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

Zev Wainberg, MD, MSc
Co-Director, GI Oncology Program
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#### **Commercial Support**

This activity is supported by an educational grant from Lilly.



#### Dr Love — Disclosures

**Dr Love** is president and CEO of Research To Practice. Research To Practice receives funds in the form of educational grants to develop CME activities from the following companies: AbbVie Inc, Adaptive Biotechnologies Corporation, ADC Therapeutics, Agios Pharmaceuticals Inc, Alexion Pharmaceuticals, Amgen Inc, Array BioPharma Inc, a subsidiary of Pfizer Inc, Astellas, AstraZeneca Pharmaceuticals LP, Aveo Pharmaceuticals, Bayer HealthCare Pharmaceuticals, BeiGene Ltd, Blueprint Medicines, Boehringer Ingelheim Pharmaceuticals Inc, Bristol-Myers Squibb Company, Celgene Corporation, Clovis Oncology, Coherus BioSciences, Daiichi Sankyo Inc, Eisai Inc, Epizyme Inc, Exact Sciences Inc, Exelixis Inc, Five Prime Therapeutics Inc, Foundation Medicine, G1 Therapeutics Inc, Genentech, a member of the Roche Group, Gilead Sciences Inc, GlaxoSmithKline, Grail Inc, Halozyme Inc, Helsinn Healthcare SA, ImmunoGen Inc, Incyte Corporation, Ipsen Biopharmaceuticals Inc, Janssen Biotech Inc, administered by Janssen Scientific Affairs LLC, Jazz Pharmaceuticals Inc, Karyopharm Therapeutics, Kite, A Gilead Company, Lilly, Loxo Oncology Inc, a wholly owned subsidiary of Eli Lilly & Company, Merck, Novartis, Novocure Inc, Oncopeptides, Pfizer Inc, Pharmacyclics LLC, an AbbVie Company, Puma Biotechnology Inc, Regeneron Pharmaceuticals Inc, Sanofi Genzyme, Seagen Inc, Servier Pharmaceuticals LLC, Sumitomo Dainippon Pharma Oncology Inc, Taiho Oncology Inc, Takeda Oncology, Tesaro, A GSK Company, TG Therapeutics Inc, Turning Point Therapeutics Inc and Verastem Inc.



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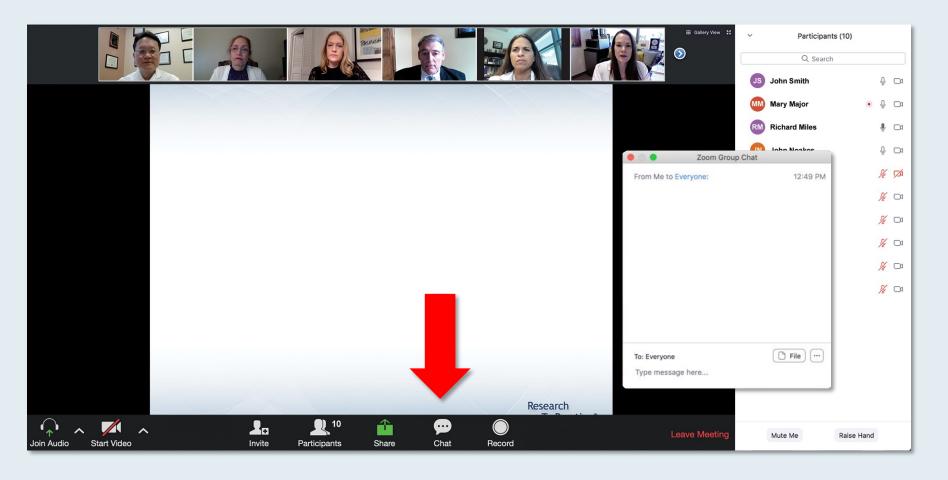


#### **Dr Wainberg — Disclosures**

Consulting Agreements	Amgen Inc, AstraZeneca Pharmaceuticals LP, Bayer HealthCare Pharmaceuticals, Bristol-Myers Squibb Company, Daiichi Sankyo Inc, Five Prime Therapeutics Inc, Gilead Sciences Inc, Ipsen Biopharmaceuticals Inc, Lilly, Merck, Molecular Templates
Contracted Research	Arcus Biosciences, Five Prime Therapeutics Inc, Novartis, Plexxikon Inc
Data and Safety Monitoring Board/Committee	Array BioPharma Inc, a subsidiary of Pfizer Inc, Pfizer Inc



#### We Encourage Clinicians in Practice to Submit Questions

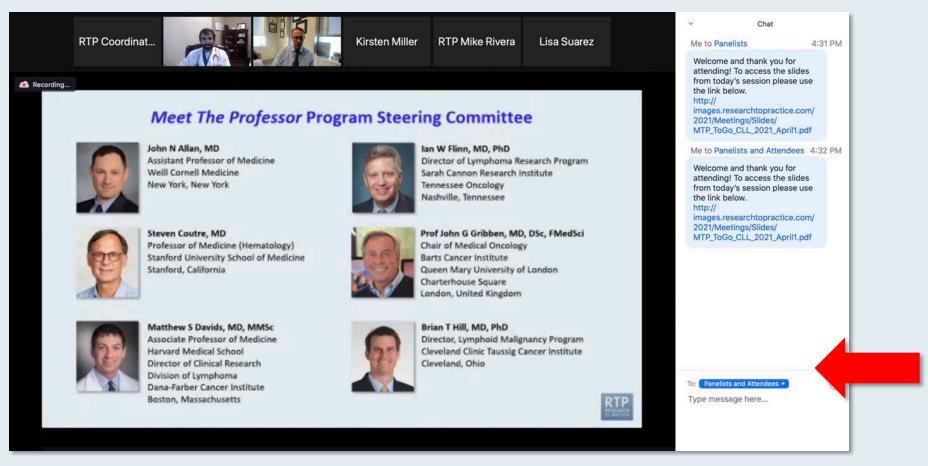


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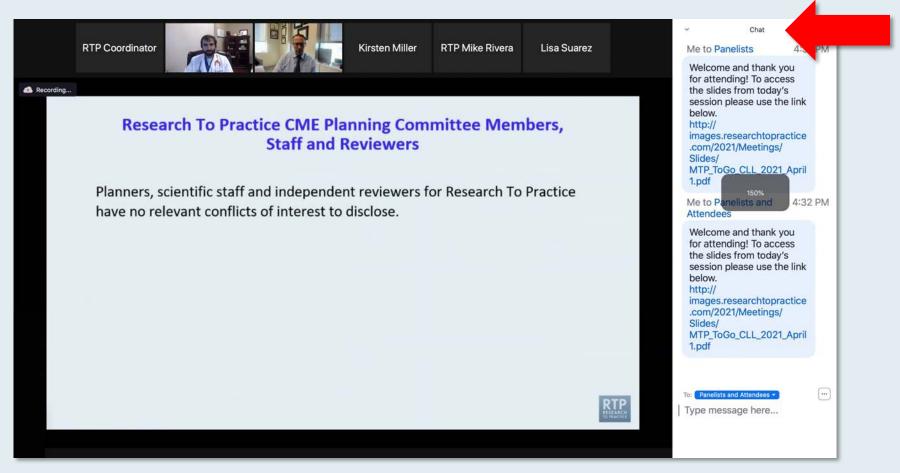


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#### **ONCOLOGY TODAY**

WITH DR NEIL LOVE

## **Key Presentations on Gastrointestinal Cancers from the 2021 ASCO Annual Meeting**



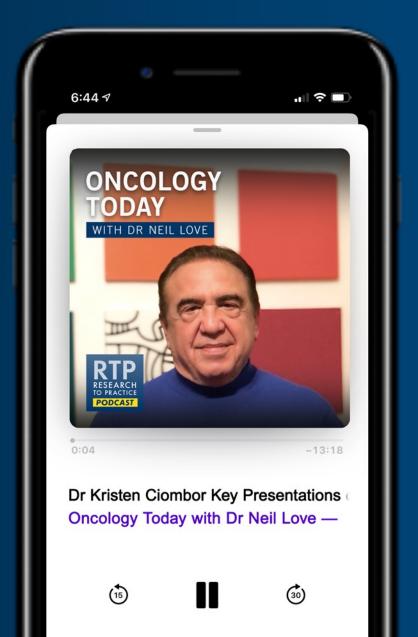
DR KRISTEN CIOMBOR

VANDERBILT-INGRAM CANCER CENTER









# Meet The Professor Optimizing the Selection and Sequencing of Therapy for Patients with Triple-Negative Breast Cancer

Tuesday, September 28, 2021 5:00 PM - 6:00 PM ET

Faculty
Professor Peter Schmid, MD, PhD



## Meet The Professor Optimizing the Clinical Management of Hodgkin and Non-Hodgkin Lymphomas

Wednesday, September 29, 2021 5:00 PM – 6:00 PM ET

Faculty
Brad S Kahl, MD



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

Friday, October 1, 2021 12:00 PM – 1:00 PM ET

Faculty
Hans Hammers, MD, PhD



### Identifying, Managing and Mitigating Therapy-Related Adverse Events in Patients with Chronic Lymphocytic Leukemia and Mantle Cell Lymphoma

A CME/MOC-Accredited Virtual Event

Monday, October 4, 2021 5:00 PM – 6:00 PM ET

Faculty
Richard R Furman, MD
Lindsey Roeker, MD

**Consulting Cardiologist Daniel J Lenihan, MD** 



#### Meet The Professor

### Optimizing the Selection and Sequencing of Therapy for Patients with ER-Positive Breast Cancer

Wednesday, October 6, 2021 5:00 PM - 6:00 PM ET

Faculty
Virginia Kaklamani, MD, DSc



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

Friday, October 8, 2021 12:00 PM – 1:00 PM ET

Faculty
Eileen M O'Reilly, MD



### Recent Advances and Future Directions in Oncology: A Daylong Multitumor Educational Webinar in Partnership with Florida Cancer Specialists

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Saturday, October 23, 2021 9:30 AM – 4:30 PM ET

**Faculty** 

Tanios Bekaii-Saab, MD Kristen K Ciombor, MD, MSCI Brad S Kahl, MD Mark Levis, MD, PhD

Mark D Pegram, MD
Daniel P Petrylak, MD
Noopur Raje, MD
David Sallman, MD

Additional faculty to be announced.



#### 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**



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Asklepios Tumorzentrum Hamburg
Asklepios Klinik Altona
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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
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Daniel Catenacci, MD
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Section of Hematology and Oncology
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Comprehensive Cancer Center
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#### **Meet The Professor Program Participating Faculty**



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Attending Physician, Member
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#### **Meet The Professor Program Participating Faculty**



Alan P Venook, MD
The Madden Family Distinguished Professor of
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Shorenstein Associate Director
Program Development
Helen Diller Family Comprehensive Cancer Center
University of California, San Francisco
San Francisco, California



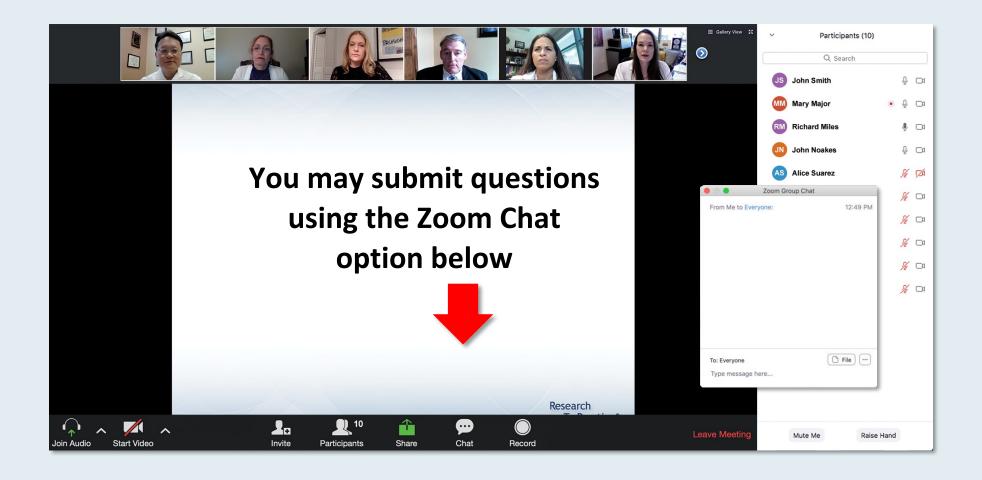
Moderator
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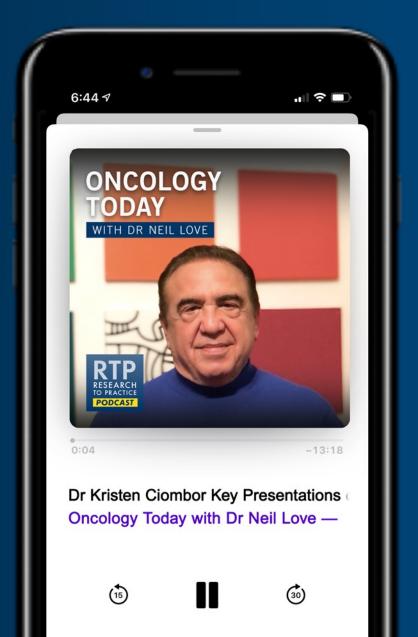
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Module 1: Breast Cancer – 9:30 AM – 10:20 AM
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**Module 2:** Lung Cancer – 10:30 AM – 11:20 AM

**Module 3:** Gastrointestinal Cancers – 11:30 AM – 12:20 PM

**Module 4:** Genitourinary Cancers – 12:30 PM – 1:20 PM

**Module 5: CLL and Lymphomas – 1:30 PM – 2:20 PM** 

Module 6: Multiple Myeloma – 2:30 PM – 3:20 PM

**Module 7: AML and MDS – 3:30 PM – 4:20 PM** 



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Warren S Brenner, MD Lynn Cancer Institute Boca Raton, Florida



Anthony Nguyen, MD Fellow Loma Linda University Health Loma Linda, California



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**Nikesh Jasani, MD** Texas Oncology-Cypress Houston, Texas



Henna Malik, MD
Site Leader of Clinical Research Trials
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North Houston, Willowbrook/Cypress
Houston, Texas



#### **Meet The Professor with Dr Wainberg**

#### **MODULE 1: Case Presentations**

- Dr Malik: A 63-year-old man with newly diagnosed esophageal cancer
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**MODULE 2: ESMO 2021 Highlights** 

**MODULE 3: Journal Club with Dr Wainberg** 

**MODULE 4: Beyond the Guidelines** 

**MODULE 5: Key Data Sets** 



#### Oncologist 2021;[Online ahead of print].

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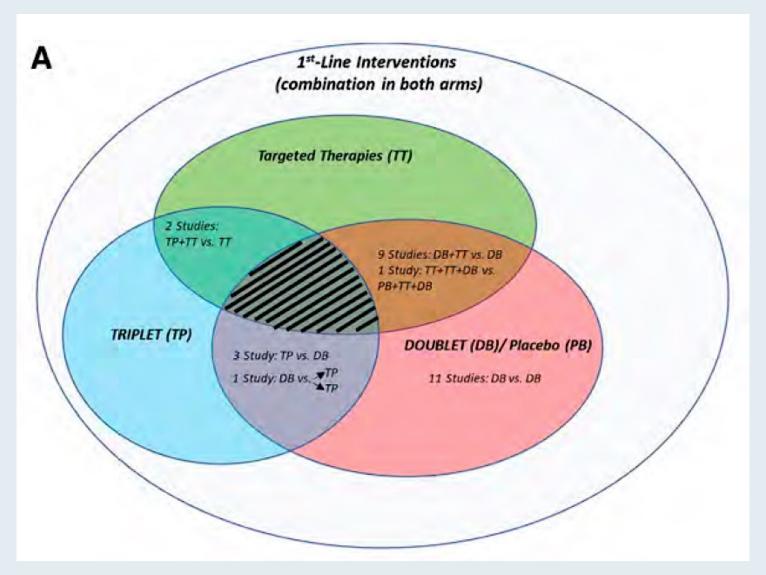
**Gastrointestinal Cancer** 

Toward a Treatment Sequencing Strategy: A Systematic Review of Treatment Regimens in Advanced Gastric Cancer/Gastroesophageal Junction Adenocarcinoma

DANIEL V. CATENACCI , A, JOSEPH CHAO, KEI MURO, SALAH EDDIN AL-BATRAN, SAMUEL J. KLEMPNER, ZEV A. WAINBERG, MANISH A. SHAH, SUN YOUNG RHA, ATSUSHI OHTSU, ASTRA M. LIEPA, HOLLY KNODERER, ANINDYA CHATTERJEE, ERIC VAN CUTSEM

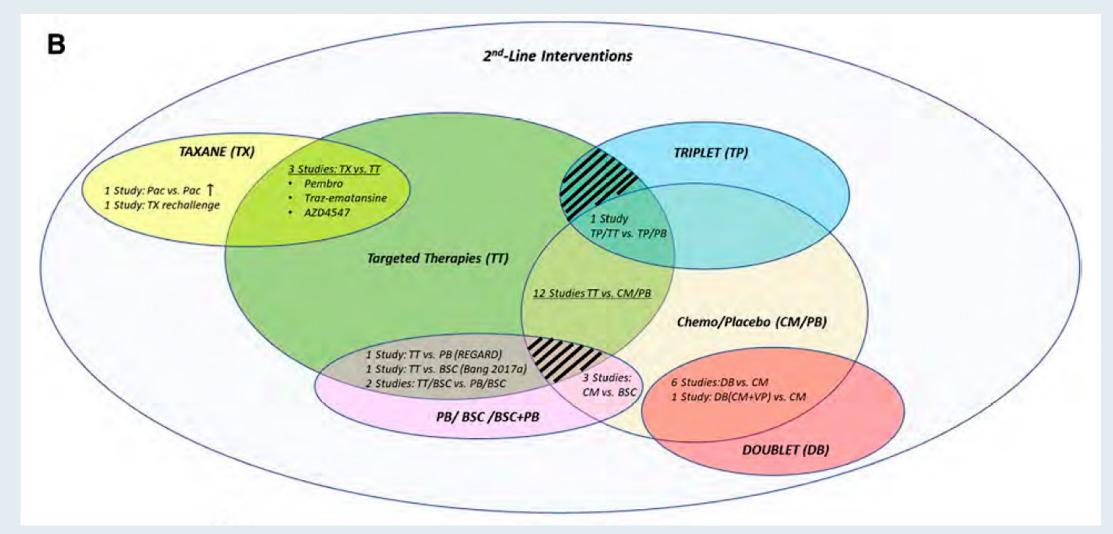


#### **First-Line Interventions**



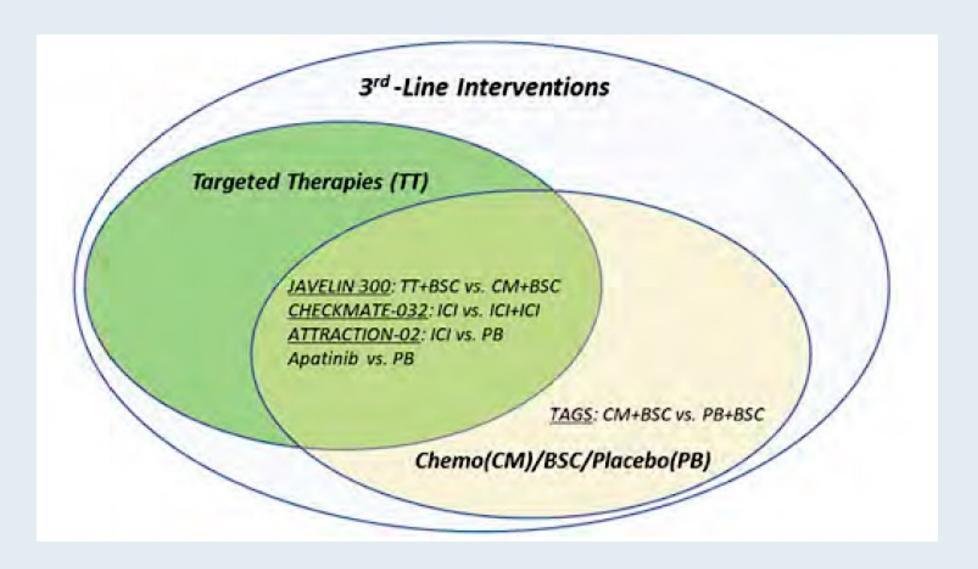


#### **Second-Line Interventions**





#### **Third-Line Interventions**





#### **Potential Treatment Sequencing Algorithm**

#### First line

#### **Second line**

#### Third line

HER2+

Trastuzumab + doublet (platinum/fluoropyrimidine)

HER2-

Doublet (FOLFOX/CAPOX/SOX)



FOLFIRI/irinotecan

Ramucirumab + paclitaxel



**Pembrolizumab** 

**Nivolumab** 

**TAS-102** 

#### **Key Considerations**

Consider triplet based on PS and disease burden

ECOG PS should be a key consideration for regimen choice

Limit taxane use to prevent ineligibility in 2L

Use of ICI (nivolumab/pembrolizumab) + chemo (based on CPS scores): CheckMate 649, KEYNOTE-590, KEYNOTE-811 (HER2+ only). CPS key determinant. Regional regulatory approvals/labels should be considered

Identify signs of progression for eligibility to further lines

#### **Key Considerations**

Identify signs of progression for eligibility to further line

T-DXd an option for HER2+ patients

HER2 retesting (consider liquid biopsy)

Treat with ICI for MSI-h tumors

Ramucirumab monotherapy or ramucirumab + FOLFIRI/irinotecan if not a candidate for combination with taxane (for patients with neuropathies from 1L)

#### **Key Considerations**

MSI agn

CPS key determinant

MSI-h- and TMB-based tumor agnostic approvals (pembrolizumab)

Chemo-free options for frail patients

T-DXd an option for HER2+ patients

Regional regulatory approvals/labels should be considered



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### Case Presentation – Dr Malik: A 63-year-old man with newly diagnosed esophageal cancer





Dr Henna Malik

Dr Nikesh Jasani

- Presented with dysphagia and a 10-lb weight loss, weakness and fatigue
- Endoscopy: 6-cm mass at the distal esophagus
- PET: Esophageal LAD
- Neoadjuvant FLOT x 2  $\rightarrow$  Concurrent chemoRT  $\rightarrow$  Surgery, with minimal residual disease
  - PET: N1-positive, Pathology: N1-negative

#### Questions

- What is the role of nivolumab in the neoadjuvant setting for patients who are resectable?
- What is the role of nivolumab in the adjuvant setting if they don't have residual disease? Does tumor grade or number of lymph nodes impact your decision-making?



# Case Presentation – Dr Del Rosario: A 45-year-old man with MSS, HER2-negative gastric adenocarcinoma, PD-L1 CPS: 5



**Dr Michael Del Rosario** 

- PMH: GERD, HTN, anxiety, BMI: 28
- Diagnosed with gastric adenocarcinoma with linitis plastica; MSS, HER2-negative, PD-L1 CPS: 5
- Awaiting PET/CT to evaluate for metastatic disease

#### Question

• If his final workup indicated locally advanced or metastatic disease, would you consider immunotherapy, and if so, why?



### Case Presentation – Dr Dayyani: A 61-year-old woman with MSI-high, TMB-high colon cancer



Dr Farshid Dayyani

- 6/2019: Presents with severe abdominal pain and distension  $\rightarrow$  CT: sigmoid mass
- Colonoscopy: Obstructive mass → Partial colectomy
- Post-operative anastomotic leak, with drain placed and TPN initiated → Hospitalized x 1 month
  - Returns after 2 days with nausea/vomiting, fevers and distension → Imaging: Increased collection around anastomosis → New drain placed
  - Drain removed → Worsening of pain, inability to eat
- Transfer of care to Dr Dayyani's institution: Workup ruled out leak but showed increasing size of collection and CEA tumor 2794 ng/ml, MSI-high, TMB-igh
- FOLFOXIRI x 1, discontinued due to tolerability → Ipilimumab/nivolumab
  - CEA dropped to 5.8 ng/ml
  - New adrenal insufficiency managed with steroid replacement
- 10/2020: Low anterior resection en bloc with pathologic complete response

#### Question

Since she responded so well, should I offer more adjuvant therapy?



## Case Presentation – Dr Patel: A 63-year-old woman with MSI-high metastatic colon cancer and a BRAF mutation



Dr Ina Patel

- 10/2017: Stage IIIB colon cancer → Right hemicolectomy
- 3/2018: Adjuvant capecitabine and oxaliplatin
- 6/2018: Stage IVC → Extended right colectomy, liver wedge resection, partial omentectomy
- 6/2018: Molecular analysis shows MSI-H, no clinically actionable mutation
- 8/2018: Pembrolizumab, with marked response followed by CEA rise to 13, slight PD on CT
- 8/2019: Ipilimumab/nivolumab x 1, discontinued due to Grade 4 diarrhea and colitis
- Repeat genetic testing detects BRAF mutation
- 10/2019: Encorafenib, cetuximab and binimetinib
  - Binimetinib discontinued due to new data suggesting it was not required
  - Doublet well tolerated
- Currently, NED

#### Question

• If a patient wasn't tolerating BRAF inhibitor therapy, how would you approach dose reduction or adjustment?



### Case Presentation – Dr Brenner: An 83-year-old man with hepatocellular carcinoma



Dr Warren Brenner

- 7/2015: T1 hepatoma from cirrhotic liver  $\rightarrow$  yttrium embolization  $\rightarrow$  Surgery
- 4/2018: Recurrent right hepatic lobe lesion → Microwave ablation
- 1/2020: Recurrent right hepatic lobe lesion → yttrium-90
- 7/2020: PD, with tumor extending to right atrium
- Atezolizumab/bevacizumab x 5 → PD

#### Questions

- What is the safety of using bevacizumab in patients who have major vascular involvement?
- How do you choose amongst the second-line treatment options?
- Are there any biomarkers outside of alpha-fetoprotein that's used for ramucirumab that can help us
  decide which agent may be better to use in the second line in patients who have received atezolizumab
  and bevacizumab?
- In patients who have resected hepatoma with negative margins, is there any role for considering adjuvant-type therapy to lower risk of disease recurrence?
- In patients who may have a borderline-resectable tumor, is there any role to giving preoperative neoadjuvant-type therapy? And if so, what agents would you recommend?



## Case Presentation – Dr Nguyen: A 60-year-old woman with metastatic cholangiocarcinoma and an IDH1 mutation



**Dr Anthony Nguyen** 

- 2016: Diagnosed with Stage II cholangiocarcinoma → Resection
- Adjuvant gemcitabine/cisplatin, with PD after 6 months
- 7/2018: IR embolization for right hepatic mass  $\rightarrow$  Biopsy-proven metastases in rib
- Local therapy with capecitabine and palliative RT → PD in thoracic spine in 9/2019
- FOLFOX x 8 months with stable disease → Maintenance 5-FU
  - Embolization of spine and palliative resection of thoracic mass
- After 2 months of maintenance 5-FU, PD in thoracic spine
- FOLFIRI, with continued PD of thoracic spine metastases
- Liquid biopsy: IDH1 mutation

#### **Questions**

- Would the liquid biopsy showing an IDH1 mutation, would you start ivosidenib, based on the CLARITY trial?
- Are there any toxicities associated with the use of ivosidenib in patients with cholangiocarcinoma?
- What do you think about the correlation between liquid biopsy versus tissue biopsy and its usefulness in the setting of GI cancers?



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#### **Gastric/GEJ/Esophageal – HER2-Negative**

- Janjigian Y et al. Nivolumab (NIVO) plus chemotherapy (Chemo) or ipilimumab (IPI) vs chemo as first-line (1L) treatment for advanced gastric cancer/gastroesophageal junction cancer/esophageal adenocarcinoma (GC/GEJC/EAC): CheckMate 649 study. ESMO 2021; Abstract LBA7.
- Shen L et al. Sintilimab plus chemotherapy versus chemotherapy as first-line therapy in patients with advanced or metastatic esophageal squamous cell cancer: First results of the phase III ORIENT-15 study. ESMO 2021; Abstract LBA52.
- Xu J et al. Sintilimab plus chemotherapy (chemo) versus chemo as first-line treatment for advanced gastric or gastroesophageal junction (G/GEJ) adenocarcinoma (ORIENT-16): First results of a randomized, double-blind, phase III study. ESMO 2021;Abstract LBA53.



#### **Gastric/GEJ/Esophageal – HER2-Positive**

- Stein A et al. Ipilimumab or FOLFOX in combination with nivolumab and trastuzumab in previously untreated HER2 positive locally advanced or metastastic esophagogastric adenocarcinoma (EGA):
   Results of the randomized phase II INTEGA trial (AIO STO 0217). ESMO 2021; Abstract LBA54.
- Van Cutsem E et al. Primary analysis of a phase II single-arm trial of trastuzumab deruxtecan
  (T-DXd) in western patients (Pts) with HER2-positive (HER2+) unresectable or metastatic gastric
  or gastroesophageal junction (GEJ) cancer who progressed on or after a trastuzumab-containing
  regimen. ESMO 2021;Abstract LBA55.
- Catenacci DV et al. MOUNTAINEER-02: Phase II/III study of tucatinib, trastuzumab, ramucirumab, and paclitaxel in previously treated HER2+ gastric or gastroesophageal junction adenocarcinoma (GEC): Trial in progress. ESMO 2021; Abstract 1434TiP.



#### **Colorectal Cancer**

- Boige V et al. Maintenance treatment with cetuximab versus observation in RAS wild-type metastatic colorectal cancer: First results of the randomized phase II TIME-PRODIGE28 UNICANCER study according to RAS/BRAF status. ESMO 2021;Abstract 429P.
- Weiss J et al. KRYSTAL-1: Adagrasib (MRTX849) as monotherapy or combined with cetuximab (cetux) in patients (pts) with colorectal cancer (CRC) harboring a KRASG12C mutation. ESMO 2021; Abstract LBA6.
- Kasper S et al. Comparison of cetuximab every 2 weeks versus standard once-weekly
  administration for the first-line treatment of RAS wild-type metastatic colorectal cancer among
  patients with left- and right-sided primary tumor location. ESMO 2021; Abstract 415P.
- Lobet S et al. Cetuximab could be administered once every two weeks instead of once weekly. ESMO 2021; Abstract 425P.
- Wang Z et al. A study of vemurafenib and cetuximab in combination with FOLFIRI for patients with BRAF V600E-mutated advanced colorectal cancer (NCT03727763): Preliminary results. ESMO 2021; Abstract 441P.

#### **Hepatocellular Carcinoma**

- Kudo M et al. IMbrave150: Exploratory efficacy and safety results in patients with hepatocellular carcinoma without macrovascular invasion (MVI) or extrahepatic spread (EHS) treated with atezolizumab (atezo) + bevacizumab (bev) or sorafenib (sor). ESMO 2021; Abstract 932P.
- Van Laethem J et al. **Updated results for pembrolizumab (pembro) monotherapy as first-line therapy for advanced hepatocellular carcinoma (HCC) in the phase II KEYNOTE-224 study.** ESMO 2021;Abstract 933P.

#### **Other**

Qi C et al. CLDN 18.2-targeted CAR-T cell therapy in patients with cancers of the digestive system.
 ESMO 2021; Abstract 13720.



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- Lacouture ME et al. Reducing skin toxicities from EGFR inhibitors with topical BRAF inhibitor therapy. Cancer Discov 2021;11(9):2158-67.
- Stein-Merlob AF et al. **Keeping immune checkpoint inhibitor myocarditis in check: Advanced circulatory mechanical support as a bridge to recovery.** *ESC Heart Fail* 2021;[Online ahead of print].
- Cascinu S et al. Tumor response and symptom palliation from RAINBOW, a phase 3 trial of ramucirumab plus paclitaxel in previously treated advanced gastric cancer. Oncologist 2020; [Online ahead of print].
- Janjigian YY et al. MATTERHORN: Efficacy and safety of neoadjuvant-adjuvant durvalumab and FLOT chemotherapy in resectable gastric and gastroesophageal junction cancer—A randomized, double-blind, placebo-controlled, phase 3 study. ASCO 2021; Abstract TPS4151.
- Janjigian YY. Genomic landscape of late-stage gastric cancer. ESMO 2021; Abstract 1416P.



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- Dr Dayyani: A 61-year-old woman with MSI-high, TMB-high colon cancer
- Dr Patel: A 63-year-old woman with MSI-high metastatic colon cancer and a BRAF mutation
- Dr Brenner: An 83-year-old man with hepatocellular carcinoma
- Dr Nguyen: A 60-year-old woman with metastatic cholangiocarcinoma and an IDH1 mutation

**MODULE 2: ESMO 2021 Highlights** 

**MODULE 3: Journal Club with Dr Wainberg** 

**MODULE 4: Beyond the Guidelines** 

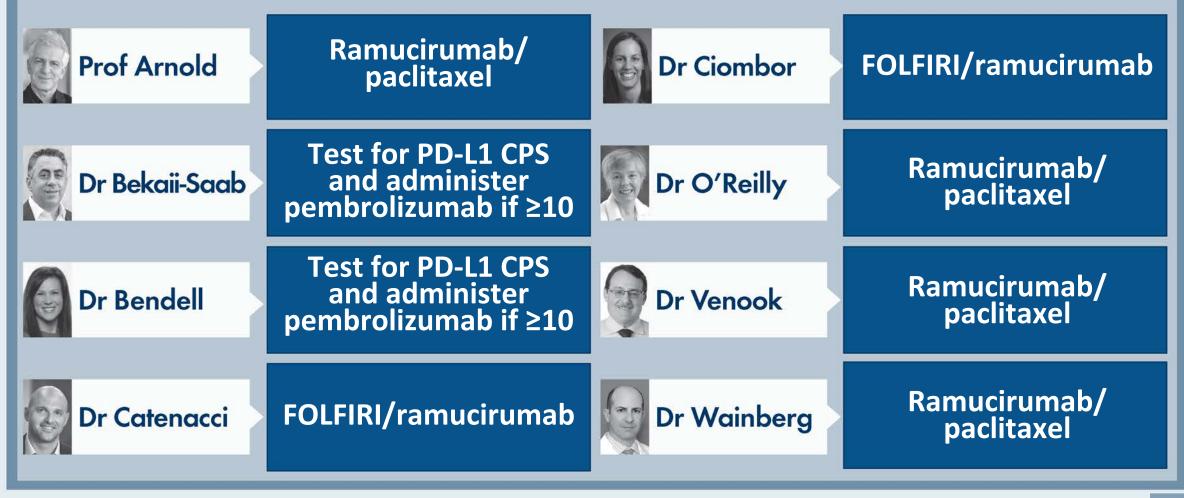
**MODULE 5: Key Data Sets** 



### **Gastric/GEJ**

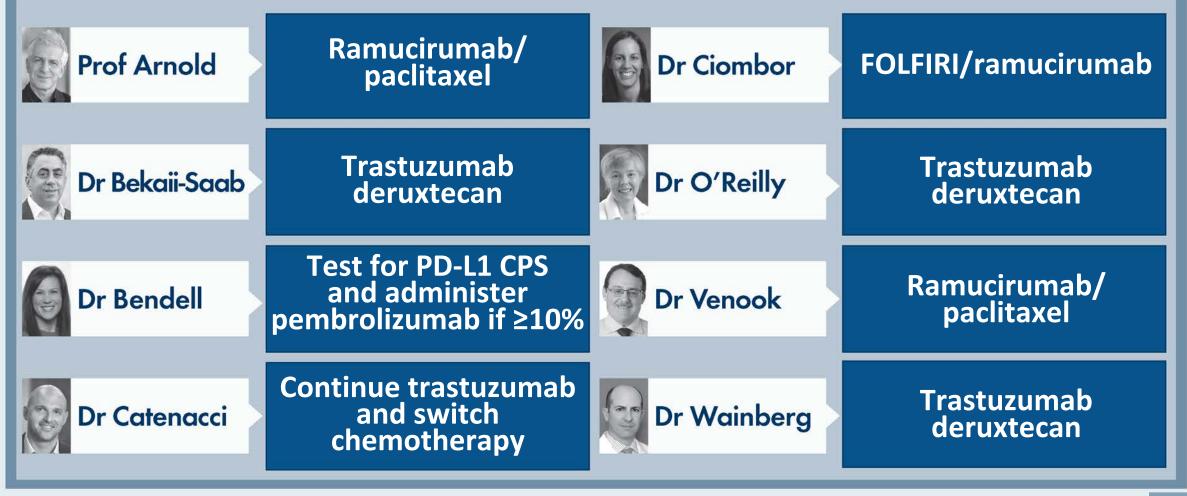


Regulatory and reimbursement issues aside, what would you currently recommend as second-line therapy for a patient with metastatic <u>HER2-negative</u>, MSS adenocarcinoma of the GEJ who has experienced disease progression on first-line <u>FOLFOX</u>?





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>?





### **Colorectal Cancer**

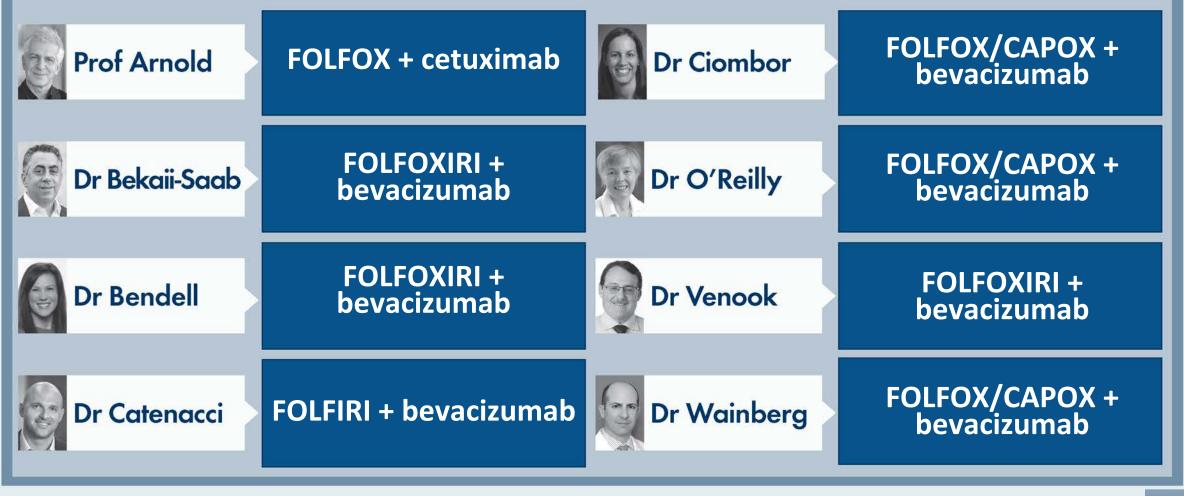


### What is your usual first-line treatment recommendation for a <u>clinically</u> <u>stable 60-year-old</u> patient with <u>left-sided</u>, MSS, pan-RAS wild-type, <u>BRAF wild-type</u> metastatic colorectal cancer (mCRC)?

- 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?

Prof Arnold	Second line	Dr Ciombor	Second line
Dr Bekaii-Saab	Second line	Dr O'Reilly	Second line
Dr Bendell	Second line	Dr Venook	Second line
Dr Catenacci	Second line	Dr Wainberg	Second line

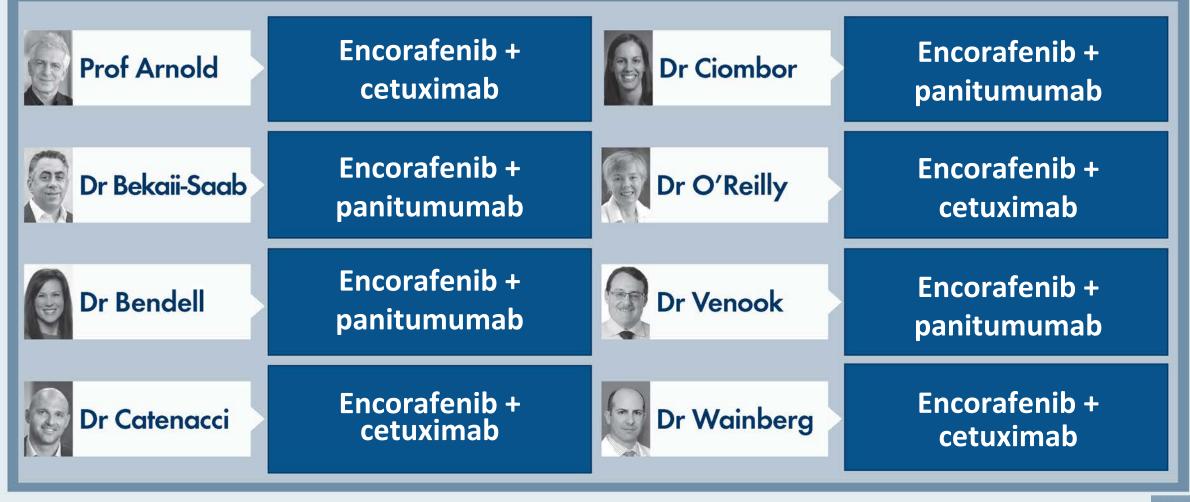


### For a patient with mCRC with a BRAF V600E mutation to whom you would administer BRAF-targeted therapy, what would be your preferred treatment?

- 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?





### Hepatocellular

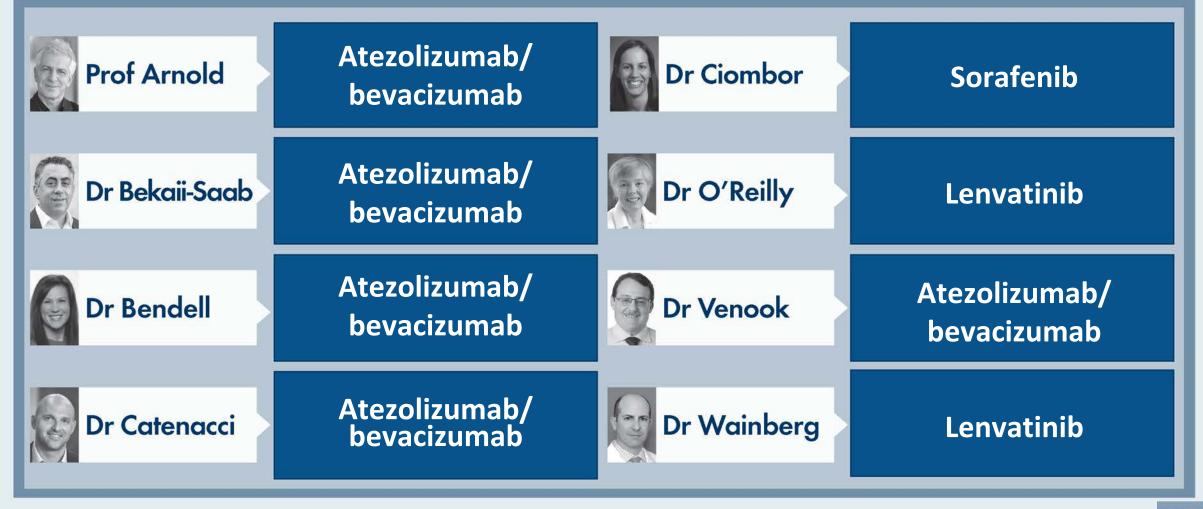


### What would be your current preferred <u>first-line</u> systemic treatment for a 65-year-old patient with HCC, a <u>Child-Pugh B7</u> score and PS 1?

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

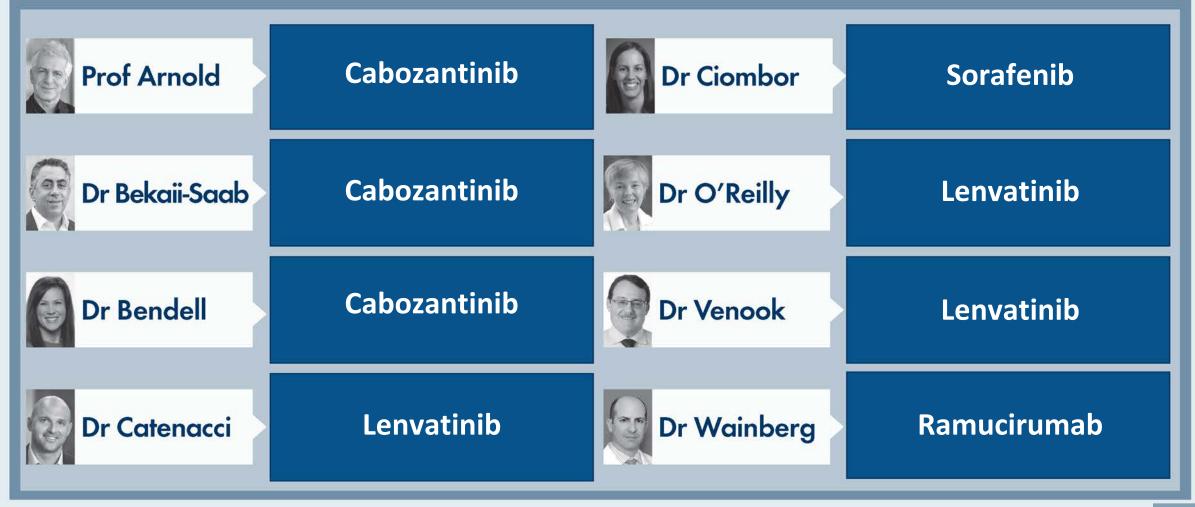


# What would be your current preferred first-line systemic treatment for a 65-year-old patient with HCC, a <u>Child-Pugh B7 score</u> and a <u>PS of 1</u>?



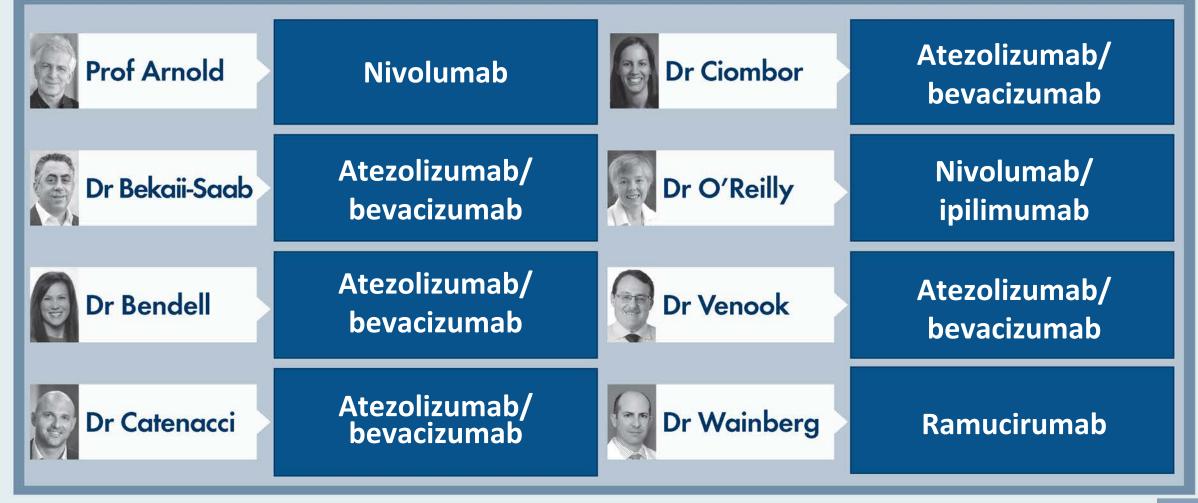


What would be your most likely second-line systemic therapy for a 65-year-old patient with HCC, a <u>Child-Pugh A score</u> and a <u>PS of 0</u> who received first-line <u>atezolizumab/</u> <u>bevacizumab</u> with minimal toxicity, had stable disease for <u>14 months</u> and then experienced disease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





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)?





#### **Meet The Professor with Dr Wainberg**

#### **MODULE 1: Case Presentations**

- Dr Malik: A 63-year-old man with newly diagnosed esophageal cancer
- Dr Del Rosario: A 45-year-old man with MSS, HER2-negative gastric adenocarcinoma, PD-L1 CPS: 5
- Dr Dayyani: A 61-year-old woman with MSI-high, TMB-high colon cancer
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**MODULE 2: ESMO 2021 Highlights** 

**MODULE 3: Journal Club with Dr Wainberg** 

**MODULE 4: Beyond the Guidelines** 



#### **Gastric/GEJ Cancer/Esophageal**





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

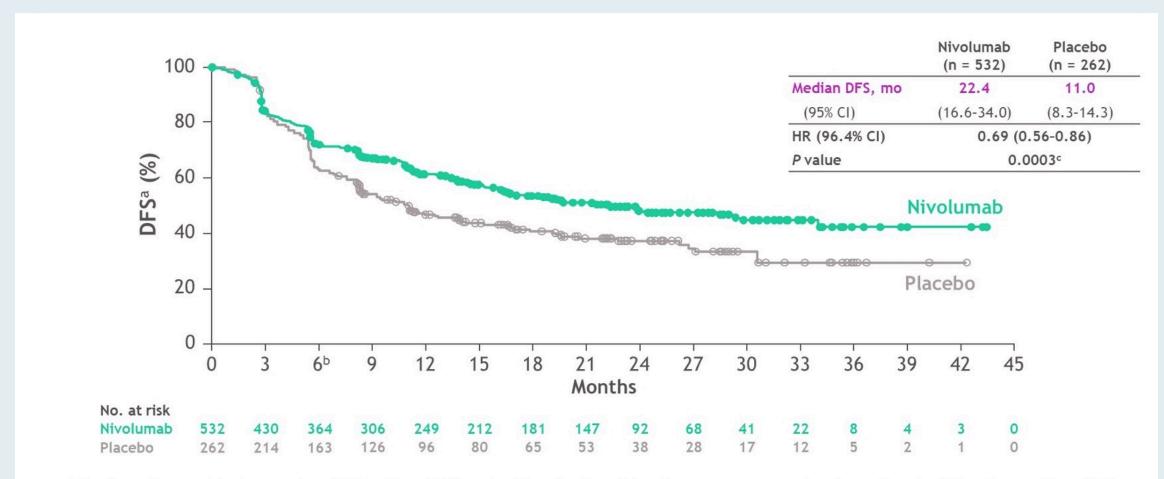
Ronan J. Kelly, <sup>1</sup> Jaffer A. Ajani, <sup>2</sup> Jaroslaw Kuzdzal, <sup>3</sup> Thomas Zander, <sup>4</sup> Eric Van Cutsem, <sup>5</sup> Guillaume Piessen, <sup>6</sup> Guillermo Mendez, <sup>7</sup> Josephine Feliciano, <sup>8</sup> Satoru Motoyama, <sup>9</sup> Astrid Lièvre, <sup>10</sup>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

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; ¬Fundacion Favaloro, Buenos Aires, Argentina; ®Johns 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

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, placebo-controlled 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."

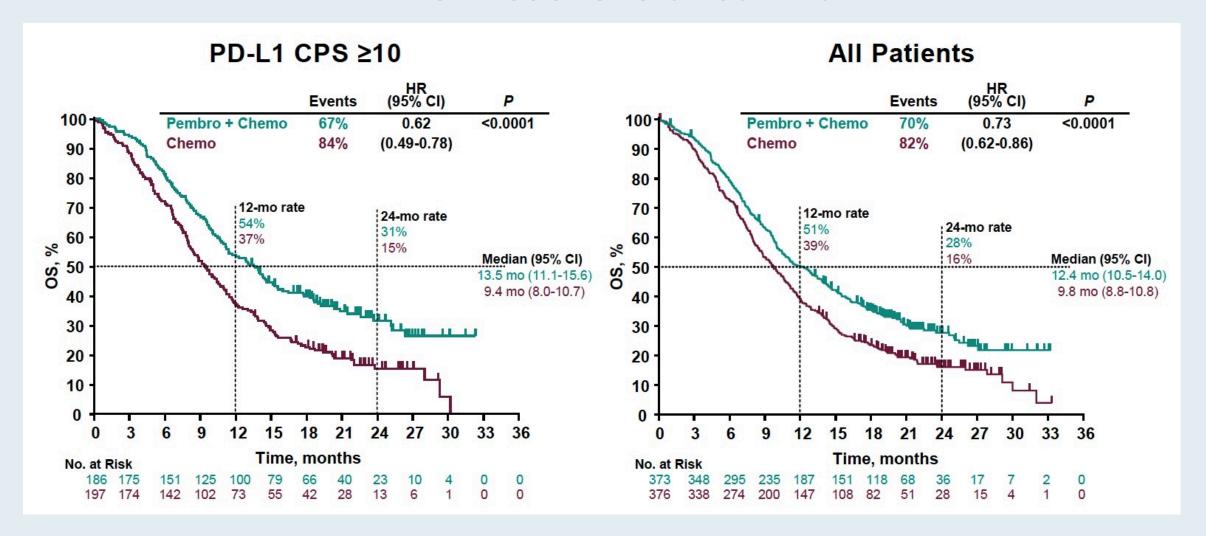


#### Pembrolizumab plus Chemotherapy versus Chemotherapy as First-Line Therapy in Patients with Advanced Esophageal Cancer: The Phase 3 KEYNOTE-590 Study

Kato K et al. ESMO 2020; Abstract LBA8\_PR.

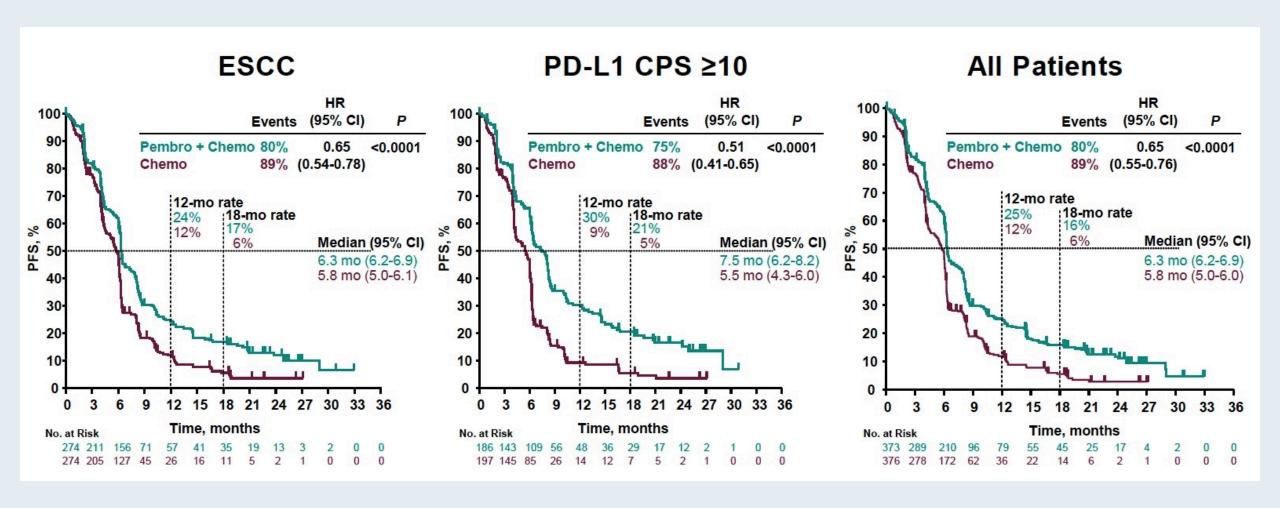


#### **KEYNOTE-590: Overall Survival**





#### **KEYNOTE-590: Progression-Free Survival**





## 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."





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

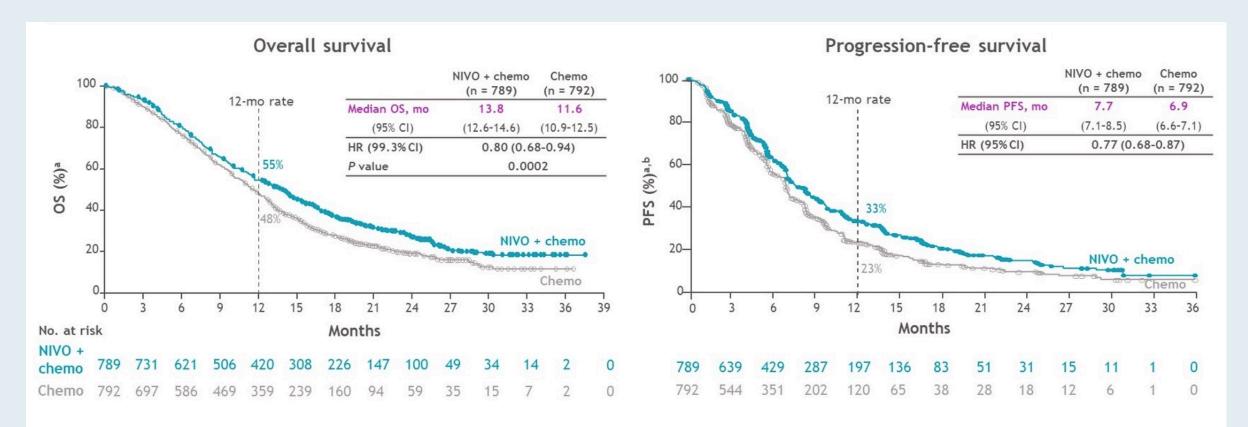
Markus Moehler, <sup>1</sup> Kohei Shitara, <sup>2</sup> Marcelo Garrido, <sup>3</sup> Pamela Salman, <sup>4</sup> Lin Shen, <sup>5</sup> Lucjan Wyrwicz, <sup>6</sup> Kensei Yamaguchi, <sup>7</sup> Tomasz Skoczylas, <sup>8</sup> Arinilda Campos Bragagnoli, <sup>9</sup> Tianshu Liu, <sup>10</sup> Michael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

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; <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, Brazil; ¹ºZhongshan 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





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

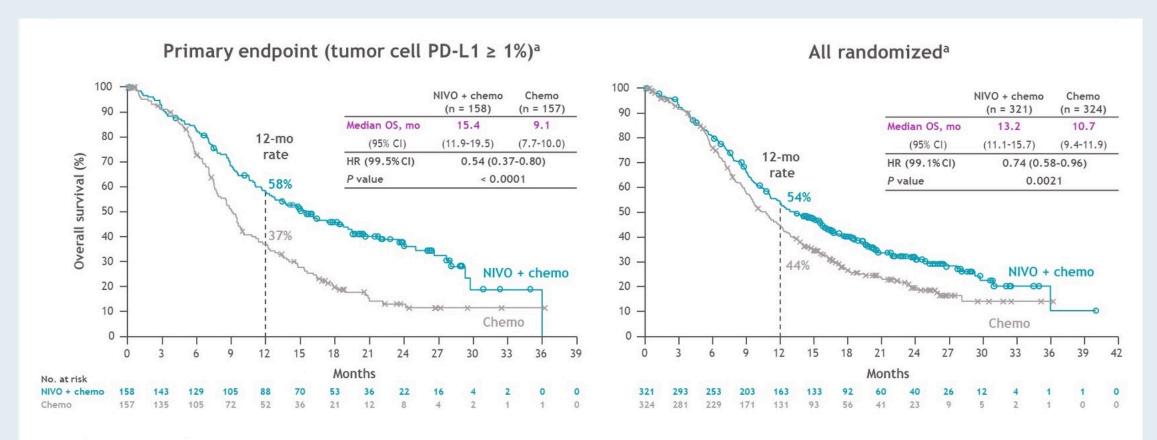
<u>Ian Chau</u>,<sup>1</sup> Yuichiro Doki,<sup>2</sup> Jaffer A. Ajani,<sup>3</sup> Jianming Xu,<sup>4</sup> Lucjan Wyrwicz,<sup>5</sup> Satoru Motoyama,<sup>6</sup> Takashi Ogata,<sup>7</sup> Hisato Kawakami,<sup>8</sup> Chih-Hung Hsu,<sup>9</sup> Antoine Adenis,<sup>10</sup> Farid el Hajbi,<sup>11</sup> Maria Di Bartolomeo,<sup>12</sup> Maria Ignez Braghiroli,<sup>13</sup> Eva Holtved,<sup>14</sup> Ioannis Xynos,<sup>15</sup> Xuan Liu,<sup>15</sup> Ming Lei,<sup>15</sup> Kaoru Kondo,<sup>15</sup> Ken Kato,<sup>16</sup> Yuko Kitagawa<sup>17</sup>

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; ¬Kanagawa Cancer Center, Kanagawa, Japan; ⁶National Taiwan University Hospital, Taipei, Taiwan; ¹ºInstitut 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, Brazil; ¹⁴Odense University Hospital, Odense, Denmark; ¹⁵Bristol Myers Squibb, Princeton, NJ; ¹⁶National Cancer Center Hospital, Tokyo, Japan; ¹¬Keio University School of Medicine, Tokyo, Japan

Abstract Number LBA4001



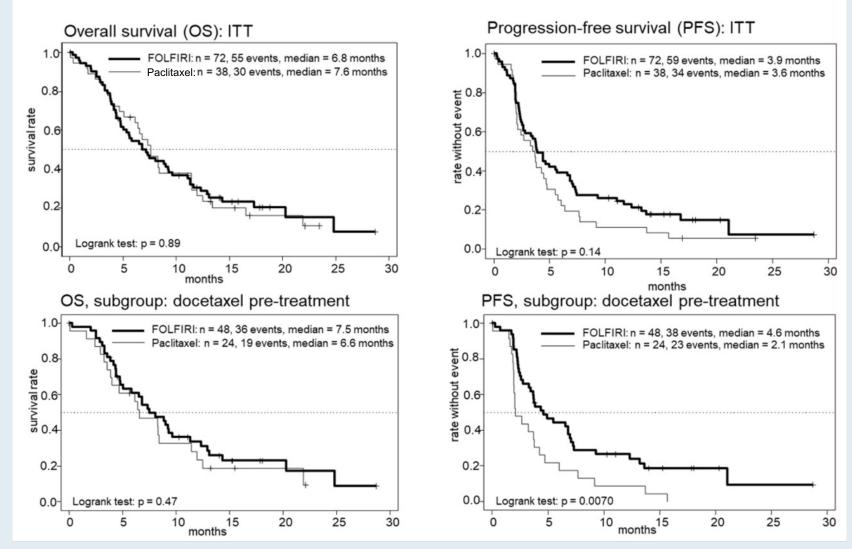
# CheckMate 648: Overall Survival for Patients with PD-L1 ≥1% (Primary Endpoint Along with PFS in PD-L1 ≥1%) and in ITT Population



- Superior OS with NIVO + chemo vs chemo in tumor cell PD-L1 ≥ 1% and all randomized populations
  - Tumor cell PD-L1 ≥ 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



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





### 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-GastricO1, NCTO3329690) 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 famtrastuzumab deruxtecan-nxki 6.4 mg/kg intravenously every 3 weeks or physician's choice of either irinotecan or paclitaxel monotherapy."





#### **Abstract 4048**



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

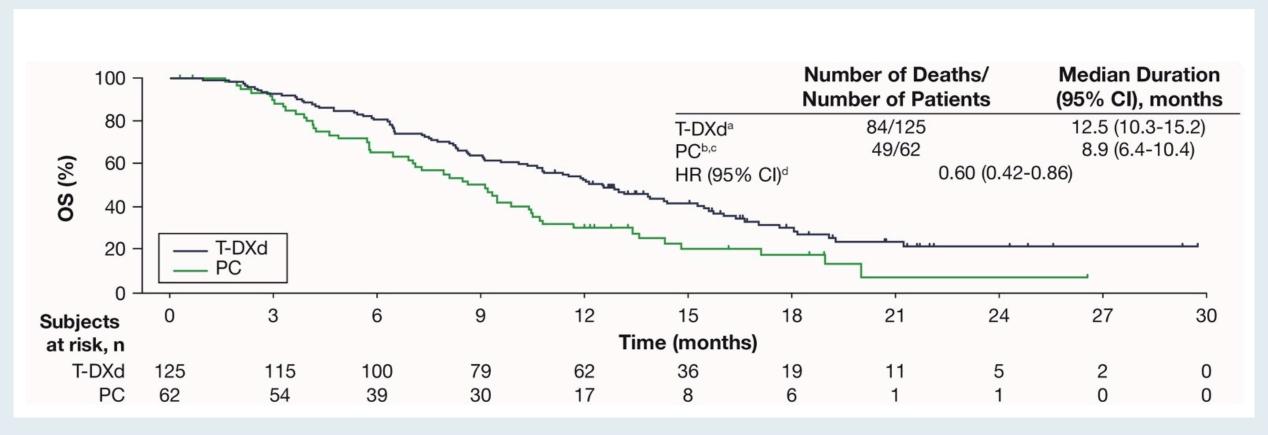
The Cancer Institute Hospital of JFCR, Tokyo, Japan June 2021

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



#### **DESTINY-Gastric01: Selected Adverse Events**

) 	T-DXd n = 125			PC Overall n = 62		
	Grade			Grade		
Preferred Term, %	Any	3	4	Any	3	4
Neutrophil count						
decreased <sup>b</sup>	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 <sup>c</sup>	57.6	38.4	0	30.6	21.0	1.6
Platelet count decreased <sup>d</sup>	40.0	9.6	1.6	6.5	1.6	1.6
White blood cell count decreased <sup>e</sup>	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		

<sup>\*</sup>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."





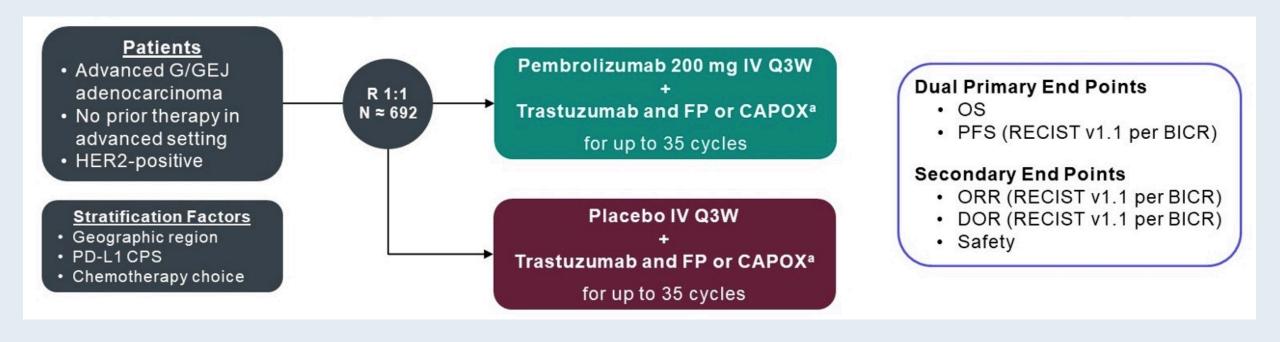
# Pembrolizumab Plus Trastuzumab and Chemotherapy for HER2+ Metastatic Gastric or Gastroesophageal Junction Cancer: Initial Findings of the Global Phase 3 KEYNOTE-811 Study

Yelena Y. Janjigian,<sup>1</sup> Akihito Kawazoe,<sup>2</sup> Patricio Yañez,<sup>3</sup> Suxia Luo,<sup>4</sup> Sara Lonardi,<sup>5</sup> Oleksii Kolesnik,<sup>6</sup> Olga Barajas,<sup>7</sup> Yuxian Bai,<sup>8</sup> Lin Shen,<sup>9</sup> Yong Tang,<sup>10</sup> Lucjan S. Wyrwicz,<sup>11</sup> Kohei Shitara,<sup>2</sup> Shukui Qin,<sup>12</sup> Eric Van Cutsem,<sup>13</sup> Josep Tabernero,<sup>14</sup> Lie Li,<sup>15</sup> Chie-Schin Shih,<sup>15</sup> Pooja Bhagia,<sup>15</sup> Hyun Cheol Chung,<sup>16</sup> 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; ¬Arturo López Pérez Foundation, Santiago, Chile; ⁶Harbin Medical University Cancer Hospital, Harbin, China; ⁰Key Laboratory of Carcinogenesis and Translational Research (Ministry of Education/Beijing), Peking University Cancer Hospital & Institute, Beijing, China; ¹¹Cancer 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

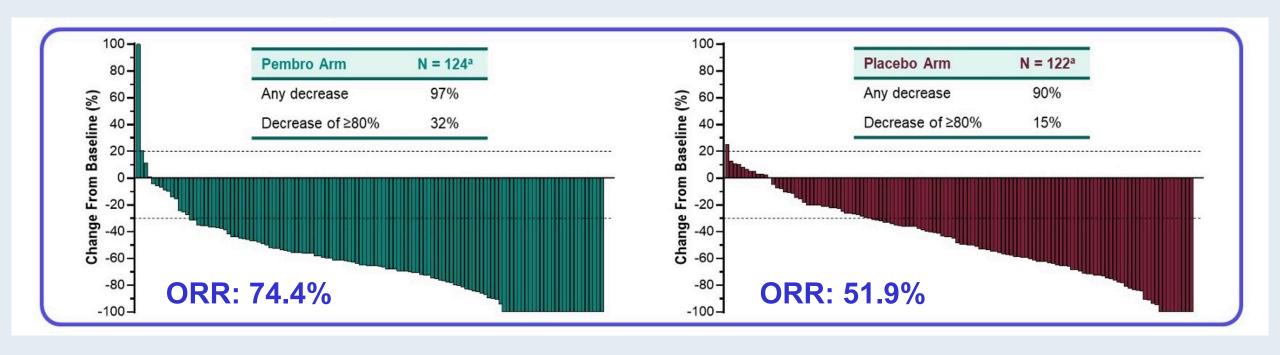


#### **KEYNOTE-811 Phase III Study Design**





#### **KEYNOTE-811: Confirmed Response at First Interim Analysis**





#### **Colorectal Cancer**



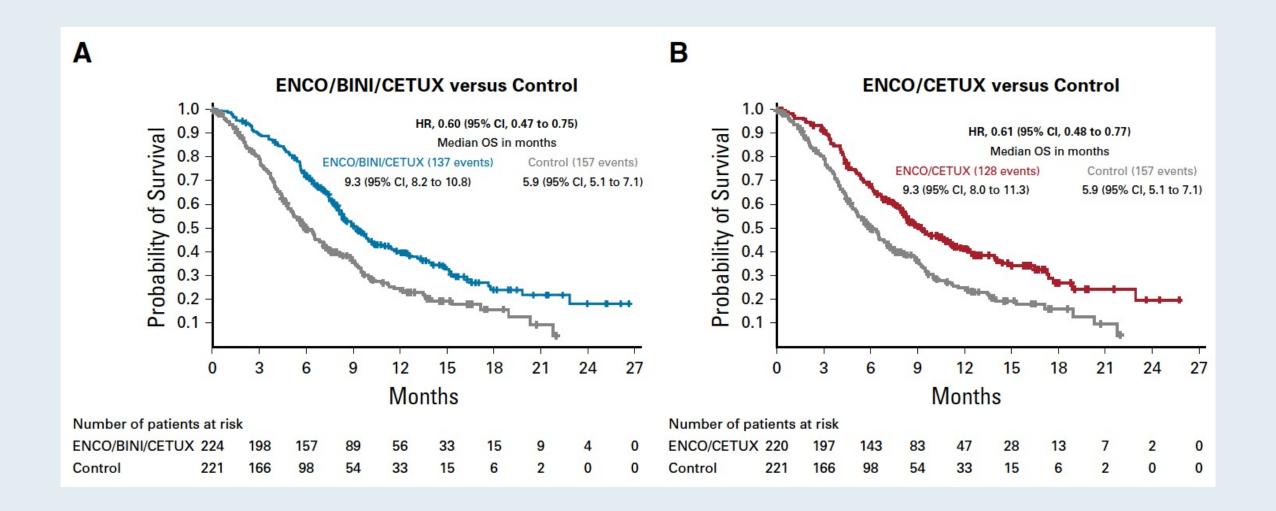
### Encorafenib Plus Cetuximab as a New Standard of Care for Previously Treated *BRAF* V600E— Mutant Metastatic Colorectal Cancer: Updated Survival Results and Subgroup Analyses from the **BEACON Study**

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, PhD<sup>10</sup>; Neeltje Steeghs, MD, PhD<sup>11</sup>; Tormod Kyrre Guren, MD, PhD<sup>12</sup>; Hendrik-Tobias Arkenau, MD, PhD<sup>13</sup>; Pilar Garcia-Alfonso, MD14; Elena Elez, MD, PhD1; Ashwin Gollerkeri, MD15; Kati Maharry, PhD15; Janna Christy-Bittel. MSN15: and Scott Kopetz, MD, PhD<sup>16</sup>

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



#### **BEACON: Overall Survival Results**







ANCHOR CRC: a single-arm, phase 2 study of encorafenib, binimetinib plus cetuximab in previously untreated *BRAF*<sup>V600E</sup>—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 BRAF-mutant ColoRectal Cancer

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



#### **BREAKWATER Study Design**

An open-label, multicenter, randomized phase 3 study of 1<sup>st</sup> 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<sup>V600E</sup> mutant mCRC with 0 to 1 prior regimens in the metastatic setting

Encorafenib + cetuximab + mFOLFOX6 N=30

Encorafenib + cetuximab + FOLFIRI N=30

#### Dosages

- · Encorafenib, 300 mg PO QD
- Cetuximab, 500 mg/m<sup>2</sup> IV Q2W
- FOLFOX, full dose IV Q2W
- FOLFIRI, full dose IV Q2W

#### Phase 3

Patients with BRAF<sup>V600E</sup> mutant mCRC and no prior systemic therapy in the metastatic setting

Arm A\*\*

Encorafenib + cetuximab, N=290

Arm B\*\*

Encorafenib + cetuximab + FOLFOX or FOLFIRIβ, N=290

Control arm§

Physician's choice: FOLFOX, FOLFIRI, FOLFOXIRI, CAPOX, all ± anti-VEGF antibody, N=290

#### 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

#### OTHER ENDPOINTS

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

Randomize 1:1:1\*

PK including drug-drug interactions

\*\*Same dosing as SLI; \$FOLFOX or FOLFIRI based on SLI results; \$ No crossover.

ClinicalTrials.gov Identifier: NCT04607421





<sup>\*</sup>Stratified by: ECOG PS 0 v. 1, Region US/Canada v. Western Europe v. ROW

### 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/m<sup>2</sup> 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."





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

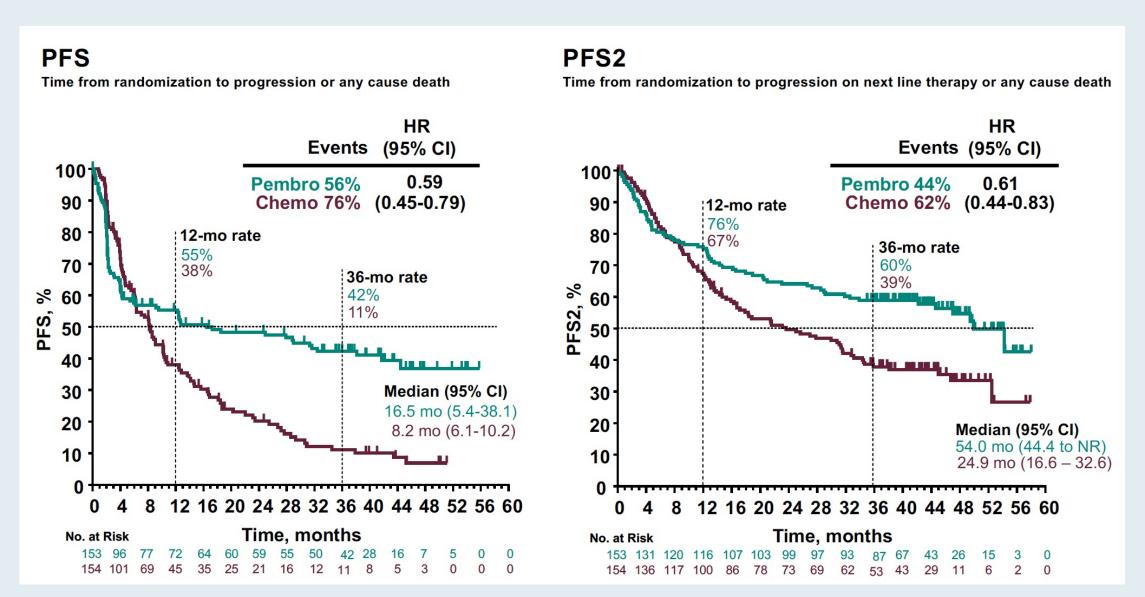
Thierry André,<sup>1</sup> Kai-Keen Shiu,<sup>2</sup> Tae Won Kim,<sup>3</sup> Benny Vittrup Jensen,<sup>4</sup> Lars Henrik Jensen,<sup>5</sup> Cornelis Punt,<sup>6</sup> Denis Smith,<sup>7</sup> Rocio Garcia-Carbonero,<sup>8</sup> Julia Alcaide-Garcia,<sup>9</sup> Peter Gibbs,<sup>10</sup> Christelle de la Fouchardiere,<sup>11</sup> Fernando Rivera,<sup>12</sup> Elena Elez,<sup>13</sup> Johanna Bendell,<sup>14</sup> Dung T. Le,<sup>15</sup> Takayuki Yoshino,<sup>16</sup> Wenyan Zhong,<sup>17</sup> David Fogelman,<sup>18</sup> Patricia Marinello,<sup>18</sup> Luis A. Diaz Jr<sup>19</sup>

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, Netherlands; ¬Bordeaux University Hospital, Bordeaux, France; ³Hospital Universitario 12 de Octubre, Imas12, CNIO, UCM, Madrid, Spain; ⁰Hospital 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; ¹⁵National Cancer Center Hospital East, Kashiwa, Japan; ¹¹MSD China, Beijing, China; ¹³Merck & Co., Inc. Kenilworth, NJ, USA; ¹³Memorial Sloan Kettering Cancer Center, New York, NY, USA

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

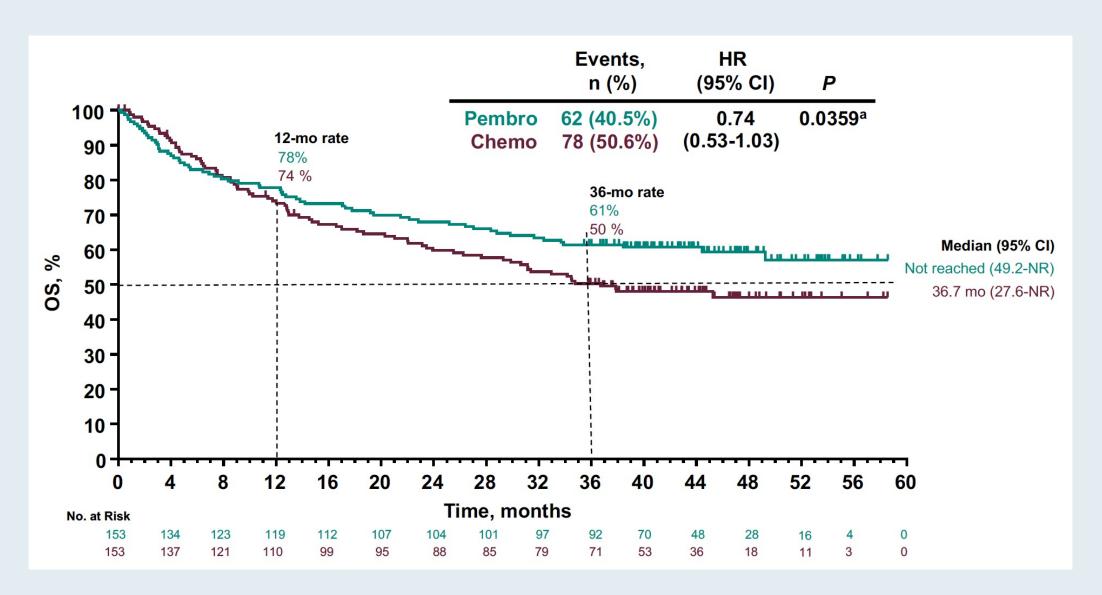


#### **KEYNOTE-177: Progression-Free Survival**





#### **KEYNOTE-177: Overall Survival**







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

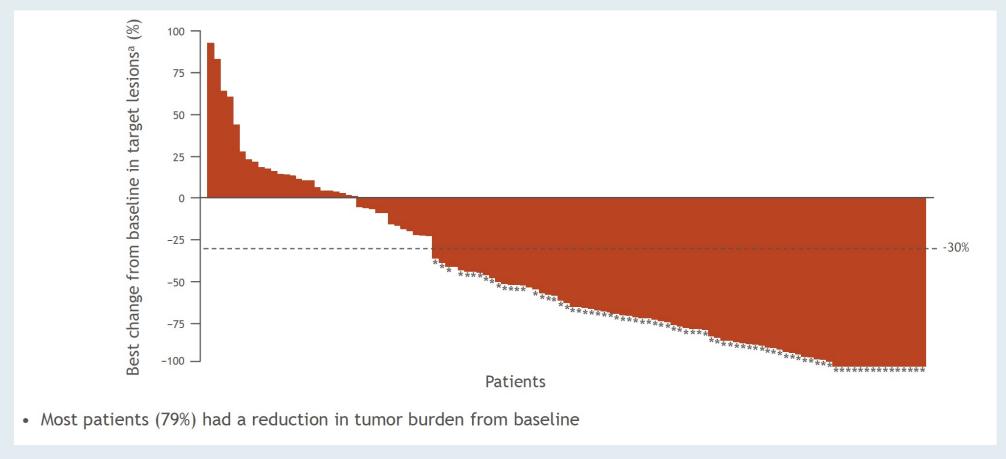
<sup>1</sup>Hôpital Saint Antoine, Assistance Publique Hôpitaux de Paris and Sorbonne Université, Paris, France; <sup>2</sup>Istituto Oncologico Veneto IOV-IRCSS, Padova, Italy; <sup>3</sup>Westmead Hospital, Sydney, NSW, Australia; <sup>4</sup>University of Southern California Norris Comprehensive Cancer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







# CheckMate 142: Four-Year Update of Nivolumab/Ipilimumab as First-Line Therapy for MSI-H/dMMR mCRC



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



# FDA Grants Accelerated Approval to Dostarlimab-gxly for dMMR Advanced Solid Tumors

Press Release – August 17, 2021

"The Food and Drug Administration granted accelerated approval to dostarlimab-gxly for adult patients with mismatch repair deficient (dMMR) recurrent or advanced solid tumors, as determined by an FDA-approved test, that have progressed on or following prior treatment and who have no satisfactory alternative treatment options.

Today, the FDA also approved the VENTANA MMR RxDx Panel as a companion diagnostic device to select patients with dMMR solid tumors for treatment with dostarlimab-gxly.

The efficacy of dostarlimab was evaluated in the GARNET Trial (NCT02715284), a non-randomized, multicenter, open-label, multi-cohort trial. The efficacy population consisted of 209 patients with dMMR recurrent or advanced solid tumors who progressed following systemic therapy and had no satisfactory alternative treatment."



## Antitumor Activity of Dostarlimab in Patients with Mismatch Repair—Deficient (dMMR) Tumors: A Combined Analysis of 2 Cohorts in the GARNET Study

Berton D et al.

ASCO 2021; Abstract 2564.



#### **GARNET: Trial Design and Antitumor Activity**

#### **Trial Design**

# Part 1 Dose finding Part 2A Fixed-dose safety run-in Part 2B Expansion cohorts A1: dMMR EC

#### Key inclusion/exclusion criteria for cohorts A1 and F:

- Patients with dMMR/MSI-H solid tumors (cohort F was also open to patients with POLε-mutated solid tumors)
- Patients could be screened based on MMR/MSI testing results using IHC, PCR, or NGS performed in a certified local laboratory, but patient eligibility was determined by MMR IHC results for this analysis
- Patients must have measurable disease at baseline
- . Patients must be anti-PD-(L)1 naive
- Patients must submit 2 scans demonstrating PD based on BICR per RECIST v1.1 prior to the first dose of dostarlimab

#### Additional key inclusion/exclusion criteria for

- Patients must have progression on or after platinum doublet therapy
- Patients must have received ≤2 prior lines of treatment for recurrent or advanced disease

E: NSCLC

(N=143)

A2: MMRp EC

F: Non-endometrial dMMR basket (N=173)

G: PROC

#### Additional key inclusion/exclusion criteria for cohort F:

- Patients must have progression following systemic therapy and have no satisfactory alternative treatment options
- Patients with CRC must have PD after, or been intolerant to, fluoropyrimidine, oxaliplatin, and irinotecan

#### **Primary Endpoint Analysis**

Variable	Cohort A1 (n=103)	Cohort F (n=106)	Cohorts A1 + F (n=209)
Median follow-up time, moa	20.4	16.7	17.5
Confirmed responses, n	46	41	87
ORR, % (95% CI) <sup>b</sup>	44.7 (34.9–54.8)	38.7 (29.4–48.6)	41.6 (34.9–48.6)
CR, n (%)	11 (10.7)	8 (7.5)	19 (9.1)
PR, n (%)	35 (34.0)	33 (31.1)	68 (32.5)
SD, n (%)	13 (12.6)	26 (24.5)	39 (18.7)
PD, n (%)	39 (37.9)	32 (30.2)	71 (34.0)
NE, n (%)	5 (4.9)	7 (6.6)	3 (1.4)
Disease control rate, % (95% CI) <sup>c</sup>	57.3 (47.2–67.0)	63.2 (53.3–72.4)	60.3 (53.3–67.0)
Duration of response, median (range), mo	34.7 (2.63 to 35.78+)	NR (5.59 to 30.13+)	34.7 (2.63 to 35.78+)

#### **Antitumor Activity by Tumor Type**

			ned ORR ST v1.1)
Tumor type	Patients, N	n (%)	95% CI, %
Overall	209	87 (41.6)	(34.9-48.6)
EC	103	46 (44.7)	(34.9-54.8)
CRC	69	25 (36.2)	(25.0-48.7)
Non-CRC	37	16 (43.2)	(27.1–60.5)
Small-intestinal cancer	12	4 (33.3)	(9.9–65.1)
Gastric and gastroesophageal junction cancer	8	3 (37.5)	(8.5–75.5)
Pancreatic carcinoma	4	SD, 3 PD	
Ovarian cancer	2	PR, SD	
Hepatocellular carcinoma	2	PR, PD	
Biliary neoplasm	2	2 CR	
Breast cancer	1	CR	
Adrenal cortical carcinoma	1	PR	
Malignant neoplasm of the female genitals	1	PR	
Pleural cancer	1	PR	
Unknown origin	1	PR	
Renal cell carcinoma	1	SD	
Esophageal cancer	1	PD	



#### **GARNET Combined Cohort Analysis: Adverse Events**

	Cohort A1 (N=143)	Cohort F (N=173)	Cohorts A1 + F (N=316)
Safety summary, n (%)			
Any TEAE	140 (97.9)	167 (96.5)	307 (97.2)
Any-grade TRAE	100 (69.9)	119 (68.8)	219 (69.3)
Grade ≥3 TEAE	72 (50.3)	85 (49.1)	157 (49.7)
Grade ≥3 TRAE	23 (16.1)	20 (11.6)	43 (13.6)
Treatment-related SAE	15 (10.5)	13 (7.5)	28 (8.9)
Any TRAE leading to discontinuation	8 (5.6)	8 (4.6)	16 (5.1)
TRAE leading to death <sup>a</sup>	0	2 (1.2)	2 (0.6)
TEAEs in ≥1% of patients lea	iding to discontin	nuation, n (%)	
ALT increased	2 (1.4)	2 (1.2)	4 (1.3)
Any-grade TEAEs in ≥20% of	f patients, n (%)		
Anemia	45 (31.5)	55 (31.8)	100 (31.6)
Diarrhea	40 (28.0)	43 (24.9)	83 (26.3)
Asthenia	35 (24.5)	42 (24.3)	77 (24.4)
Nausea	45 (31.5)	26 (15.0)	71 (22.5)
Fatigue	36 (25.2)	28 (16.2)	64 (20.3)
Grade ≥3 TEAEs in ≥2% of p	atients, n (%)		
Anemia	21 (14.7)	13 (7.5)	34 (10.8)
Abdominal pain	7 (4.9)	6 (3.5)	13 (4.1)
Hyponatremia	6 (4.2)	5 (2.9)	11 (3.5)
Sepsis	4 (2.8)	6 (3.5)	10 (3.2)
ALT increased	3 (2.1)	5 (2.9)	8 (2.5)
Acute kidney injury	4 (2.8)	3 (1.7)	7 (2.2)
Lipase increased	3 (2.1)	4 (2.3)	7 (2.2)

Grade ≥2 irTEAEs in ≥5%	Cohort A1 (N=143) of patients, n (%)	Cohort F (N=173)	Cohorts A1 + F (N=316)
Diarrhea	12 (8.4)	11 (6.4)	23 (7.3)
Hypothyroidism	11 (7.7)	9 (5.2)	20 (6.3)
ALT increased	4 (2.8)	12 (6.9)	16 (5.1)
Grade ≥3 irTEAEs in ≥1%	of patients, n (%)		
ALT increased	3 (2.1)	5 (2.9)	8 (2.5)
Lipase increased	3 (2.1)	4 (2.3)	7 (2.2)
AST increased	1 (0.7)	4 (2.3)	5 (1.6)
Diarrhea	3 (2.1)	2 (1.2)	5 (1.6)
Hyperglycemia	1 (0.7)	3 (1.7)	4 (1.3)

<sup>&</sup>lt;sup>a</sup>1 hepatic ischemia and 1 suicide.

ALT, alanine aminotransferase; AST, aspartate aminotransferase; ir, immune-related; SAE, serious adverse event; TEAE, treatment-emergent adverse event; TRAE, treatment-related adverse event.



# Safety and efficacy of anti-PD-1 antibody dostarlimab in patients (pts) with mismatch repair-deficient (dMMR) solid cancers: Results from GARNET study

Thierry André<sup>1</sup>, Dominique Berton<sup>2</sup>, Giuseppe Curigliano<sup>3</sup>, Susan L. Ellard<sup>4</sup>, Jose Manuel Trigo Perez<sup>5</sup>, Hendrik-Tobias Arkenau<sup>6</sup>, Cyril Abdeddaim<sup>7</sup>, Victor Moreno<sup>8</sup>, Wei Guo<sup>9</sup>, Ellie Im<sup>9</sup>, Naureen Starling<sup>10</sup>

<sup>1</sup>Sorbonne University and Saint-Antoine Hospital, Paris, France; <sup>2</sup>GINECO & Institut de Cancerologie de l'Ouest, Centre René Gauducheau, Saint-Herblain, France; <sup>3</sup>Division of Early Drug Development for Innovative Therapies, IEO, European Institute of Oncology IRCCS, and University of Milano, Milan, Italy; <sup>4</sup>BC Cancer-Kelowna, British Columbia, Canada; <sup>5</sup>Medical Oncology Department, Hospital Ramón y Cajal, Madrid, Spain; <sup>6</sup>Sarah Cannon Research Institute UK Limited, London, UK; <sup>7</sup>Centre de Lutte Contre le Cancer-Centre Oscar Lambret, Lille, France; <sup>8</sup>START Madrid-FJD, Fundación Jiménez Diaz Hospital, Madrid, Spain; <sup>9</sup>GlaxoSmithKline, Waltham, MA, USA; <sup>10</sup> Royal Marsden Hospital NHS Foundation Trust, London and Surrey, UK

Email: thierry.andre@aphp.fr

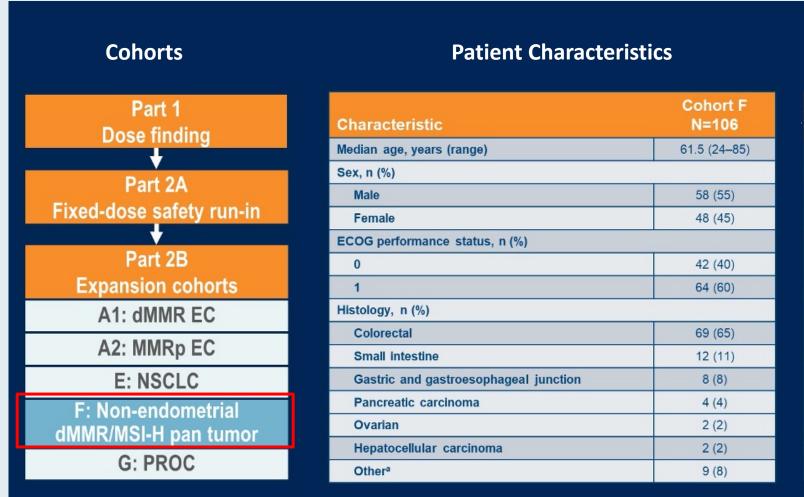
Abstract 9

PRESENTED AT:

Gastrointestinal Cancers Symposium



#### **GARNET: Methods, Patient Characteristics and Antitumor Activity**



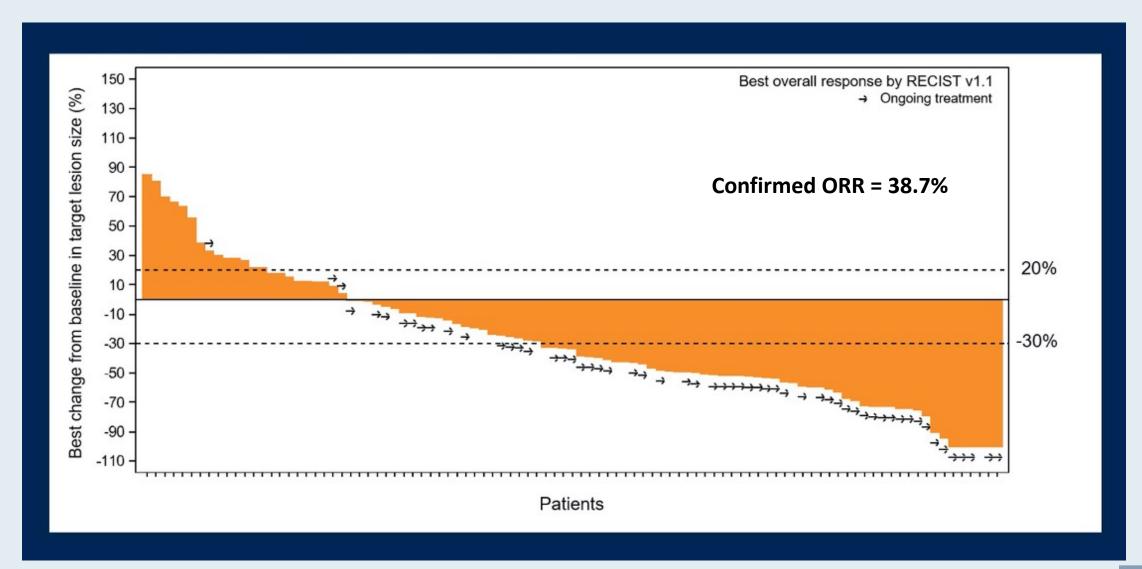
#### Response

		Confirmed ORI	R (RECIST v1.1)
Tumor type	Patients, N	n	95% Cl <sup>a</sup>
Overall	106	41 (38.7%)	(29.4%-48.6%)
CRC	69	25 (36.2%)	(25.0%-48.7%)
Non-CRC	37	16 (43.2%)	(27.1%-60.5%)
Small intestinal cancer	12	4 (33.3%)	(9.9%–65.1%)
Gastric and gastroesophageal junction	8	3 (37.5%)	(8.5%–75.5%)
Pancreatic carcinoma	4	SD, 3 PD	
Ovarian cancer	2	PR, SD	
Hepatocellular carcinoma	2	PR, PD	
Biliary neoplasm	1	CR	
Breast cancer	1	CR	
Gallbladder	1	CR	
Adrenal cortical	1	PR	
Genital neoplasm malignant female	1	PR	
Pleural	1	PR	
Unknown origin	1	PR	
Renal cell carcinoma	1	SD	
Esophageal cancer	1	PD	

dMMR = mismatch repair-deficient; EC = endometrial cancer; MMRp = mismatch mutation repair-proficient; NSCLC = non-small cell lung cancer; PROC = platinum-resistant ovarian cancer



#### **GARNET Cohort F: Best Volume Change in Target Lesions**





#### **GARNET Cohort F: Adverse Events**

Preferred term, n (%)	Cohort F (N=144 <sup>a</sup> )	Preferred term, n (%)	Cohort F (N=144ª)
Any grade TRAEs occurring in ≥5% of pts		Grade ≥3 TRAEs occurring	in ≥1% of pts
Asthenia	19 (13)	Lipase increased <sup>b</sup>	2 (1)
Diarrhea	18 (13)	Hyperlipasemia <sup>c</sup>	2 (1)
Pruritis	18 (13)	Grade ≥3 irTRAEs	
Arthralgia	13 (9)	Lipase increased	2 (1)
Fatigue	13 (9)	Adrenal insufficiency	1 (<1)
Hypothyroidism	12 (8)	ALT increased	1 (<1)
Rash	12 (8)	AST increased	1 (<1)
AST increased	11 (8)	Diarrhea	1 (<1)
ALT increased	9 (6)	Hyperthyroidism	1 (<1)
Nausea	8 (6)	Rash	1 (<1)







### 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)

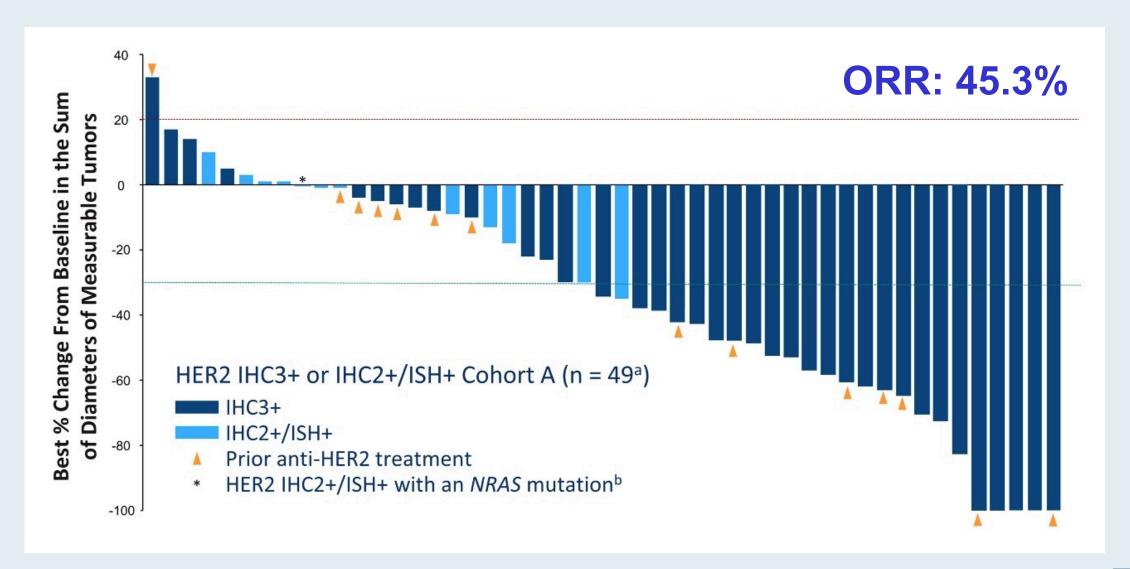
**Takayuki Yoshino**; National Cancer Center Hospital East, Kashiwa, Japan June 7, 2021

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

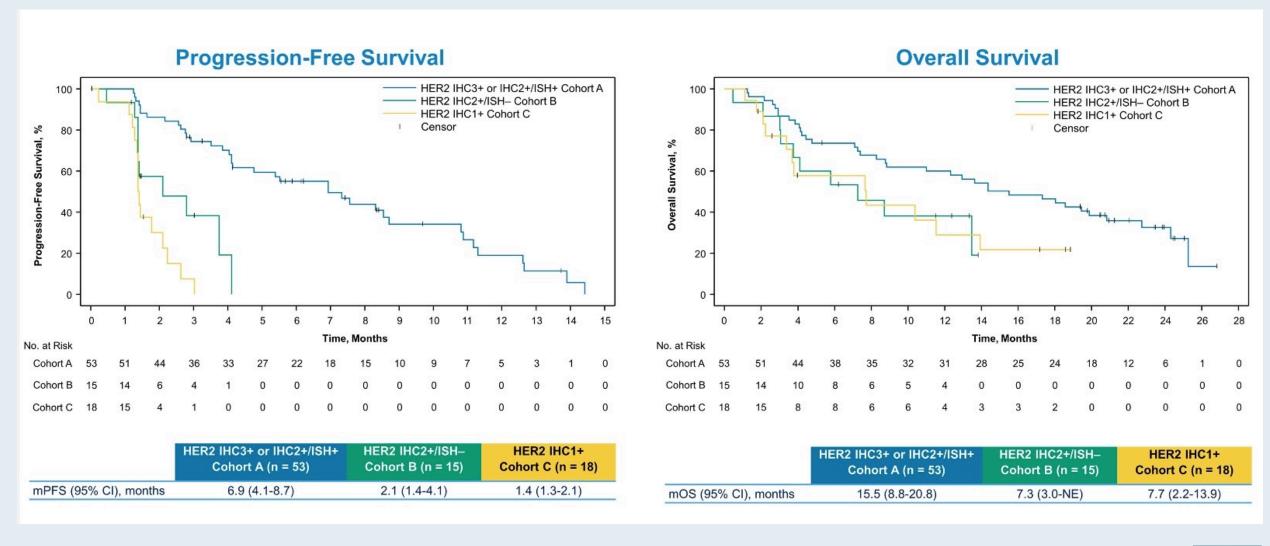


#### **DESTINY-CRC01: Best Change in Tumor Size in Cohort A**





#### **DESTINY-CRC01: Progression-Free and Overall Survival**





#### **DESTINY-CRC01** AEs of Special Interest: Interstitial Lung Disease

n (%)
0
4 (4.7)
1 (1.2)
0
3 (3.5)a
8 (9.3) <sup>b,c</sup>

#### 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.



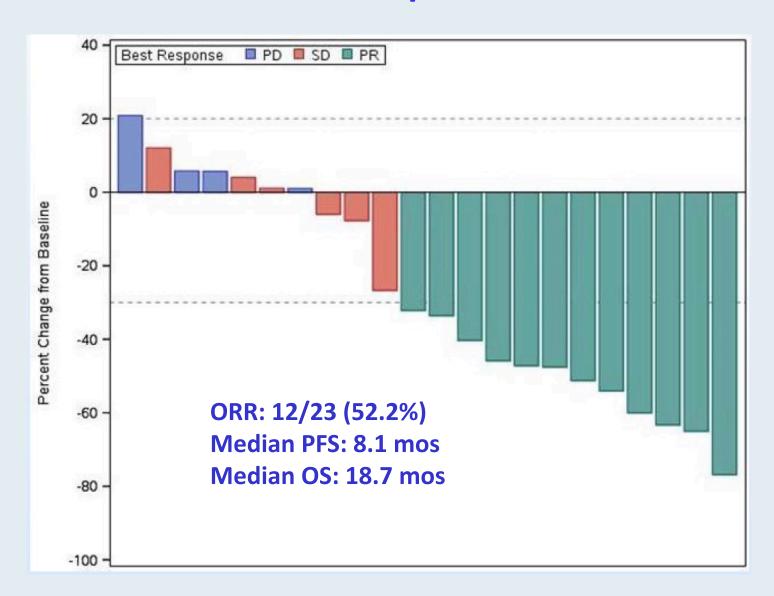
## Trastuzumab and Tucatinib for the Treatment of HER2 Amplified Metastatic Colorectal Cancer: Initial Results from the MOUNTAINEER Trial

Strickler JH et al.

ESMO 2019; Abstract 527PD.



#### **MOUNTAINEER:** Response and Survival





#### **Hepatocellular Carcinoma**



#### **Articles**



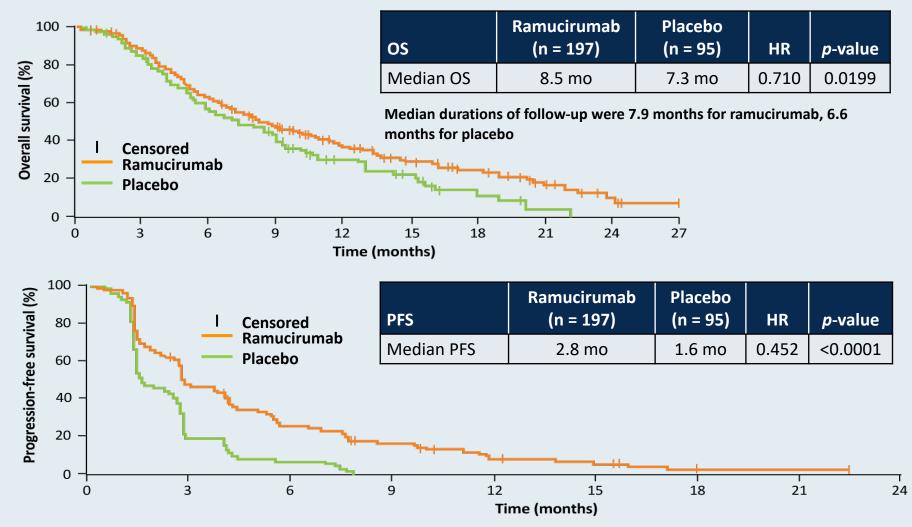
## Ramucirumab after sorafenib in patients with advanced hepatocellular carcinoma and increased α-fetoprotein concentrations (REACH-2): a randomised, double-blind, placebo-controlled, phase 3 trial

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.



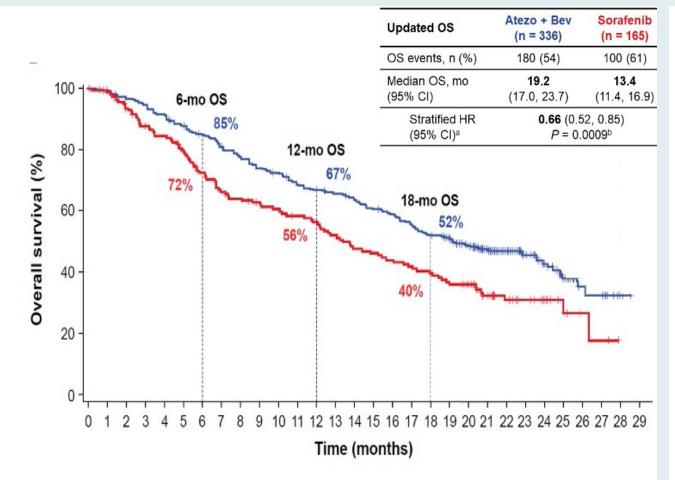
IMbrave150: Updated Overall Survival (OS) Data from a Global, Randomized, Open-Label Phase III Study of Atezolizumab (atezo) + Bevacizumab (bev) versus Sorafenib (sor) in Patients (pts) with Unresectable Hepatocellular Carcinoma (HCC)

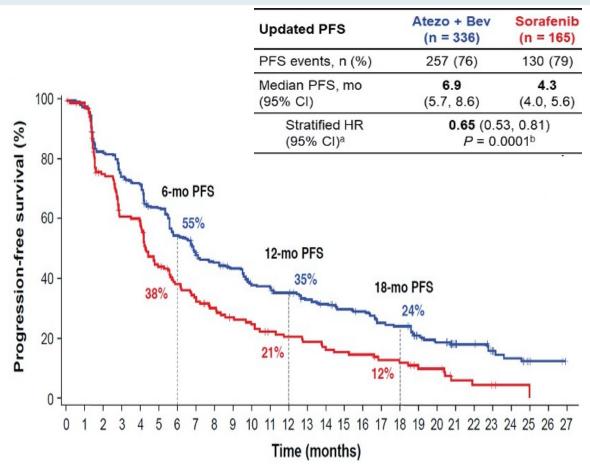
Finn RS et al.

Gastrointestinal Cancers Symposium 2021; Abstract 267.



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







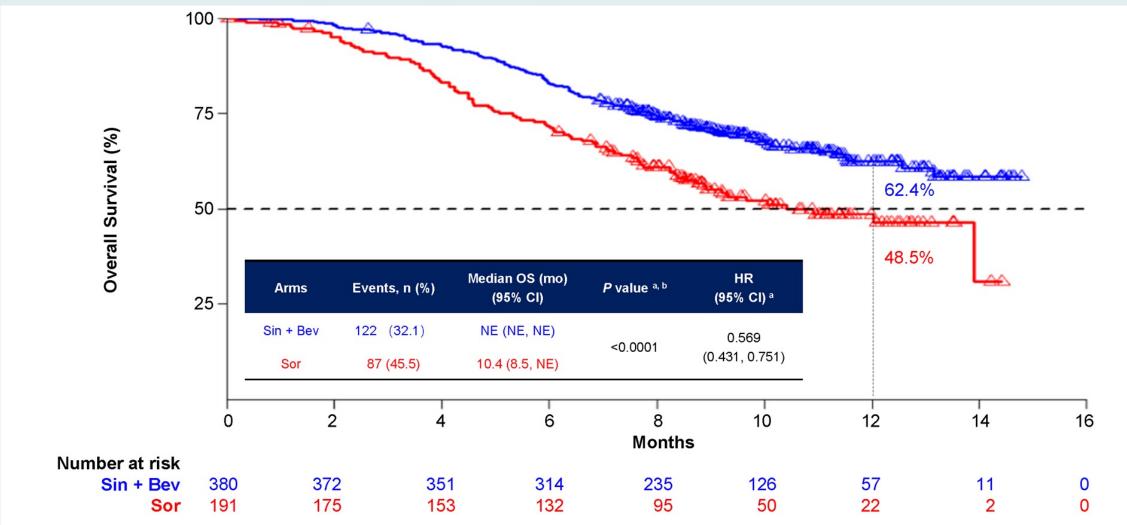
#### Sintilimab plus Bevacizumab Biosimilar vs Sorafenib as First-Line Treatment for Advanced Hepatocellular Carcinoma (ORIENT-32)

Ren Z et al.

ESMO Asia 2020; Abstract LBA2.



#### **ORIENT-32 Coprimary Endpoint: Overall Survival**

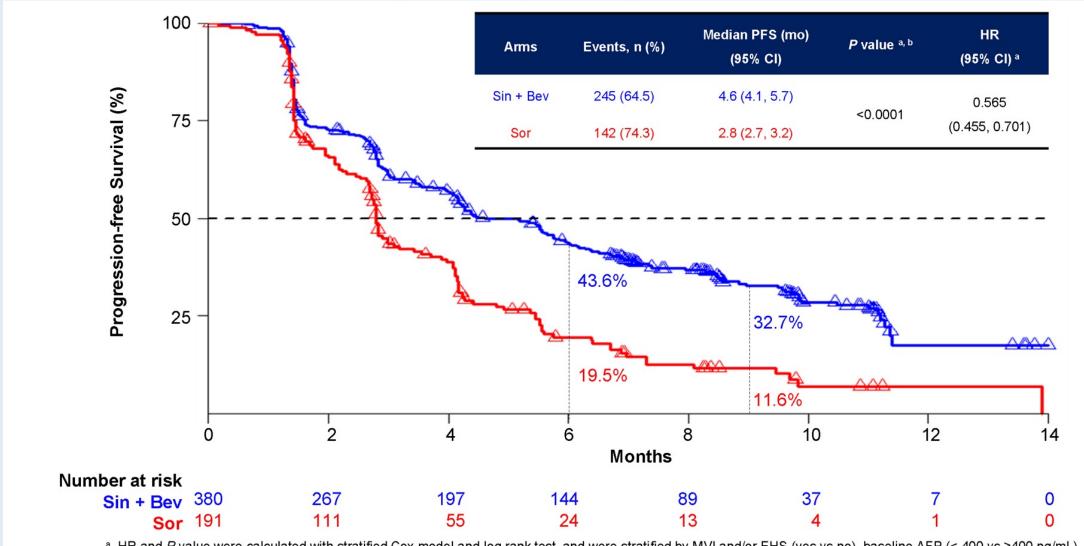


NE, not evaluable; a, HR and P value were calculated with stratified Cox model and log rank test, and were stratified by MVI and/or EHS (yes vs no), baseline AFP (< 400 vs  $\geq$ 400 ng/mL) and ECOG PS (0 vs 1); b, the two-sided P value boundary based on 209 events is 0.0035. Data cutoff, 15 Aug 2020;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

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



# Meet The Professor Optimizing the Selection and Sequencing of Therapy for Patients with Triple-Negative Breast Cancer

Tuesday, September 28, 2021 5:00 PM - 6:00 PM ET

Faculty
Professor Peter Schmid, MD, PhD

**Moderator Neil Love, MD** 



#### Thank you for joining us!

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

