, onset was from 9 days to 120 days (median: 22 days); and death occurred 6-19 days after diagnosis (median: 6 days)

Updated ILD/pneumonitis guidelines recommend to monitor for symptoms, interrupt or discontinue T-DXd, conduct imaging (as clinically indicated), and start steroids as soon as ILD is suspected.

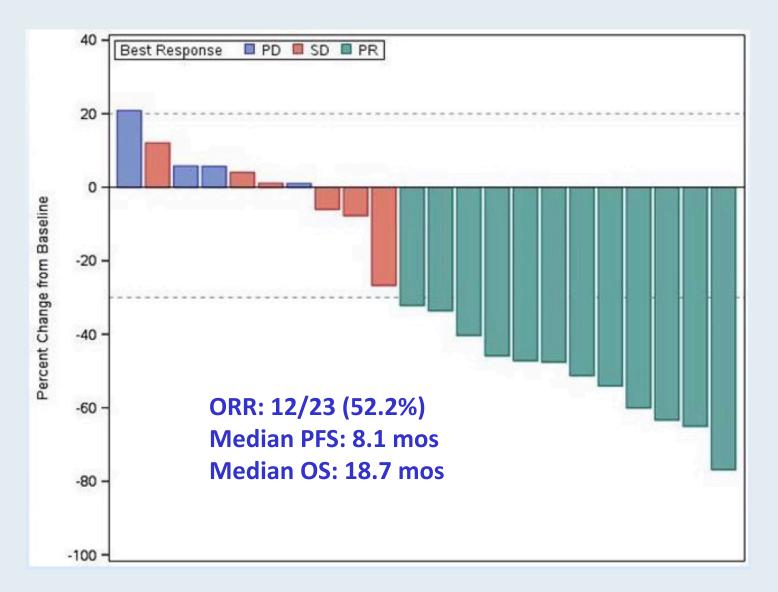


Trastuzumab and Tucatinib for the Treatment of HER2 Amplified Metastatic Colorectal Cancer: Initial Results from the MOUNTAINEER Trial

Strickler JH et al. ESMO 2019;Abstract 527PD.



MOUNTAINEER: Response and Survival





Oncologist 2021; [Online ahead of print].



Symptom Management and Supportive Care

Preemptive Versus Reactive Topical Clobetasol for Regorafenib-Induced Hand-Foot Reactions: A Preplanned Analysis of the ReDOS Trial

AMINAH JATOI, ^a FANG-SHU OU, ^a DANIEL H. AHN, ^b TYLER J. ZEMLA, ^a JENNIFER G. LE-RADEMACHER, ^a PATRICK BOLAND, ^c KRISTEN K. CIOMBOR, ^d NISHA L. JACOBS, ^e BORIS PASCHE, ^f JAMES M. CLEARY, ^g JEANNINE S. MCCUNE, ^h KATRINA S. PEDERSEN, ⁱ AFSANEH BARZI, ^h E. GABRIELA CHIOREAN, ^j ERICA N. HEYING, ^a HEINZ-JOSEF LENZ, ^k JEFF A. SLOAN, ^a AXEL GROTHEY, ^I MARIO E. LACOUTURE, ^m TANIOS BEKAII-SAAB^b ^aMayo Clinic, Rochester, Minnesota, USA; ^bMayo Clinic, Scottsdale, Arizona, USA; ^cRoswell Park Cancer Institute, Buffalo, New York, USA; ^dVanderbilt University, Nashville, Tennessee, USA; ^eMinnesota Hematology Oncology, Coon Rapids, Minnesota, USA; ^fWake Forest Baptist Medical Center, Winston-Salem, North Carolina, USA; ^gDana-Farber Cancer Institute, Boston, Massachusetts, USA; ^hCity of Hope, Duarte, California, USA; ⁱWashington University in St. Louis, St. Louis, Missouri, USA; ^jUniversity of Washington, Seattle, Washington, USA; ^kUSC Norris Comprehensive Cancer Center, California, Los Angeles, USA; ^lWest Cancer Center, Germantown, Tennessee, USA; ^mMemorial Sloan Kettering Cancer Center, New York, New York, USA



Meet The Professor with Dr Bekaii-Saab

MODULE 1: Cases from Drs Ibrahim and Ma

- Dr Ibrahim: A 58-year-old man with HIV and esophageal cancer
- Dr Ma: A frail 78-year-old woman with metastatic gastric cancer and brain metastases PD-L1 CPS 15%, TMB 38.4 mut/Mb
- Dr Ibrahim: An 81-year-old man with metastatic gastroesophageal junction adenocarcinoma and a PD-L1 of 50%

MODULE 2: Beyond the Guidelines; Key Data – Gastroesophageal Cancers

MODULE 3: Cases from Dr Ciombor

- A 51-year-old woman with metastatic colorectal cancer (CRC) and discordant mismatch repair results
- A 53-year-old woman with microsatellite-stable metastatic CRC and a BRAF V600E mutation

MODULE 4: Beyond the Guidelines; Key Data – CRC

MODULE 5: Cases from Dr Gosain

- A 64-year-old man with metastatic sarcomatoid hepatocellular carcinoma (HCC) whose disease progressed from Child-Pugh A6 to B8 while on atezolizumab/bevacizumab
- A 66-year-old man with HCC and untreated hepatitis C

MODULE 6: Beyond the Guidelines; Key Data – HCC



Case Presentation – Dr Gosain: A 64-year-old man with metastatic sarcomatoid HCC whose disease progressed from Child-Pugh A6 to B8 while on atezolizumab/bevacizumab



Dr Rahul Gosain

- PMH: Cirrhosis from alcohol (quit 5 years ago), active smoker, being followed for thrombocytopenia
- 12/2020: AFP increased from baseline of 6.4 to 15.2; Ultrasound without new findings
 - MRI c/w multifocal liver lesions, largest 4.5 cm
 - CT chest/pelvis c/w pulmonary nodules, enlarged periportal nodes
 - Liver biopsy: HCC, sarcomatoid histology, PD-L1 CPS 10, *Child-Pugh A6* (albumin 3.3)

Questions

• What's the utility of ultrasound versus MRI as a screening tool for HCC?



Case Presentation – Dr Gosain: A 64-year-old man with metastatic sarcomatoid HCC whose disease progressed from Child-Pugh A6 to B8 while on atezolizumab/bevacizumab (continued)

- 12/2020: AFP increased from baseline of 6.4 to 15.2; Ultrasound without new findings
 - MRI c/w multifocal liver lesions, largest 4.5 cm
 - CT chest/pelvis c/w pulmonary nodules, enlarged periportal nodes
 - Liver biopsy: HCC, sarcomatoid histology, PD-L1 CPS 10, *Child-Pugh A6* (albumin 3.3)
 - EGD: Negative for varices
- Bevacizumab/atezolizumab, but required paracentesis for worsening ascites before cycle 3
 - Now Child-Pugh B8

Questions

- The patient progressed from Child-Pugh A6 to B8 while on bevacizumab/atezolizumab, which isn't approved in this setting. Should I switch treatment now?
- If he progresses, are there any good alternative treatment options?
- How often and in what circumstances would you consider doing a biopsy despite this being classic HCC on your MRI?
- How important is knowing the histology? Will it change treatment?



Dr Rahul Gosain



Case Presentation – Dr Gosain: A 66-year-old man with HCC and untreated hepatitis C



Dr Rahul Gosain

- Known history of untreated hepatitis C
- 12/2019: 8.5-cm liver mass and porta vein thrombus, diagnosed with Child-Pugh B7 HCC
- Lenvatinib 12mg decreased to 8mg with up-trending LFTs
 - Further rapid rise in LFTs but now with drastic rise in Hep C viral load (while AFP was down trending: 2842)
- Treated his active hepatitis C for 8 weeks
 - AFP at 4718 and scans consistent with further progression of his liver lesion
- Lenvatinib re-started
 - AFP is now down-trending (1718) and scans are stable

Questions

• Do you treat patients with untreated hepatitis C any differently? Is it more likely that you'll treat their hepatitis C first and then their metastatic disease?



Meet The Professor with Dr Bekaii-Saab

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- A 64-year-old man with metastatic sarcomatoid hepatocellular carcinoma (HCC) whose disease progressed from Child-Pugh A6 to B8 while on atezolizumab/bevacizumab
- A 66-year-old man with HCC and untreated hepatitis C



What would be your current preferred <u>first-line</u> systemic treatment for a 65-year-old patient with HCC, a <u>Child-Pugh B7</u> score and PS 1?

- 1. Sorafenib
- 2. Lenvatinib
- 3. Atezolizumab/bevacizumab
- 4. Chemotherapy
- 5. Other



What would be your current preferred first-line systemic treatment for a 65-year-old patient with HCC, a <u>Child-Pugh B7</u> score and a <u>PS of 1</u>?

Prof Arnold	Atezolizumab/ bevacizumab	Dr Ciombor	Sorafenib
Dr Bekaii-Saab	Atezolizumab/ bevacizumab	Dr O'Reilly	Lenvatinib
Dr Bendell	Atezolizumab/ bevacizumab	Dr Venook	Atezolizumab/ bevacizumab
Dr Catenacci	Atezolizumab/ bevacizumab	Dr Wainberg	Lenvatinib

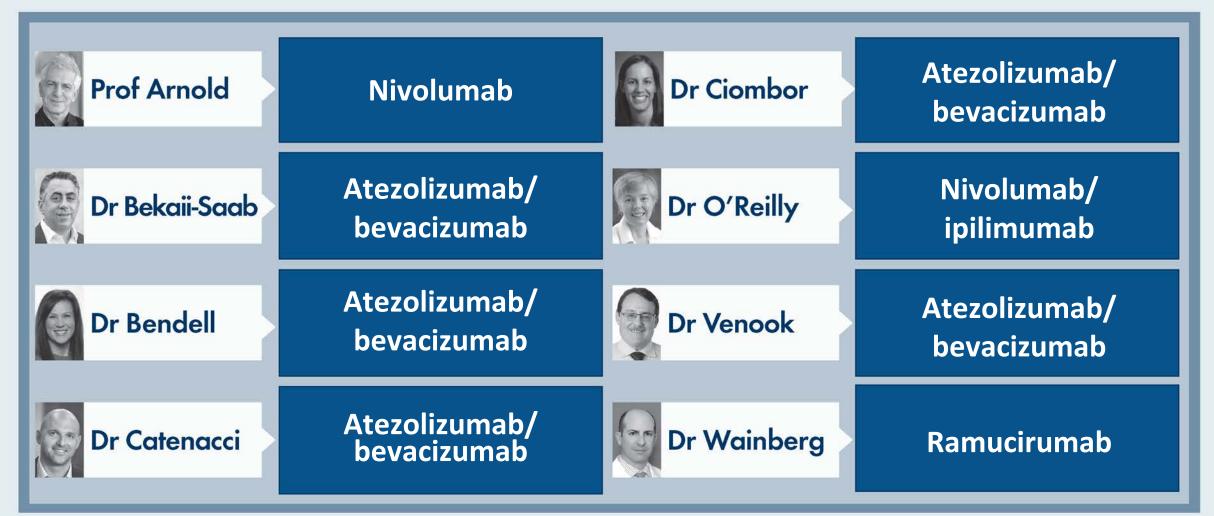


What would be your most likely second-line systemic therapy for a 65-year-old patient with HCC, a <u>Child-Pugh A score</u> and a <u>PS of 0</u> who received first-line <u>atezolizumab/</u> <u>bevacizumab</u> with minimal toxicity, had stable disease for <u>14 months</u> and then experienced disease progression (alpha-fetoprotein, AFP, 2,500 ng/mL)?

Prof Arnold	Cabozantinib	Dr Ciombor	Sorafenib
Dr Bekaii-Saab	Cabozantinib	Dr O'Reilly	Lenvatinib
Dr Bendell	Cabozantinib	Dr Venook	Lenvatinib
Dr Catenacci	Lenvatinib	Dr Wainberg	Ramucirumab



What would be your most likely second-line systemic therapy for a 65-year-old patient with HCC, a <u>Child-Pugh A score</u> and a <u>PS of 0</u> who received first-line standard-dose <u>sorafenib</u> with minimal toxicity, had stable disease for <u>14 months</u> and then experienced disease progression (AFP 2,500 ng/mL)?





What would be your most likely third-line systemic therapy recommendation for an otherwise healthy 65-year-old patient with HCC who experienced disease progression on first-line atezolizumab/bevacizumab and second-line lenvatinib (AFP 2,500 ng/mL)?

Prof Arnold	Ramucirumab	Dr Ciombor	Ramucirumab
Dr Bekaii-Saab	Cabozantinib	Dr O'Reilly	Nivolumab/ ipilimumab
Dr Bendell	Cabozantinib	Dr Venook	Cabozantinib
Dr Catenacci	Ramucirumab	Dr Wainberg	Ramucirumab





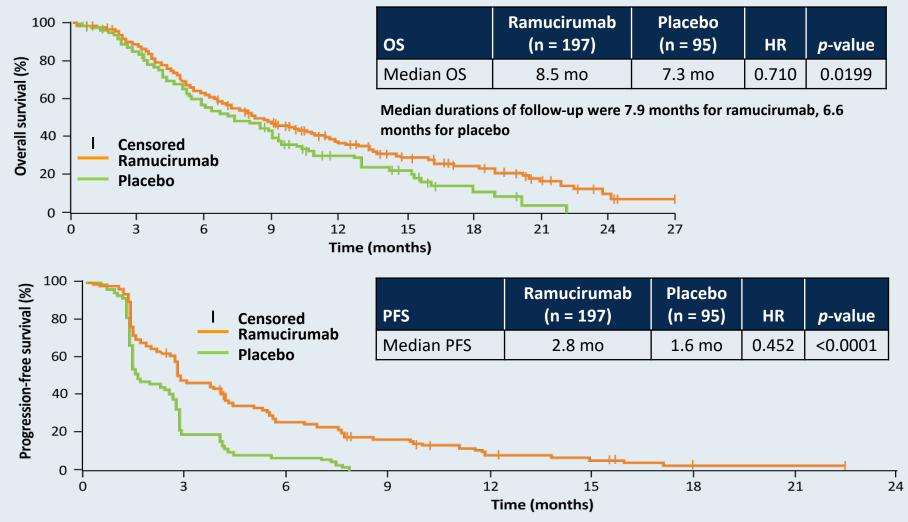
Ramucirumab after sorafenib in patients with advanced hepatocellular carcinoma and increased α-fetoprotein concentrations (REACH-2): a randomised, double-blind, placebo-controlled, phase 3 trial

Andrew X Zhu, Yoon-Koo Kang, Chia-Jui Yen, Richard S Finn, Peter R Galle, Josep M Llovet, Eric Assenat, Giovanni Brandi, Marc Pracht, Ho Yeong Lim, Kun-Ming Rau, Kenta Motomura, Izumi Ohno, Philippe Merle, Bruno Daniele, Dong Bok Shin, Guido Gerken, Christophe Borg, Jean-Baptiste Hiriart, Takuji Okusaka, Manabu Morimoto, Yanzhi Hsu, Paolo B Abada, Masatoshi Kudo, for the REACH-2 study investigators*

Lancet Oncol 2019;20(2):282-96.



REACH-2: A Phase III Trial of Ramucirumab After Sorafenib for Patients with Advanced HCC and Increased AFP



Grade ≥3 AEs associated with ramucirumab included hypertension and hyponatremia.

Zhu AX et al. ASCO 2018; Abstract 4003; Lancet Oncol 2019; 20(2): 282-96.



Combination Immunotherapy for Hepatocellular Carcinoma: Where Are We Currently?

Pedro Luiz Serrano Uson Junior, MD^{1,2,3} Bolni Marius Nagalo, PhD^{1,2,3,4} Daniel H. Ahn, MD¹ Tanios Bekaii-Saab, MD¹ Mitesh J. Borad, MD^{1,2,3,4}

- ¹ Division of Hematology and Medical Oncology, Mayo Clinic, Scottsdale, Arizona
- ²Center for Individualized Medicine, Mayo Clinic, Rochester, Minnesota
- ³Mayo Clinic Cancer Center, Mayo Clinic, Phoenix, Arizona
- ⁴ Department of Molecular Medicine, Mayo Clinic, Rochester, Minnesota

Semin Liver Dis 2021;41:136-141.

Address for correspondence Mitesh J. Borad, MD, Division of Hematology and Medical Oncology, Department of Molecular Medicine, Mayo Clinic, 5777 E Mayo Blvd, Phoenix, AZ 85054, (e-mail: borad.mitesh@mayo.edu).

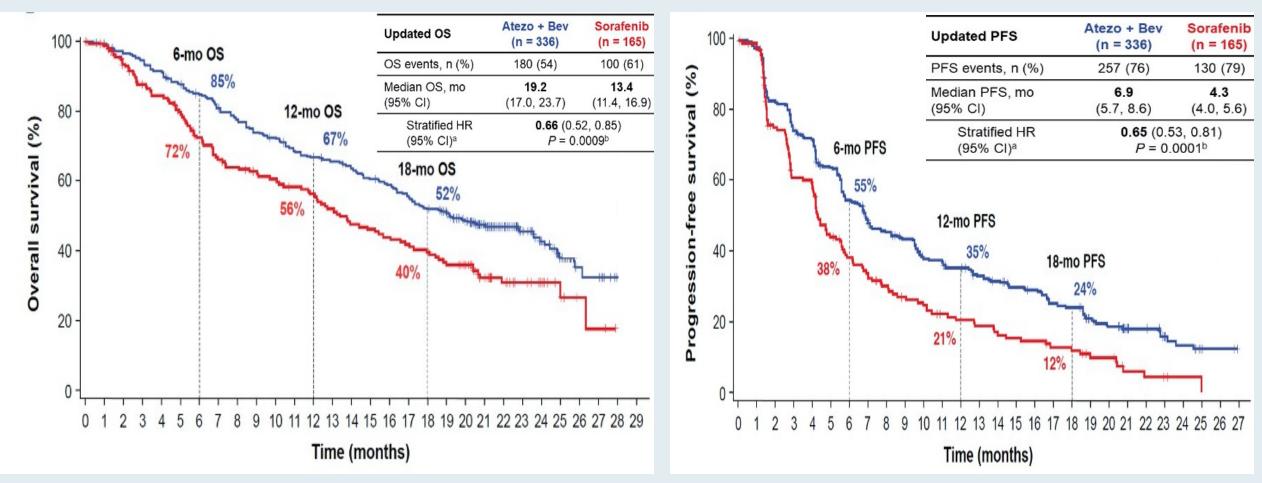


IMbrave150: Updated Overall Survival (OS) Data from a Global, Randomized, Open-Label Phase III Study of Atezolizumab (atezo) + Bevacizumab (bev) versus Sorafenib (sor) in Patients (pts) with Unresectable Hepatocellular Carcinoma (HCC)

Finn RS et al. Gastrointestinal Cancers Symposium 2021;Abstract 267.



IMbrave150: Updated OS and PFS (Median Follow-Up = 15.6 Months)





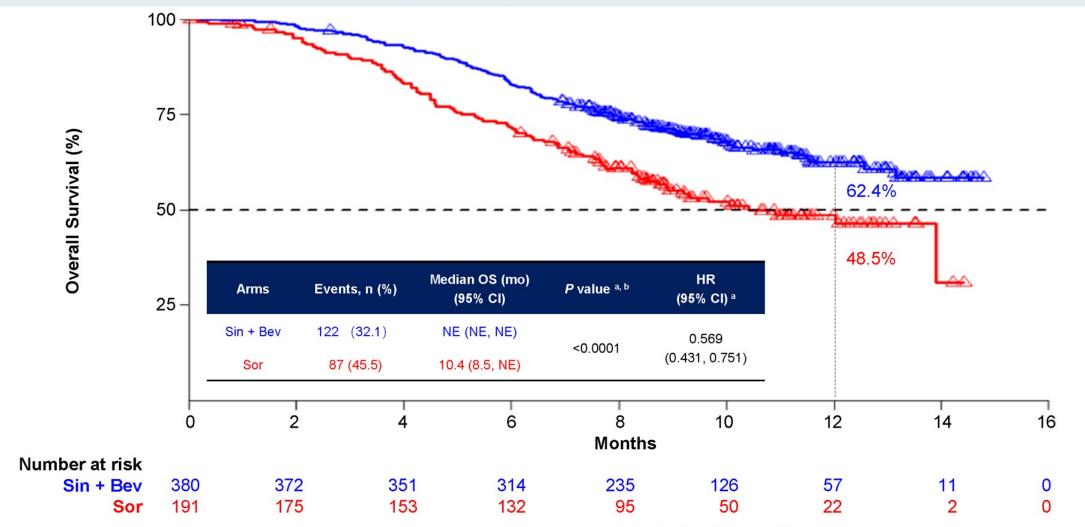
Finn RS et al. Gastrointestinal Cancers Symposium 2021; Abstract 267.

Sintilimab plus Bevacizumab Biosimilar vs Sorafenib as First-Line Treatment for Advanced Hepatocellular Carcinoma (ORIENT-32)

Ren Z et al. ESMO Asia 2020;Abstract LBA2.



ORIENT-32 Coprimary Endpoint: Overall Survival

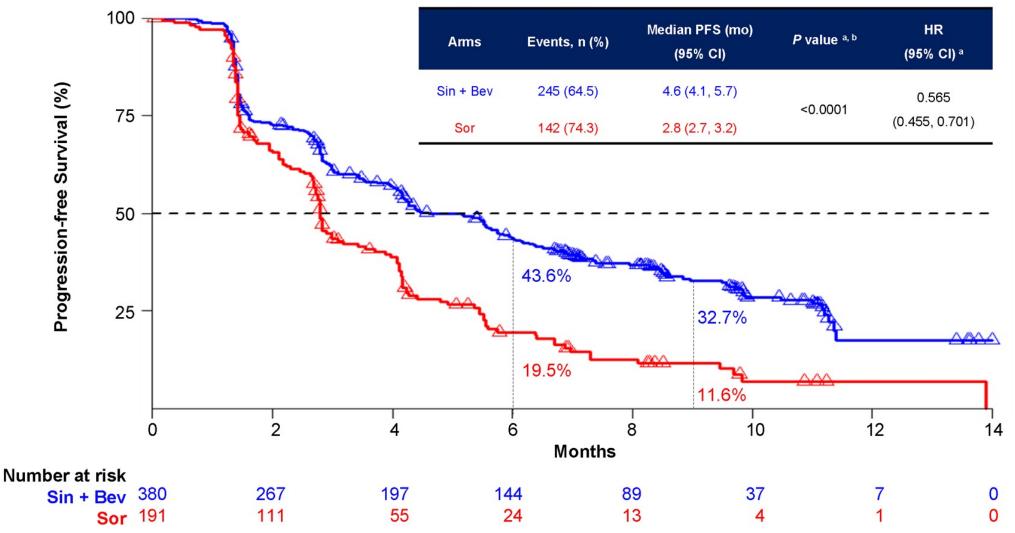


NE, not evaluable; ^a, HR and *P* value were calculated with stratified Cox model and log rank test, and were stratified by MVI and/or EHS (yes vs no), baseline AFP (< 400 vs ≥400 ng/mL) and ECOG PS (0 vs 1); ^b, the two-sided *P* value boundary based on 209 events is 0.0035. Data cutoff, 15 Aug 2020; median survival follow-up, 10.0 months.

The superior OS benefit with sintilimab plus bev biosimilar was generally consistent across all subgroups Ren Z et al. ESMO Asia 2020;Abstract LBA2.



ORIENT-32 Coprimary Endpoint: Progression-Free Survival

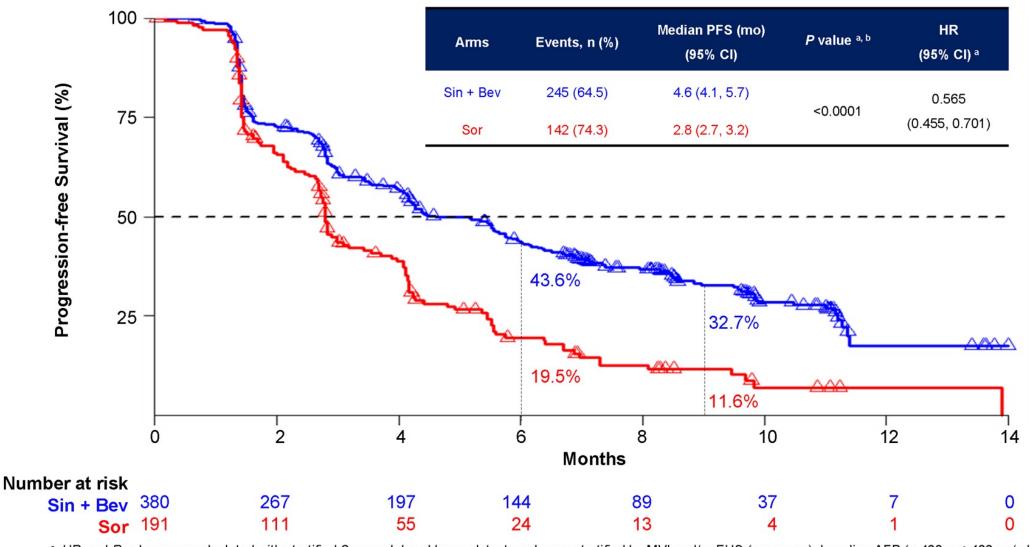


a, HR and *P* value were calculated with stratified Cox model and log rank test, and were stratified by MVI and/or EHS (yes vs no), baseline AFP (< 400 vs ≥400 ng/mL) and ECOG PS (0 vs 1); ^b, the two-sided *P* value boundary is 0.002. Data cutoff, 15 Aug 2020; median survival follow-up, 10.0 months.

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ORIENT-32 Coprimary Endpoint: Progression-Free Survival



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Am J Med 2020:S0002-9343(20)31098-6

REVIEW

THE AMERICAN Journal *of* Medicine ®

Contemporary Management of Pancreatic Cancer from an Internist Perspective

Qurat ul Ain Riaz Sipra, MD,^{a,1} Mahnoor Islam, MBBS,^{b,1} Irbaz Bin Riaz, MD, MS,^c Jin Zhaohui, MD,^d Hani M. Babiker, MD,^e Tanios S. Bekaii-Saab, MD,^c Mohamad Bassam Sonbol, MD^c

^aBanner University Medical Center, University of Arizona, Tucson; ^bDow Medical University, Karachi City, Sindh, Pakistan; ^cMayo Clinic, Phoenix, Ariz; ^dMayo Clinic, Rochester, Minn; ^eUniversity of Arizona Cancer Center, Tucson.



A Conversation with the Investigators: Metastatic Castration-Resistant Prostate Cancer

> Tuesday, July 20, 2021 5:00 PM – 6:00 PM ET

Faculty

Emmanuel S Antonarakis, MD Johann de Bono, MBChB, MSc, PhD Julie N Graff, MD

> Moderator Neil Love, MD



Thank you for joining us!

CME and MOC credit information will be emailed to each participant within 5 business days.

