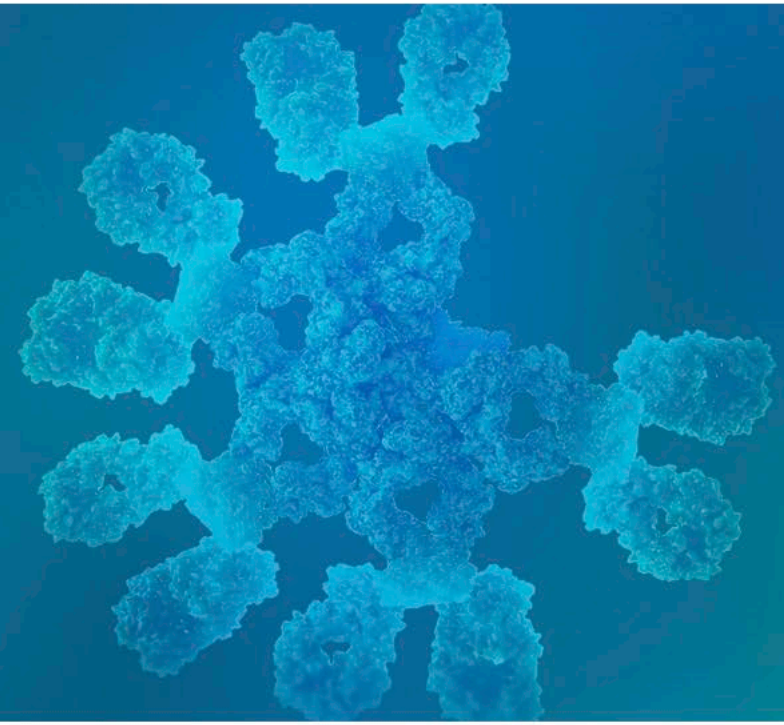
REIMAGINING

antibody medicines

IGM-8444 Clinical Update

June 2, 2023

Welcome and Introductions



Fred Schwarzer

Chief Executive Officer
IGM Biosciences, Inc.

Speakers at today's event

Welcome and Introductions	**Fred Schwarzer** Chief Executive Officer IGM Biosciences, Inc.

Targeting DR5 with IGM-8444	**Chris Takimoto, MD, PhD** Chief Medical Officer IGM Biosciences, Inc.

IGM-8444 Phase 1 Program Data Update	**Susanna Ulahannan, MD, MMEd** Assistant Professor, Section of Hematology/Oncology Oklahoma University Health Stephenson Cancer Center

Clinical Landscape and Development Strategy	**Eric Humke, MD, PhD** Vice President, Clinical Development IGM Biosciences, Inc.

Forward-looking statements

This presentation contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements reflect the current views of the management of IGM Biosciences, Inc. (the “Company,” “we” or “our”) based on information available to us as of the date hereof. All statements other than statements of historical fact could be deemed forward-looking, including but not limited to statements regarding our future financial performance; plans, timelines, and expectations related to our preclinical studies, clinical trials, discovery programs and collaboration activities; business plans, strategies, strategic priorities, catalysts and objectives; our ability to obtain regulatory approval; the potential therapeutic benefits and economic value of our product candidates; potential growth opportunities; and our competitive position, industry environment and potential market opportunities. In some cases, you can identify forward-looking statements by terms such as “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potentially” “predict,” “should,” “target,” “will” or the negative of these terms or other similar expressions. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including, among other things: plans, timelines, and expectations related to our preclinical studies, clinical trials and our discovery programs including regarding the availability of data, planned regulatory filings, the initiation and progress of current and future clinical trials; our early stages of clinical drug development; our ability to achieve clinical goals; risks related to the use of engineered IgM antibodies; our ability to adequately demonstrate sufficient safety and efficacy and reduced toxicity, of our product candidates, either alone or in combination with other compounds; the potential for the results of clinical trials to differ from preclinical, preliminary, initial or expected results; the risk of significant adverse events, toxicities or other undesirable side effects; the timing or likelihood of regulatory filings and approvals; our ability and the potential to successfully manufacture and supply our product candidates for clinical trials; our ability to accurately forecast future timelines; the scope of our intellectual property protections we are able to establish and maintain; our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately; developments relating to our competitors and our industry, including competing product candidates and therapies; any potential delays or disruptions resulting from catastrophic events, including epidemics or other outbreaks of infectious diseases; general economic and market conditions including inflation; and other risks described in our public filings with the Securities and Exchange Commission, including our most recent Quarterly Report on Form 10-Q filed on May 12, 2023. New risk factors emerge from time to time, and it is not possible for our management to predict all risk factors, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in, or implied by, any forward-looking statements. You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Additionally, statements that “we believe” and similar statements reflect our management’s beliefs and opinions on the relevant subject. These statements are based on information available to us as of the date hereof, and although we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted a thorough inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain, and readers are cautioned not to unduly rely upon these statements. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. Except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason.

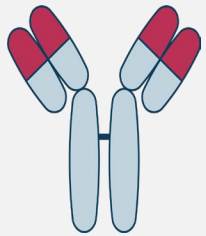
This presentation includes information on drug candidates that are under clinical investigation, and which have not yet been approved for marketing by the U.S. Food and Drug Administration. The drug candidates are currently limited by federal law to investigational use, and no representation is made as to their safety or effectiveness for the purposes for which they are being investigated.

IgM antibodies have unique structural attributes compared to IgG antibodies

Additional binding sites lead to:

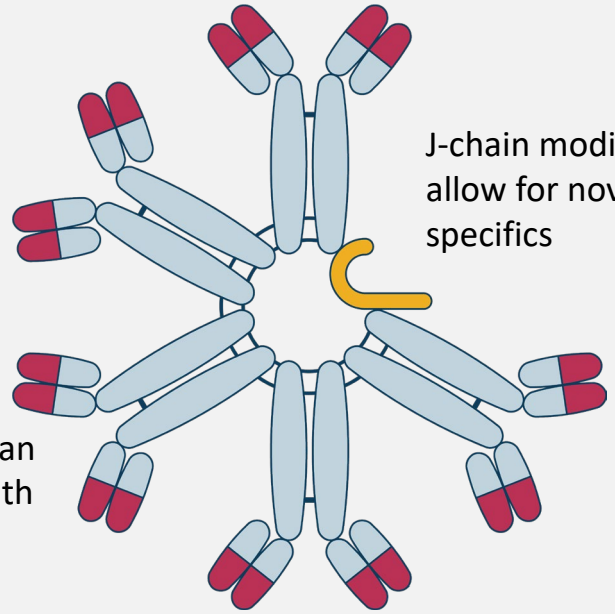
- Superior total binding power (avidity)
- Increased cross-linking of receptors for greater agonism

IgG



2 BINDING SITES

IgM



10 BINDING SITES

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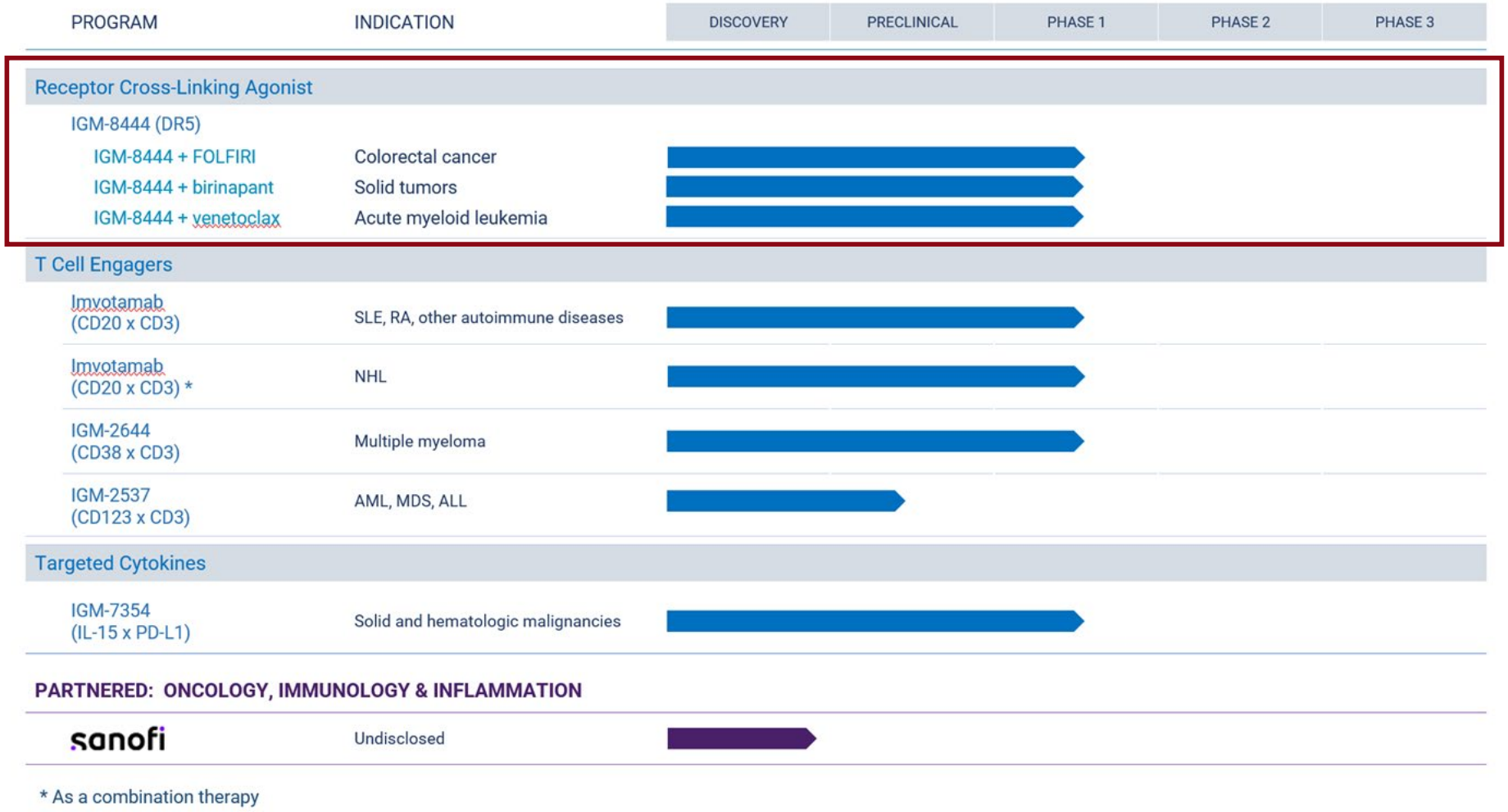
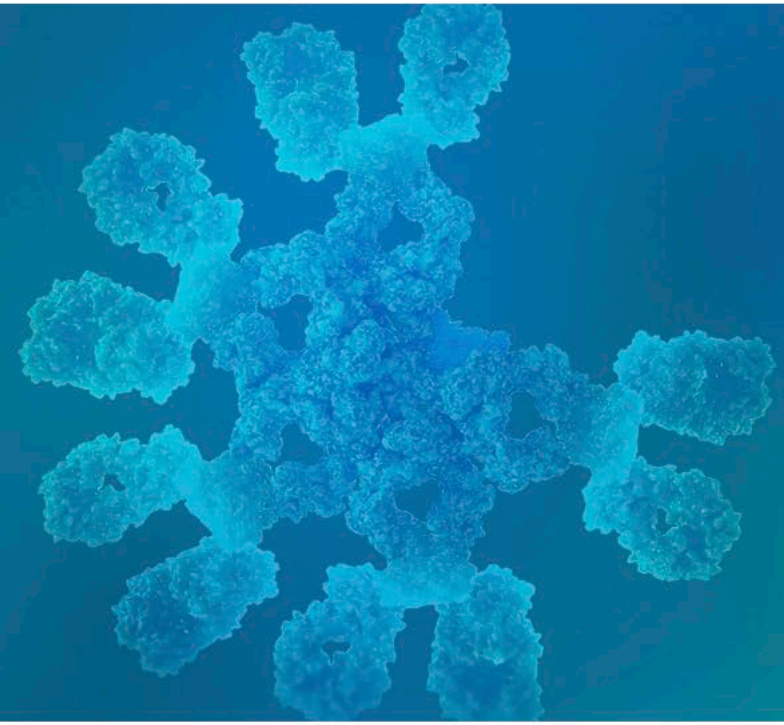
IGM pipeline: multiple mechanisms of action



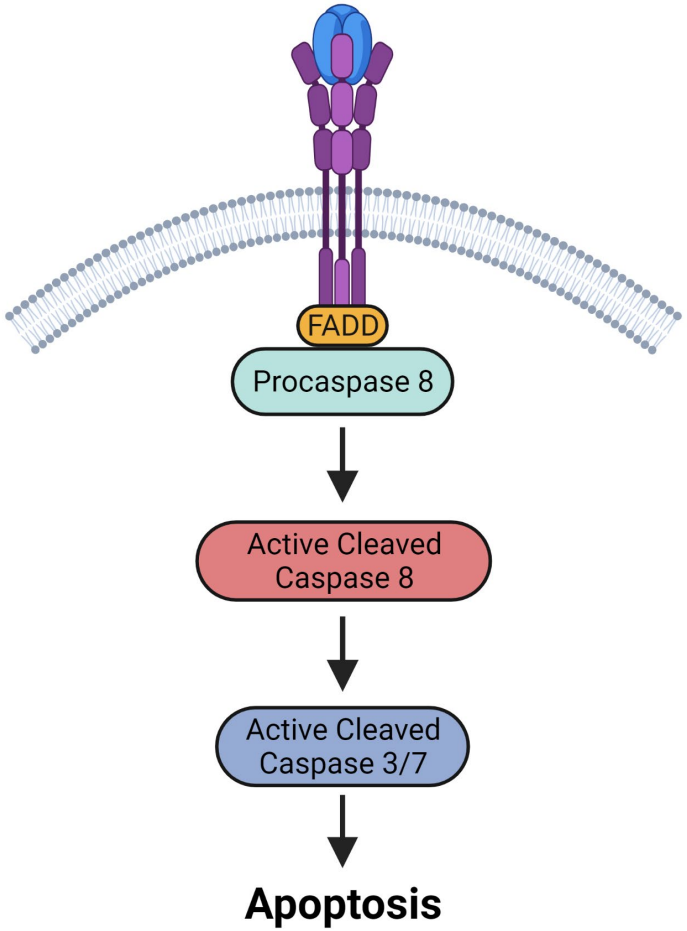
Focus for today

Targeting DR5 with IGM-8444

Chris Takimoto, MD, PhD
Chief Medical Officer
IGM Biosciences, Inc.

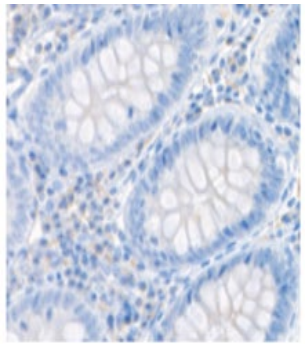


Death receptor 5 (DR5) is a driver of the extrinsic apoptotic pathway and is overexpressed in multiple tumor types

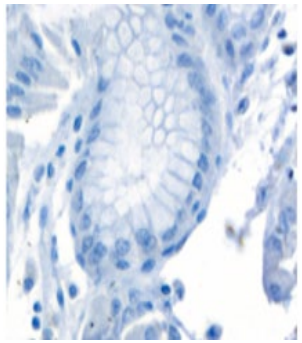


DR5 Stained Normal Tissues

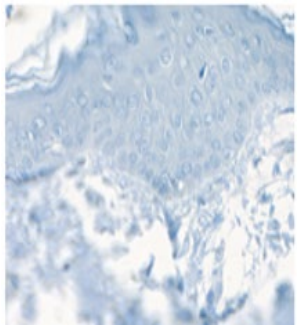
Colon



Stomach

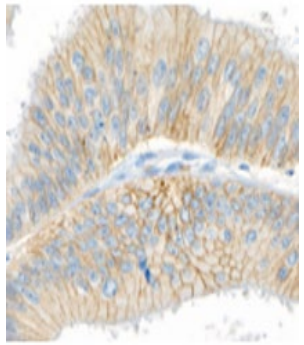


Skin

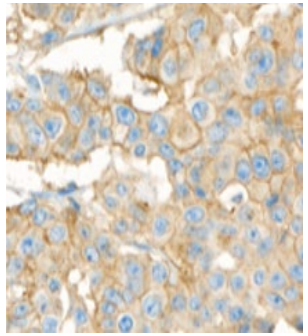


DR5 Stained Tumor Samples

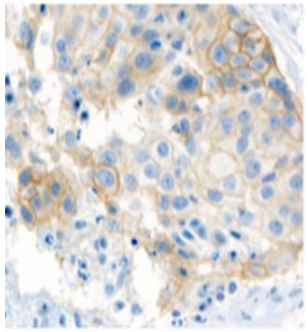
Colon Adenocarcinoma



Gastric Adenocarcinoma



Squamous cell carcinoma



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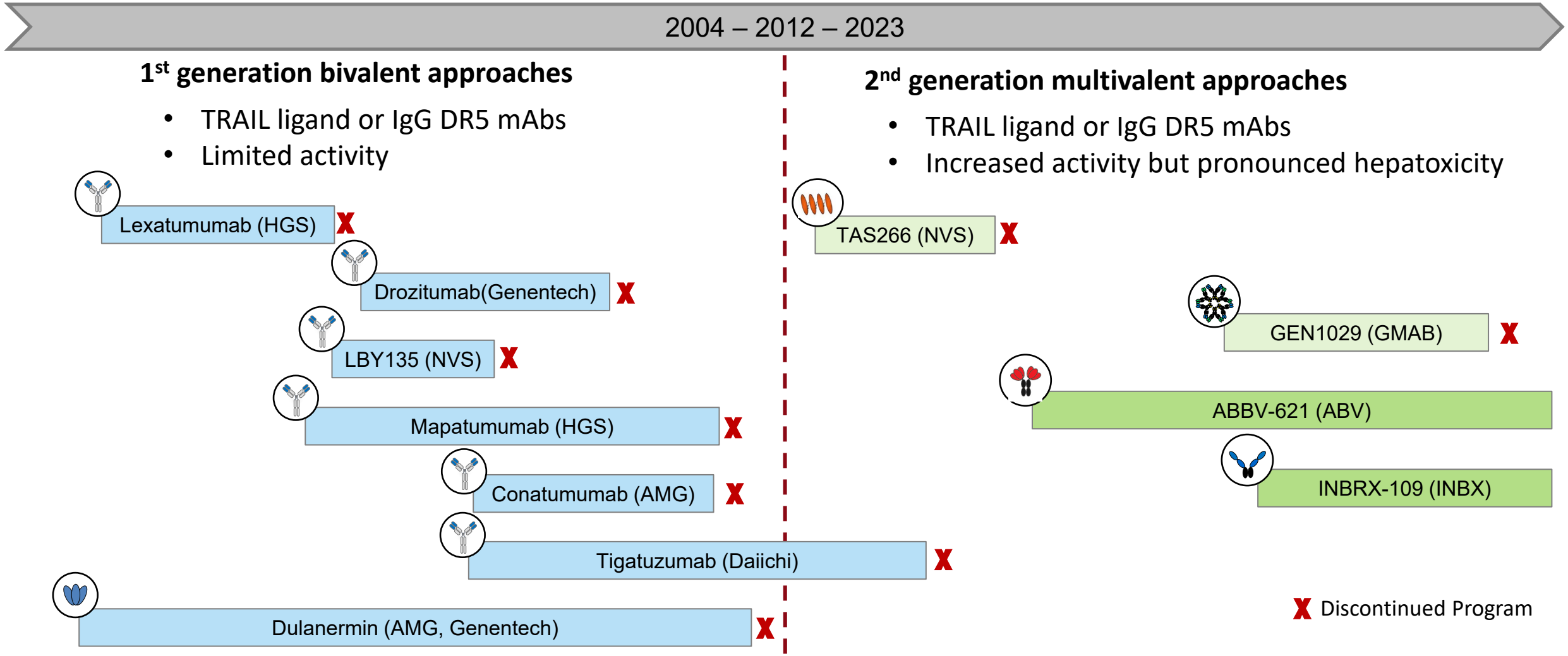
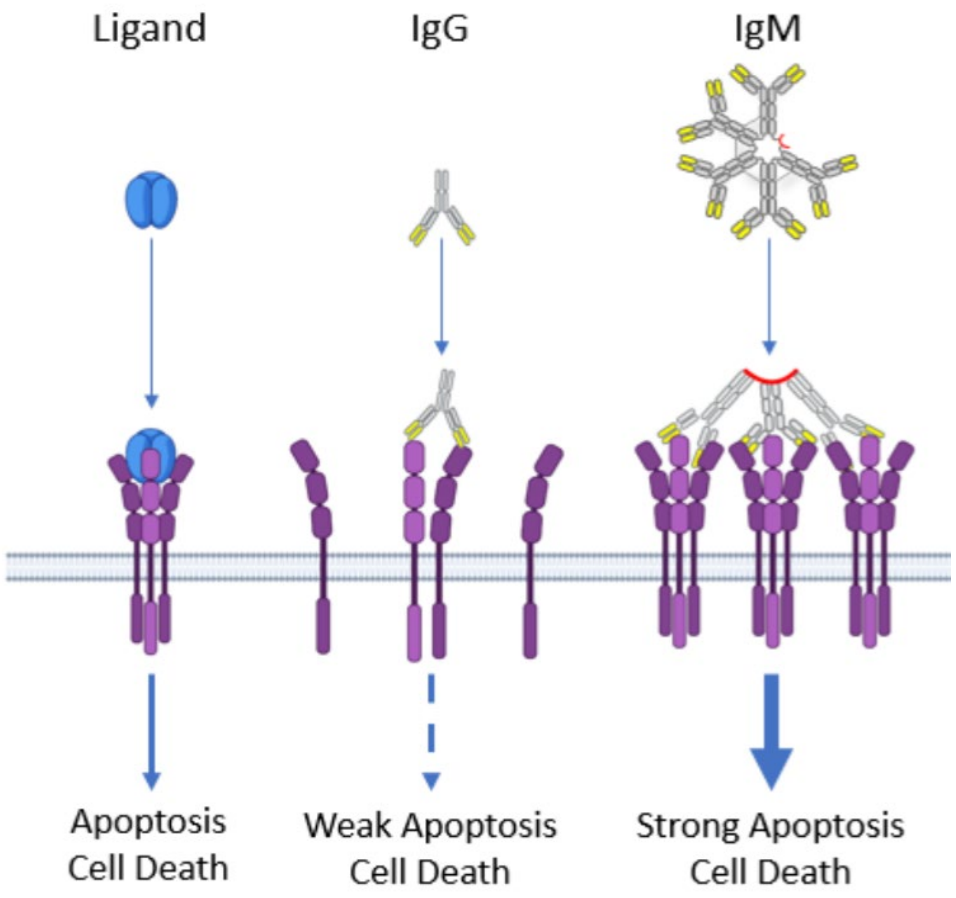
DR5 has been a therapeutic target for almost 20 years

Limited activity and hepatotoxicity have led to numerous failures

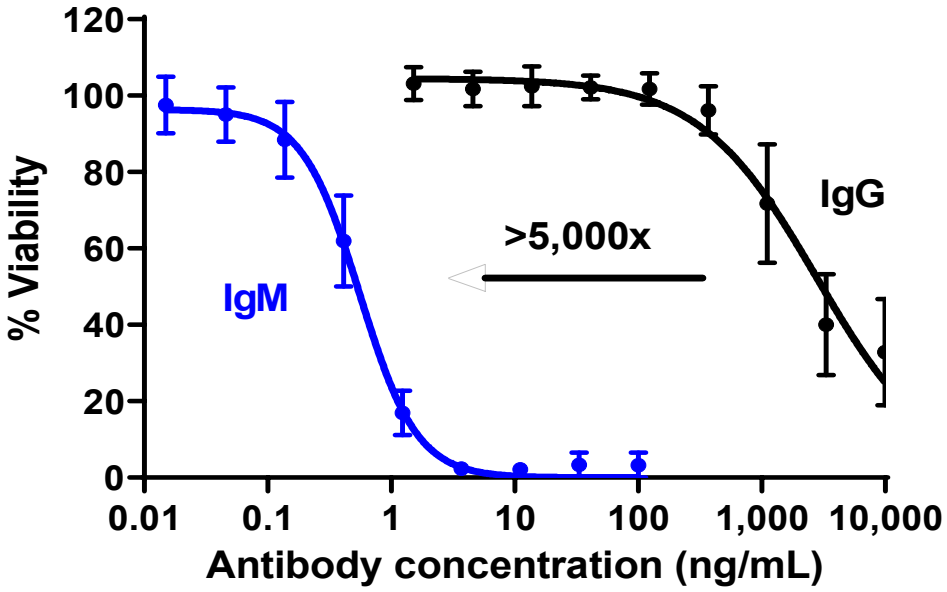


Source: Snajdauf et al., *Frontiers in Molecular Biosciences*, March 2021; Oncology Pipeline accessed May 2023

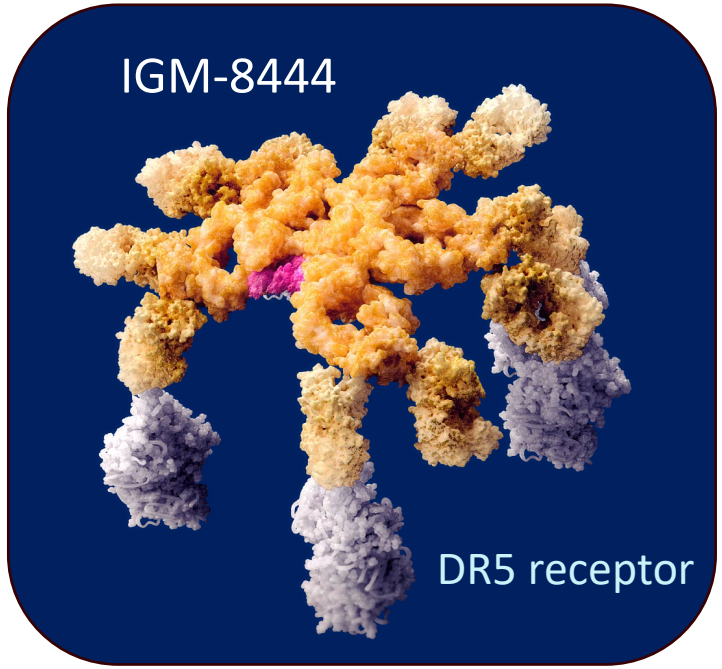
IgM antibodies can cross-link multiple DR5 receptors leading to increased apoptotic signaling and potency



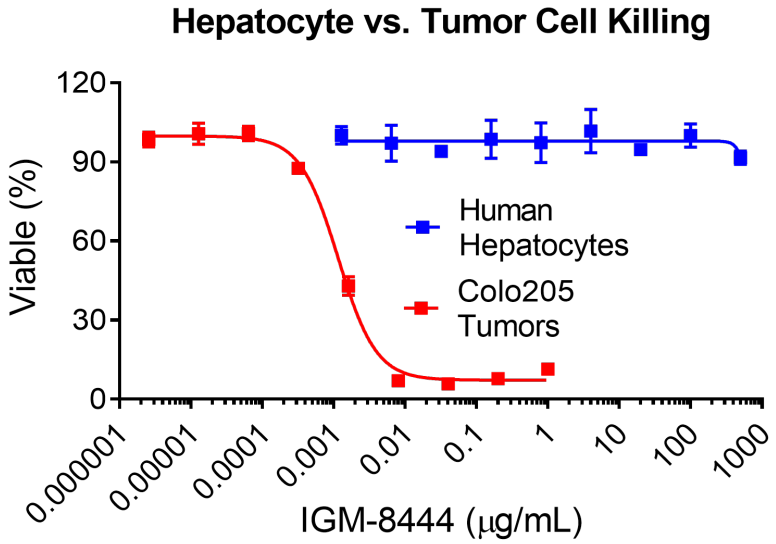
In vitro apoptosis comparing IgG and IgM DR5 antibodies using the same binding domain



IGM-8444: a multimeric DR5 agonist designed to optimize therapeutic index



Pentameric structure enables cross linking of DR5 receptors creating stronger apoptotic signal

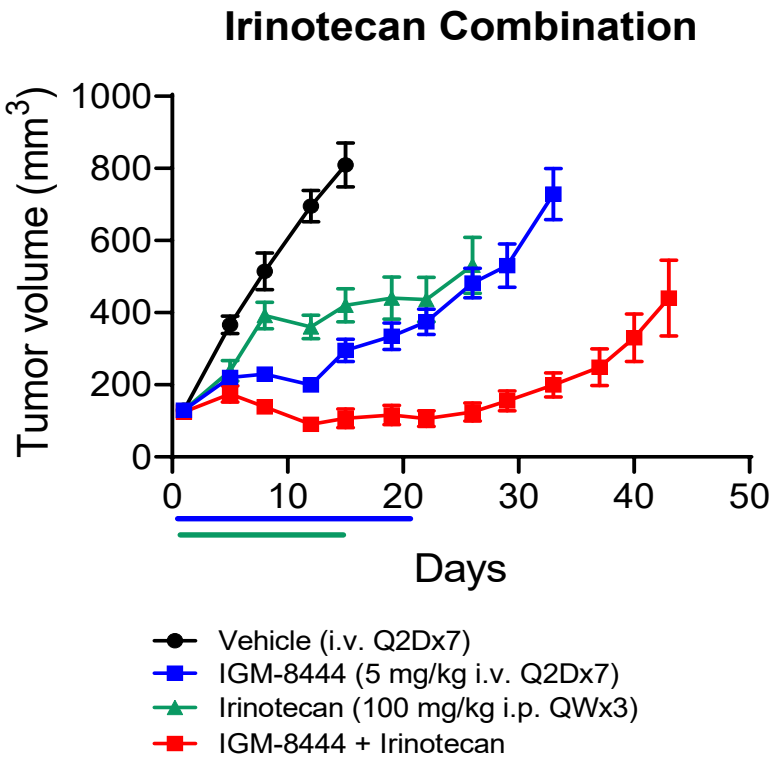


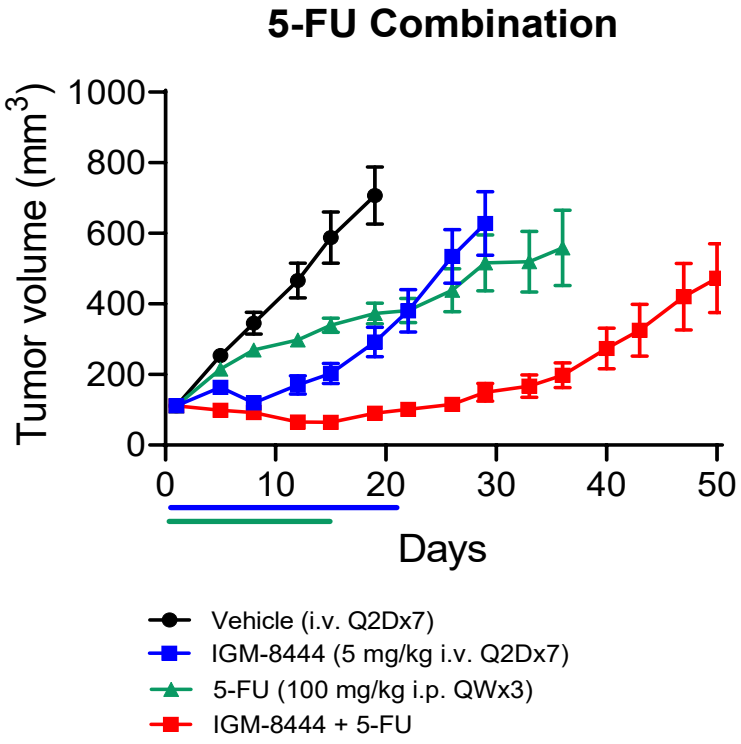
- Potent *in vitro* killing of tumor cells
- Preclinical assays showed no cytotoxicity to hepatocytes across dose range

Affinity, avidity, clustering, DR5 epitope, multimerizing kinetics and exposure all contribute to optimization

Synergistic activity observed in combination with irinotecan and 5-fluorouracil (5-FU) *in vivo*

Colorectal Cancer Model Colo205





- Synergistic activity in combination with a broad range of chemotherapeutic agents including irinotecan and 5-FU
- Chemotherapeutic agents can create cellular stress resulting in enhanced expression of DR5
- Chemotherapy upsets apoptotic balance pushing tumor cells to proapoptotic state

IGM-8444 Phase 1 Program
Data Update

Susanna Ulahannan, MD, MMEd
Assistant Professor, Section of Hematology/Oncology
Oklahoma University Health Stephenson Cancer Center

IGM-8444 anti-DR5 Phase 1a study overview
100+ patients treated to date

Single Agent Dose Escalation

IGM-8444

0.3 mg/kg to 10 mg/kg

- All-comer solid tumors 3+3 dose escalation
- DLT Window 28 days (Cycle 1)
- FPI September 2020

Combination Dose Escalation

IGM-8444 + FOLFIRI

0.3 mg/kg to 10 mg/kg

- Dose escalation of IGM-8444 + FOLFIRI began after DLT clearance of 2nd cohort single agent treatment
- Multiple tumor types allowed

Combination Expansion Cohorts

A: IGM-8444 3 mg/kg + FOLFIRI

B: IGM-8444 3 mg/kg + FOLFIRI + bevacizumab

- Colorectal cancer patients, any line
- Approximately 20 patients per expansion cohort
- Q2W dosing

NOTE: Additional cohorts evaluating IGM-8444 in combination with venetoclax and birinapant are ongoing

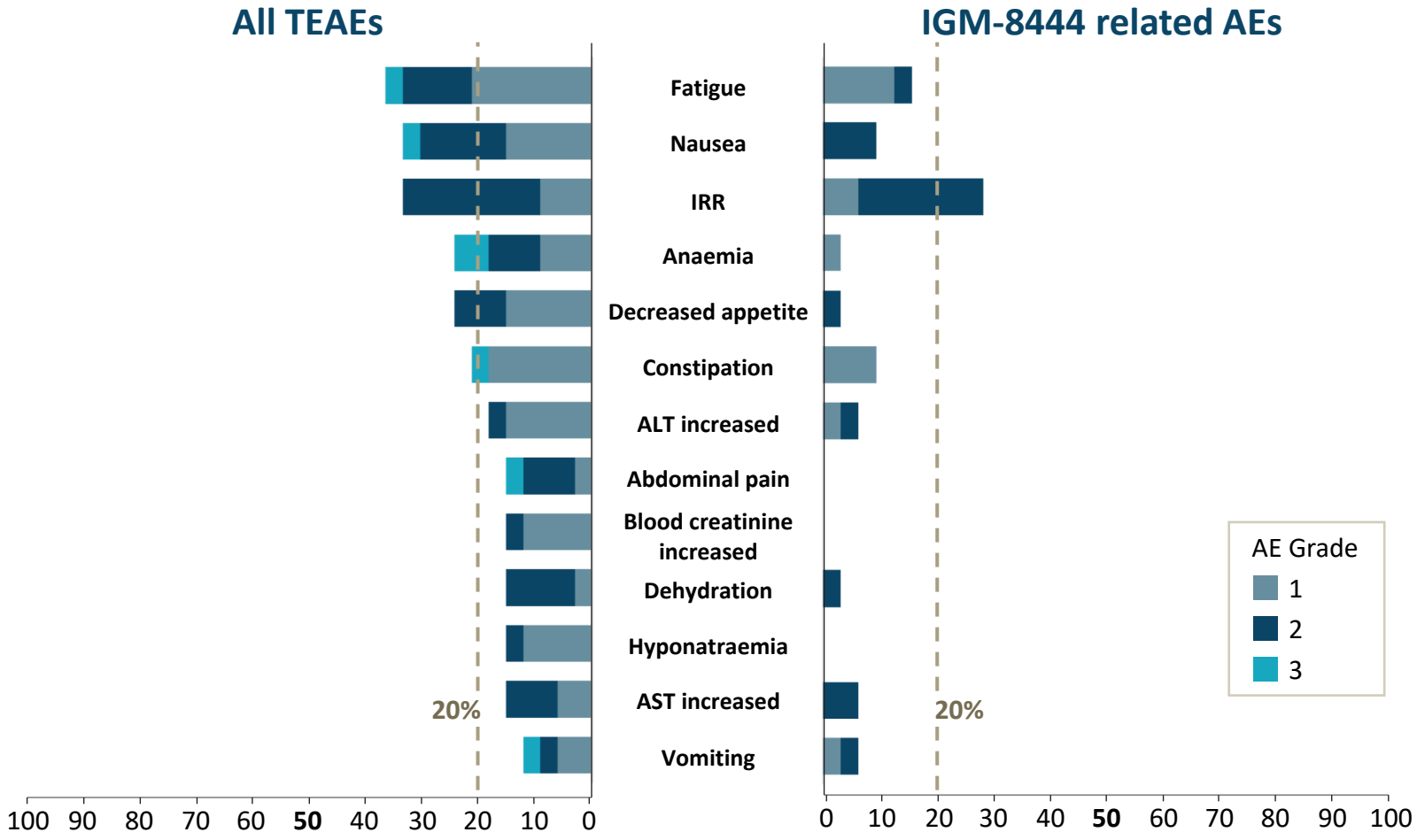
Phase 1a monotherapy dose escalation
Patient demographics and baseline characteristics

Characteristics	(N=33)
Median Age, years (range)	61 (37, 88)
Sex, n (%) Male/Female	19 (58%) / 14 (42%)
Race, n (%) White/Black/Asian/Other	28 (85%) / 1 (3%) / 2 (6%) / 2 (6%)
ECOG 0/1, n (%)	11 (33%) / 22 (67%)
Tumor types enrolled, n (%)	
Gastrointestinal (CRC, Gastric, Pancreatic, Appendiceal)	18 (54%)
Soft Tissue Sarcomas	9 (27%)
NSCLC	3 (9%)
Other	3 (9%)

Data cut-off: April 12, 2023

IGM-8444 monotherapy safety

Treatment emergent and related AEs >10% frequency



33 total patients treated with IGM-8444 monotherapy

DLTs: None

SAEs: Three patients, all **unrelated** to IGM-8444

Grade ≥3 AEs: Eight patients, all **unrelated** to IGM-8444

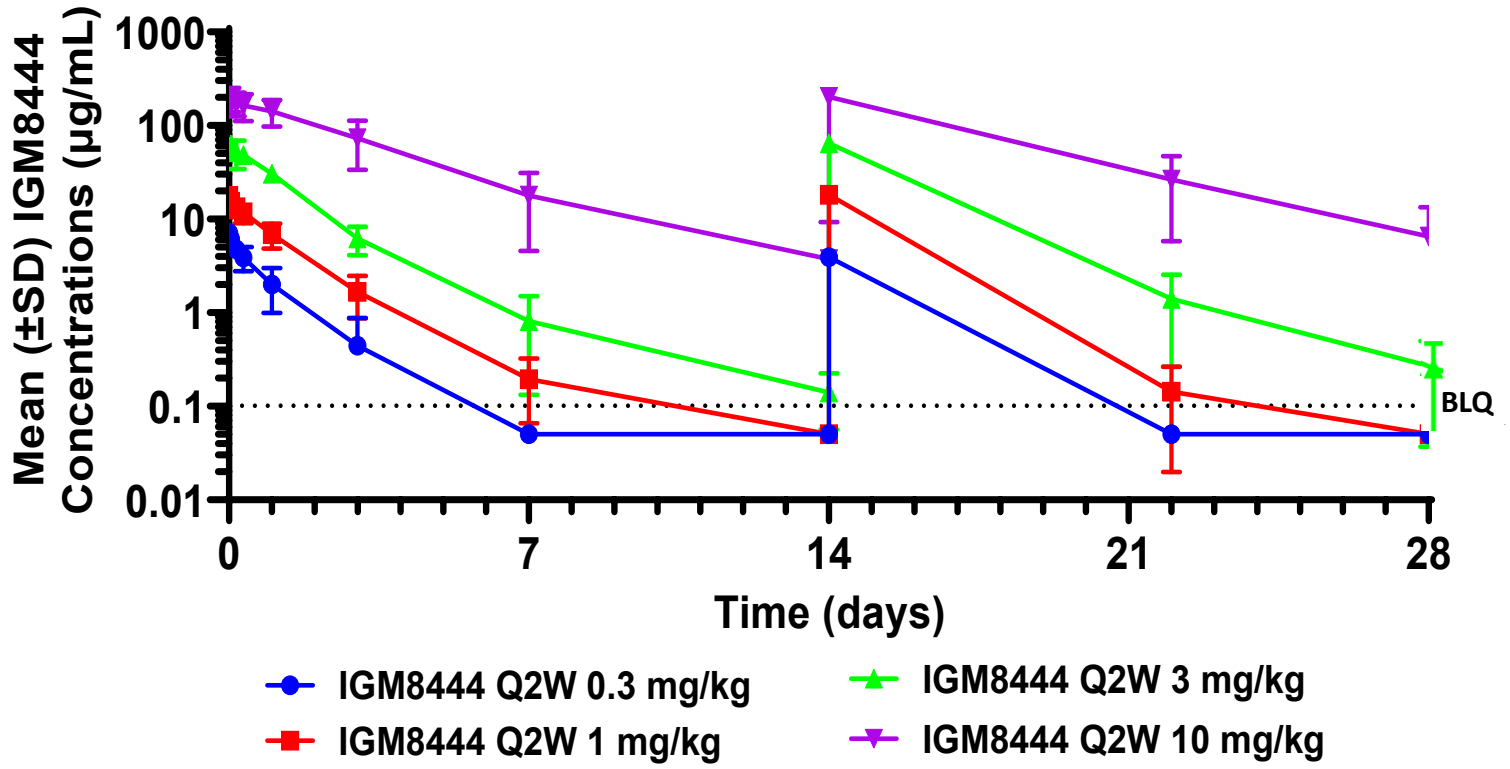
IRRs: Dose related and all low grade (Grade 1/Grade 2) and manageable with pre-medications and longer infusion times

Hepatoxicity: Low grade (Grade 1/ Grade 2) LFT elevations with no clinical sequelae

TEAEs-Treatment Emergent Adverse Events, LFT-liver function tests

Data cut-off: April 12, 2023

IGM-8444 exhibits sustained exposure over every 2-week dose interval at 3 mg/kg and 10 mg/kg



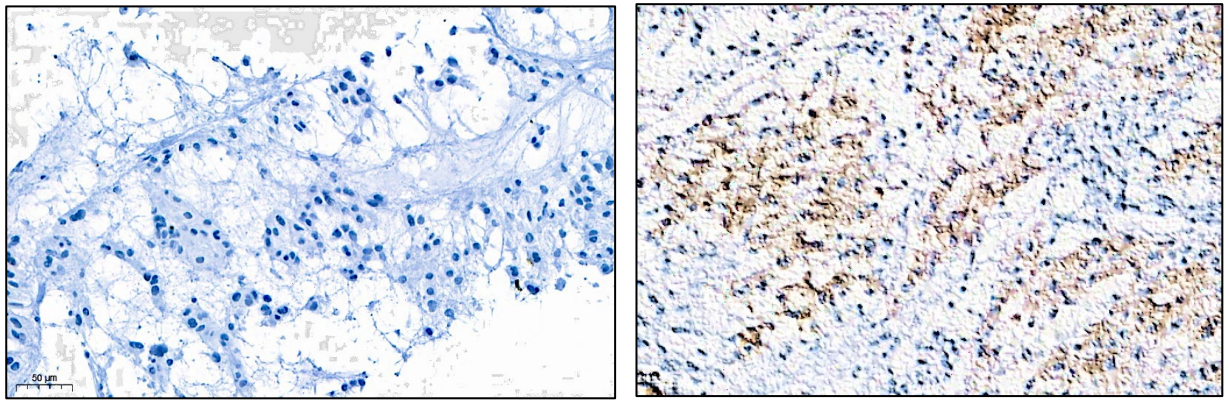
- Concentrations above projected EC_{90} during 2-week dose interval for most patients ≥3 mg/kg doses
- No impact of combination agents on IGM-8444 PK profile
- Estimated $t_{1/2}$ at 3 mg/kg & 10 mg/kg is >2 days

BLQ-below the limit of quantification

Elevation of cleaved caspase-3 in solid tumors indicating DR5 pathway activation following IGM-8444 treatment

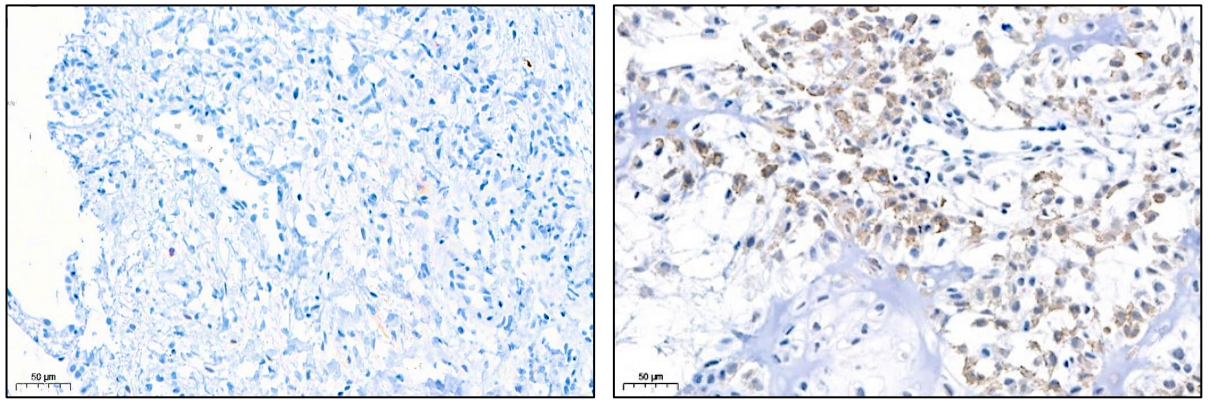
Cleaved caspase-3 IHC staining of patient tumor biopsies prior to and during treatment

Pre-Treatment **On-Treatment**



Male, 65 yrs, Chordoma
3 mg/kg monotherapy

Pre-Treatment **On-Treatment**

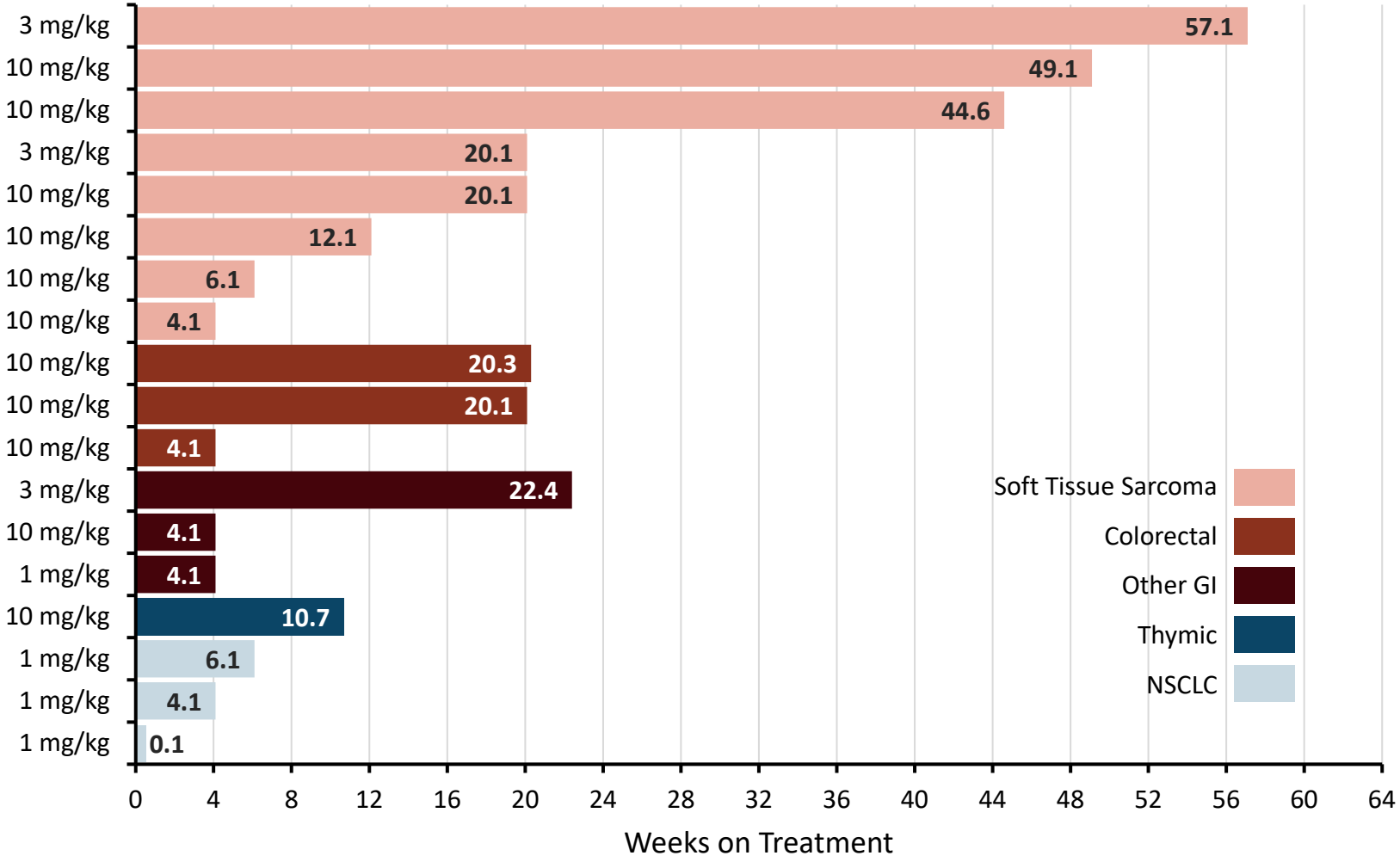


Female, 69 yrs, Chondrosarcoma
10 mg/kg monotherapy

Cleaved caspase-3 (brown) via IHC

Single agent IGM-8444 duration of treatment

All patients with 1 mg/kg to 10 mg/kg Q2W dosing with at least one dose



- Diverse Phase 1 solid tumor patient population
- Prolonged progression-free survival observed
- Long duration of treatment seen without cumulative toxicity

Data cut-off: April 12, 2023

IGM-8444 anti-DR5 Phase 1a study overview
100+ patients treated to date

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NOTE: Additional cohorts evaluating IGM-8444 in combination with venetoclax and birinapant are ongoing

IGM-8444 combination with FOLFIRI +/– bevacizumab in mCRC
Demographics and baseline characteristics

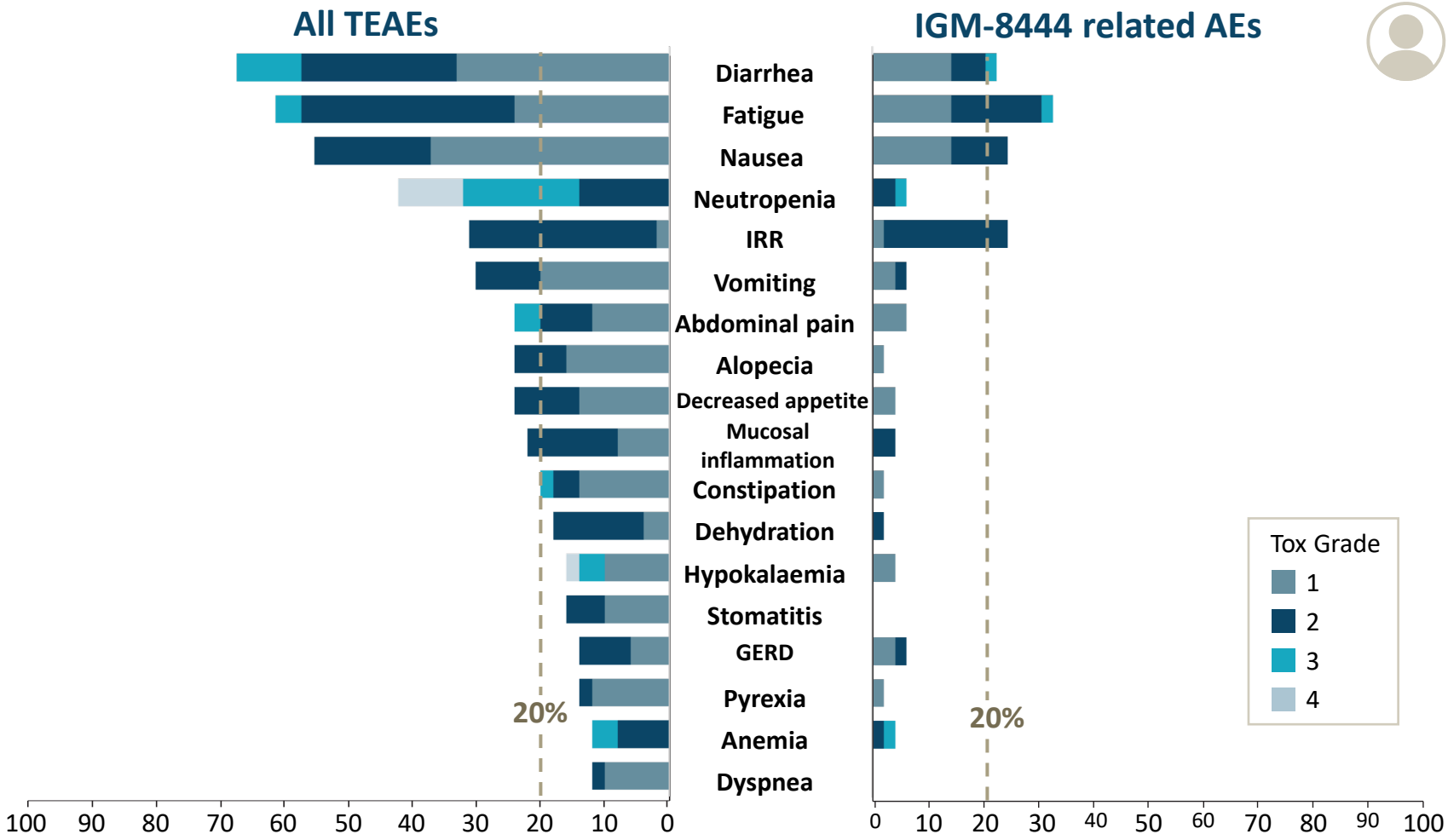
Characteristics	(N=51)
Median Age, years (range)	54 (29, 78)
Sex, n (%) Male/Female	26 (51%) / 25 (49%)
ECOG, n (%) 0/1/Missing	26 (51%) / 24 (47%) / 1 (2%)
Side of Tumor, n (%) Right/Left/Both/Unknown or missing	6 (12%) / 18 (35%) / 9 (18%) / 18 (35%)
Liver metastases present, n (%)	30 (59%)
RAS Mutant, n (%) KRAS/NRAS/Wild Type/Other/Unknown or missing	22 (43%) / 1 (2%) / 12 (24%) / 3 (6%) / 13 (25%)
MSI, n (%) High/Stable/Unknown or missing	5 (10%) / 32 (63%) / 14 (27%)
Median **prior** lines of anticancer therapy for systemic disease	2
Prior Irinotecan treatment, n (%)	36 (71%)

Data cut-off: April 12, 2023

IGM-8444 with FOLFIRI +/- bevacizumab combination cohorts

Clinical safety profile

Treatment-emergent adverse events >10% of safety population



51 CRC patients treated with IGM-8444 + FOLFIRI +/- bevacizumab

DLTs: None

SAEs: 14 patients—all unrelated

Grade 3+ AEs: No events considered related only to IGM-8444

IRRs: Low grade (Grade 1/Grade 2) and manageable with pre-medications and longer infusion

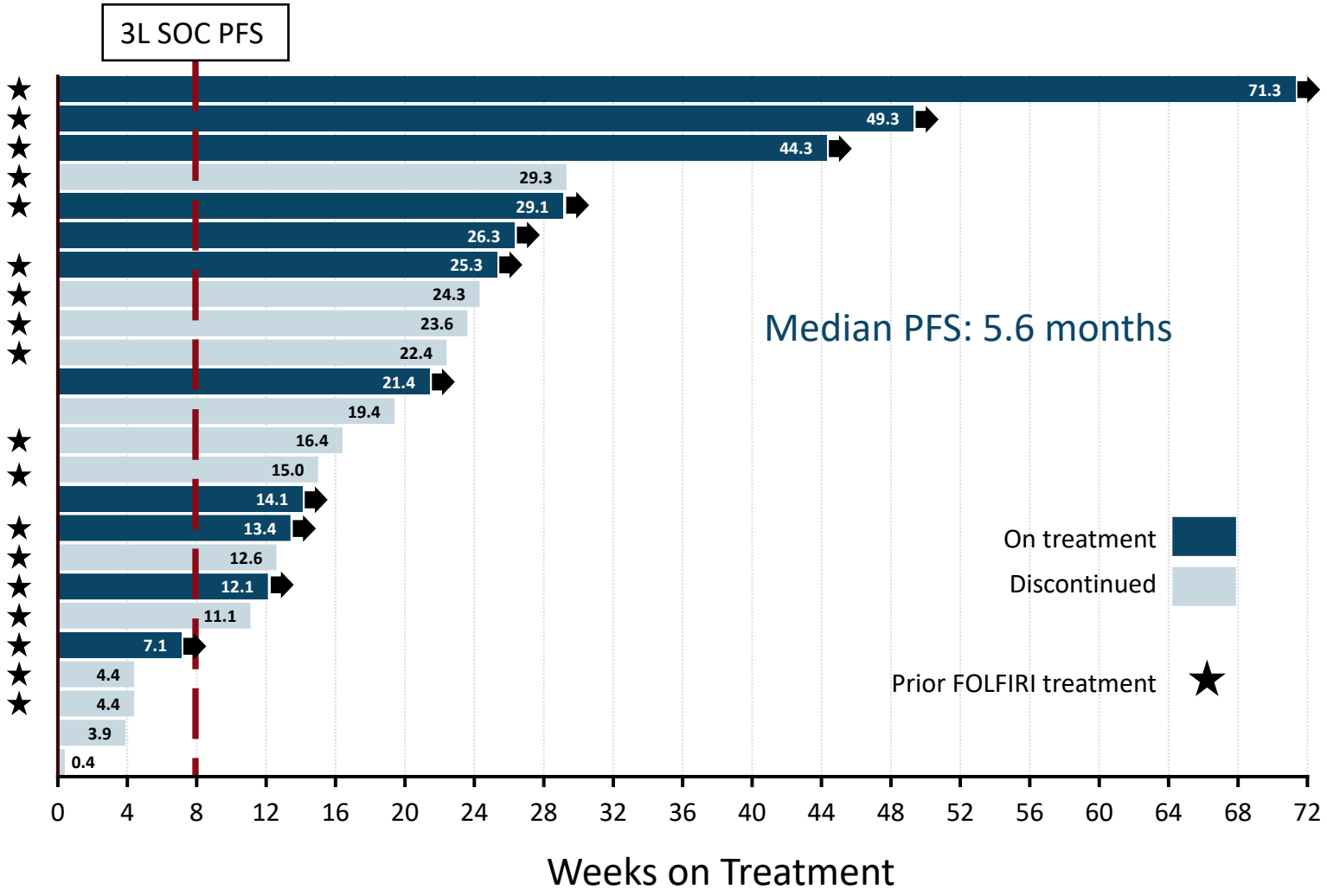
Hepatoxicity: No related Grade 3+ events. All low grade (<10% total Grade 1/ Grade 2) LFT or bilirubin elevations with no clinical sequelae

TEAEs-Treatment Emergent Adverse Events, LFT-liver function tests

Data cut-off: April 12, 2023

3 mg/kg IGM-8444 + FOLFIRI without bevacizumab in CRC patients

All patients—observed duration of treatment



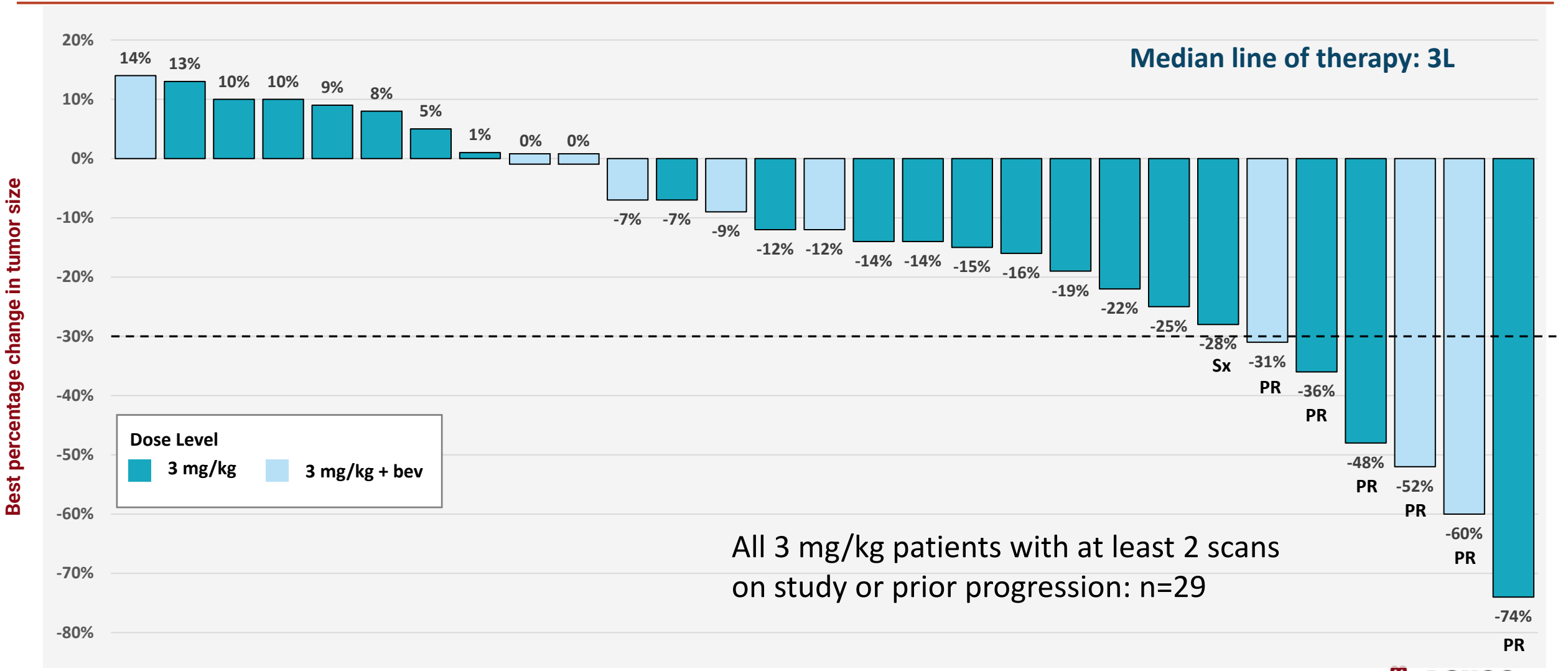
- Median 3L of therapy
- 11 of 24 (46%) patients at 3 mg/kg remain on treatment as of data cut-off April 12, 2023
- Median PFS 5.6 months
  - 3L standard of care Lonsurf/Stivarga: PFS 2m; OS 6-7m

SOC-standard of care, PFS-progression-free survival

Data cut-off: April 12, 2023

3 mg/kg IGM-8444 + FOLFIRI ± bevacizumab

mCRC tumor responses



Sx-surgery; PR-partial response

Data cut-off: April 12, 2023

Substantial benefit observed in patients refractory to prior FOLFOX/FOLFIRI treatment: selected patient profiles

69, mCRC, MSS, KRASmt, BRAFwt
Prior FOLFIRI progression

Prior Treatments	Time on Tx	Outcome
Xeloda	5m	
FOLFIRI + bev	**5m**	**SD → PD**
XELOX	**2m**	**SD → PD**
IGM-8444 + FOLFIRI	**16.4 m**	**PR (-36%)***

*Response Confirmed

47, mCRC, MSI-low, BRAFwt, KRASmt (G12D)
Prior FOLFIRI progression

Prior Treatments	Time on Tx	Outcome
FOLFOX6 → Xeloda/XRT	2 + 1m	
FOLFIRI + bev	**5m**	**NED → PD**
FOLFIRI + bev	**3m**	**SD → PD**
Clinical Trial	**2m**	**PD**
IGM-8444 + FOLFIRI	**6.7 m**	**PR (-74%)***

*Response Confirmed

52, mCRC, MSI-low, KRASwt, BRAFwt

Prior Treatments	Time on Tx	Outcome
FOLFOX	6m	**NED → PD**
IGM-8444 + FOLFIRI	**4.9 m**	**(-28%) → Treatment qualified patient for curative surgery**

63, mCRC, NRASmt, KRASwt, BRAFwt,
Prior FOLFIRI experience

Prior Treatments	Time on Tx	Outcome
FOLFOX6	6m	SD → PD
FOLFIRI + bev	**2m**	**SD → SD**
IGM-8444 + FOLFIRI	**5.4 m**	**PR (-48%)***

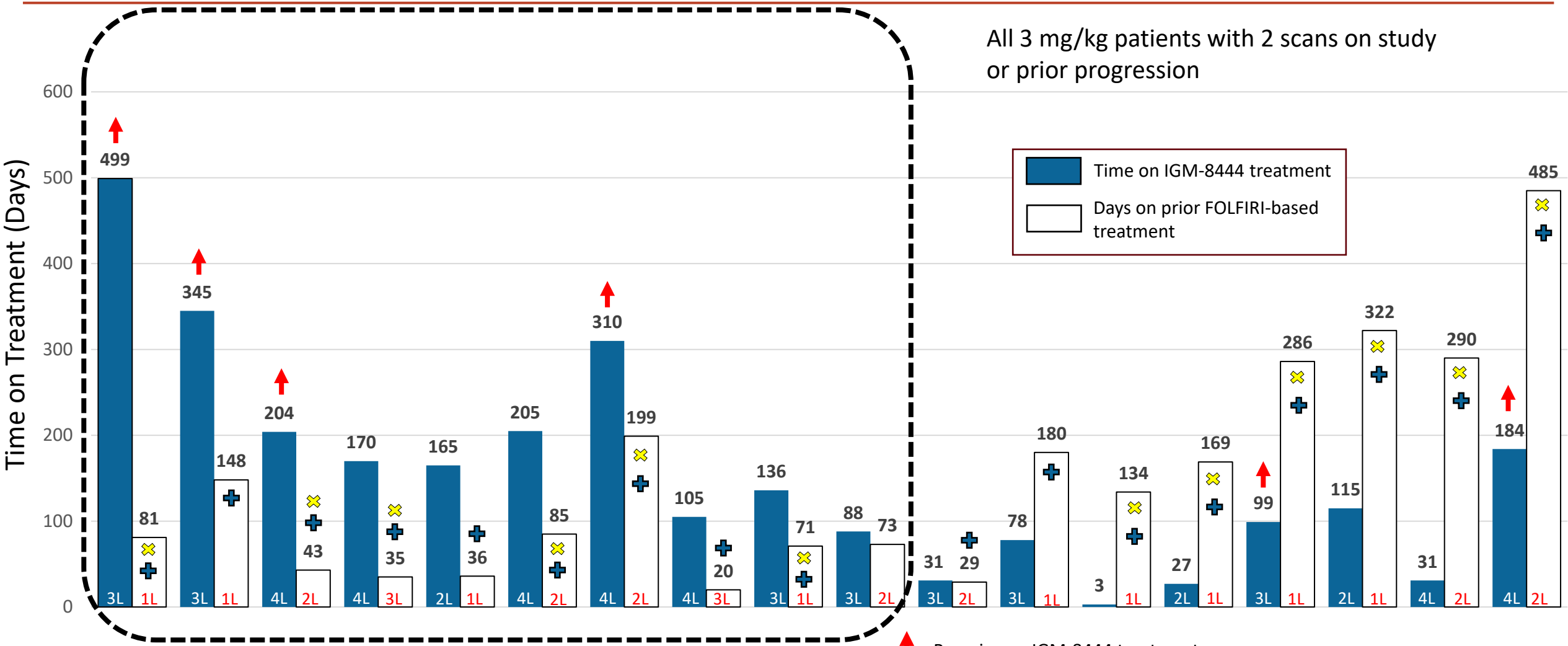
*Response Confirmed

bev-bevacizumab; m-months; SD-stable disease; PD-progressive disease; PR-partial response; NED-no evidence of disease

Data cut-off: April 12, 2023

3 mg/kg IGM-8444 + FOLFIRI without bevacizumab

Time on treatment versus prior FOLFIRI treatment



Note: Includes prior treatment with FOLFIRI, FOLFOXIRI or other irinotecan containing regimen

Remains on IGM-8444 treatment

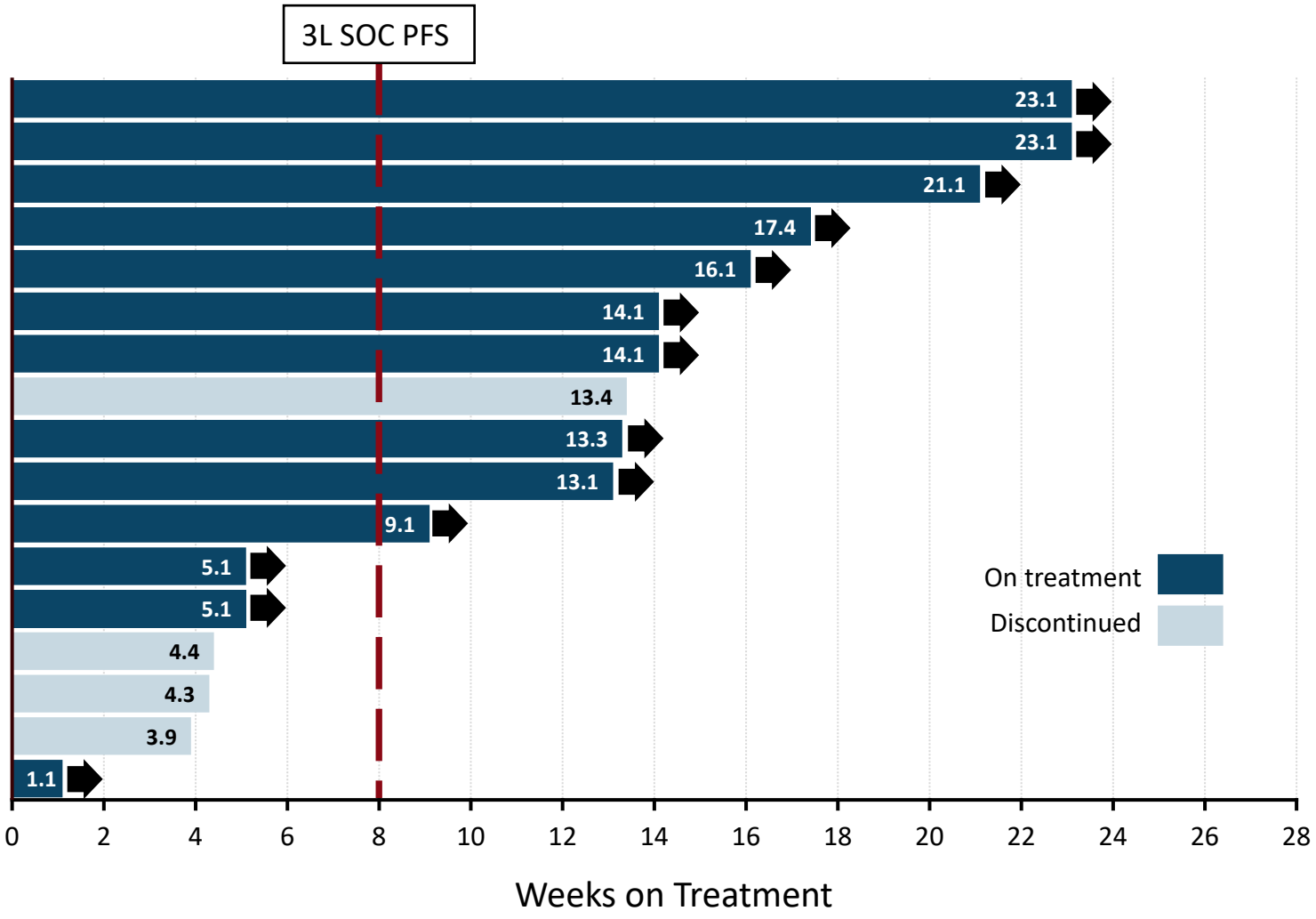
Progressed on FOLFIRI-based treatment

Treated with prior bevacizumab

Data cut-off: April 12, 2023

3 mg/kg IGM-8444 + FOLFIRI with bevacizumab in CRC Patients

Observed duration of treatment



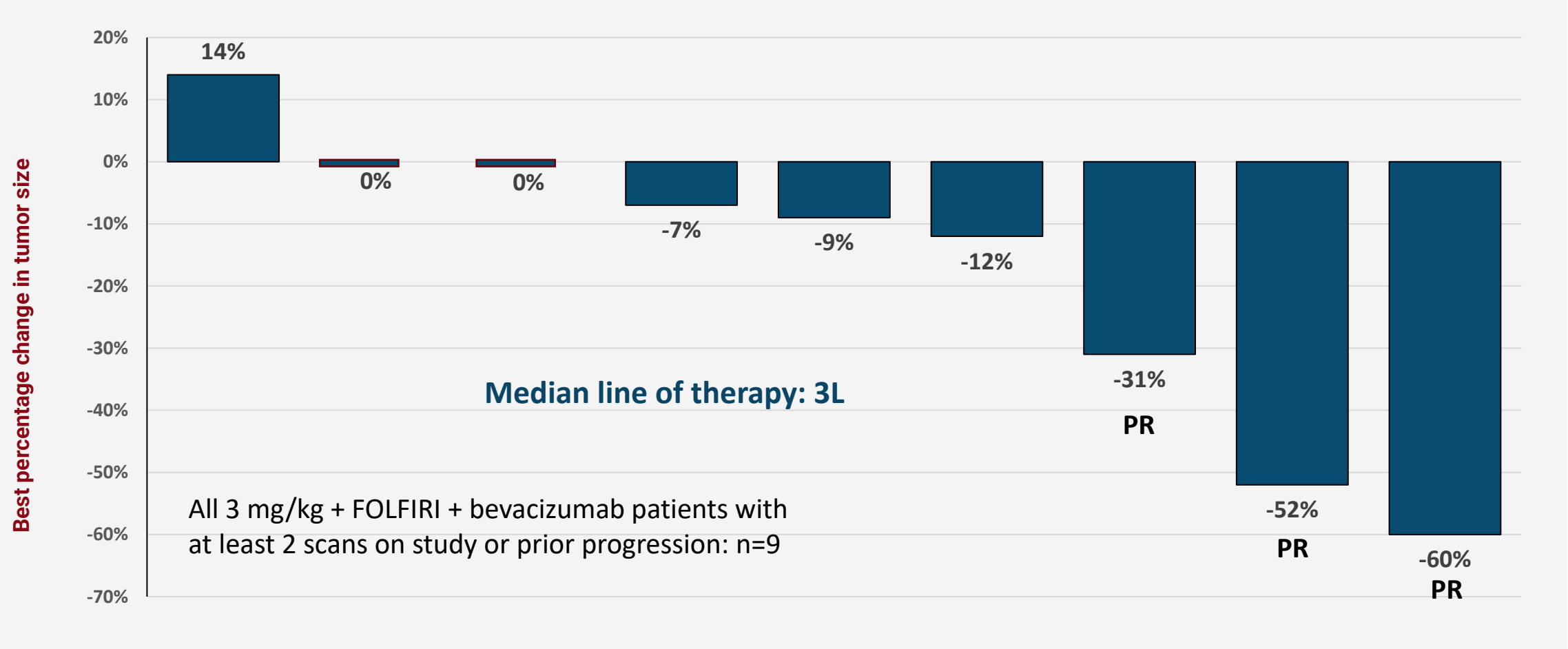
- Median 3L line of therapy
- 13 of 17 patients (76%) at 3 mg/kg remain on treatment at time of data cut-off, April 12, 2023
- Median PFS not reached

Note: Excludes three patients who came off study without post-baseline tumor assessment

SOC-standard of care, PFS-progression-free survival

Data cut-off: April 12, 2023

3 mg/kg IGM-8444 + FOLFIRI with bevacizumab in CRC patients
Tumor response



PR-partial response

Data cut-off: April 12, 2023

Summary & conclusions

- IGM-8444 demonstrated an encouraging safety profile and tolerability as a single agent and in combination with FOLFIRI ± bevacizumab
  - No clinically relevant hepatotoxicity observed across multiple doses and prolonged treatment
- IGM-8444 in combination with FOLFIRI with and without bevacizumab shows promising activity in heavily pretreated mCRC patients
  - Clinical responses and tumor shrinkage observed in majority of patients, even in patients refractory to prior therapy
  - Progression-free survival and overall response rate higher than current approved 3L standard of care
  - Longer duration of treatment in multiple patients compared with their prior FOLFIRI-based regimens

Clinical Landscape and Development Strategy

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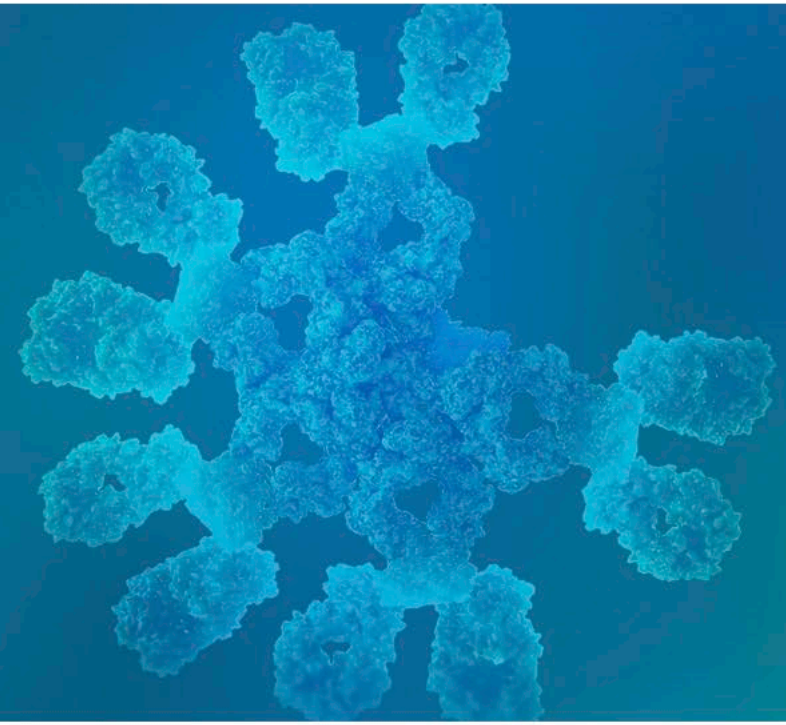


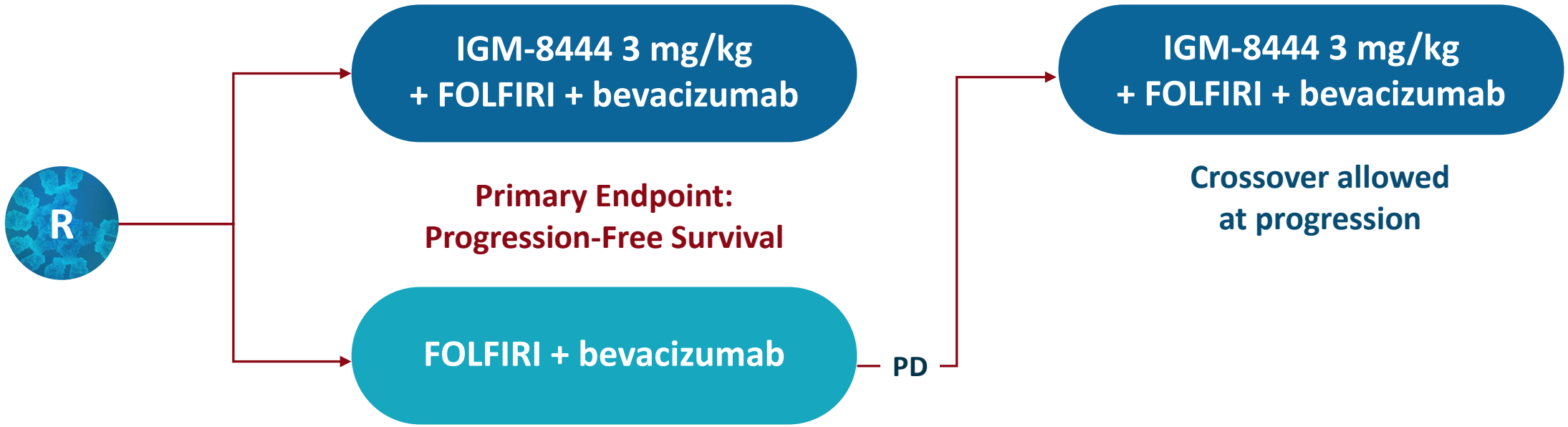
Initial focus of IGM-8444 development: improving FOLFIRI plus bevacizumab, the most common regimen for 2L colorectal cancer

	1L	2L	3L+
Current Standard of Care	**FOLFOX** (or other 5-FU chemo combos)	**FOLFIRI** (or other 5-FU chemo combos)	**Various**
	• Bevacizumab • EGFR mAb (RASwt only) • Pembrolizumab (MSI-H only)	• Bevacizumab	• Regorafenib • Trifluridine/tipiracil • Other chemotherapy
Efficacy Benchmark	mPFS: ~10+ m mOS: 20+ m ORR[1,2]: 45%+	**mPFS: ~ 6 m** **mOS: ~ 12 m** **ORR[2]: 5-20%**	**mPFS: ~ 2 m** **mOS: ~ 6-7 m** **ORR[3,4]: 1-2%**
US Patient Incidence[5]	~50,000/year	~30,000/year	~20,000/year

Limited effectiveness of later line therapies: low ORR and survival time

Source: [1]CernerEnviza Treatment Architecture accessed May 2023; [2]Hansen et al., Cancers 2021, 13(5), 1031; [3]regorafenib package insert, [4]trifluridine/tipiracil package insert, [5]GlobalData accessed October 2022

Ongoing randomized second-line metastatic colorectal cancer trial intended to quantify additional benefit of IGM-8444



Population

- 2L mCRC, all molecular subtypes including KRAS mutant
- Prior FOLFIRI treatment excluded
- Global trial

Trial Design

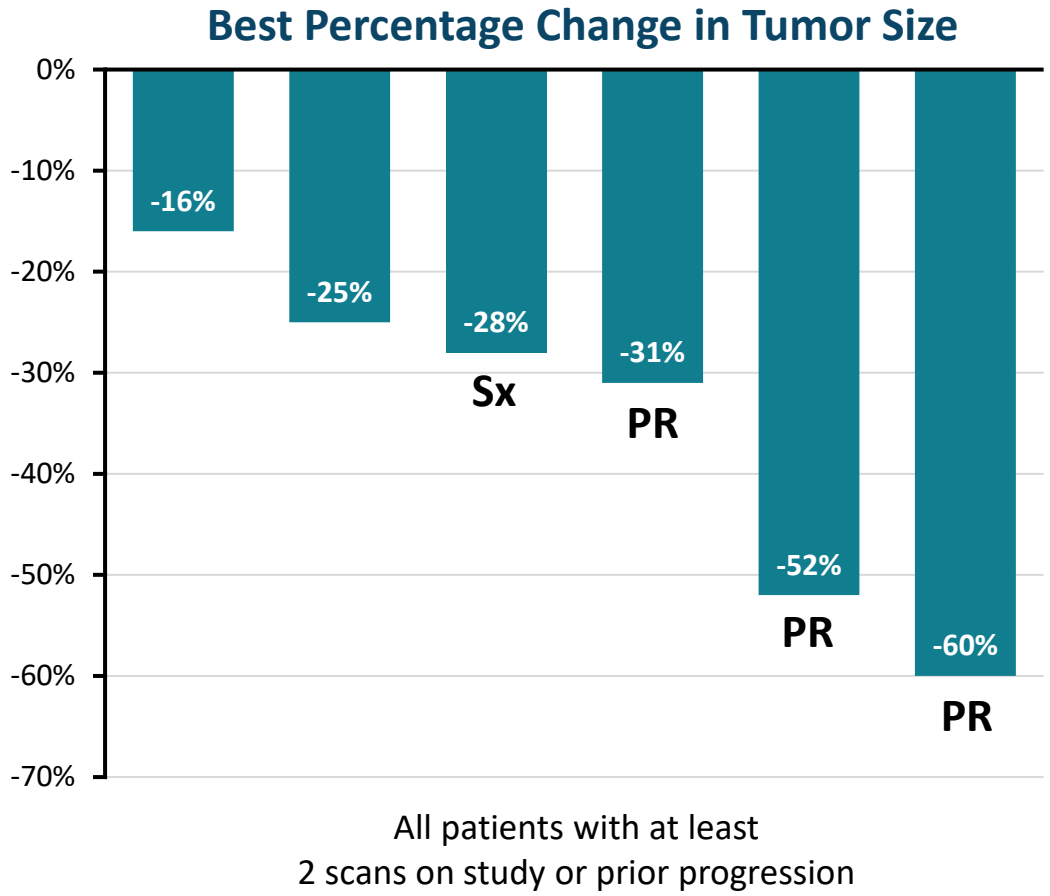
- N=110, 1:1 randomization
- Primary endpoint: PFS
- Secondary endpoints: ORR, OS, safety
- Blinded independent radiographic review

Stratification Factors

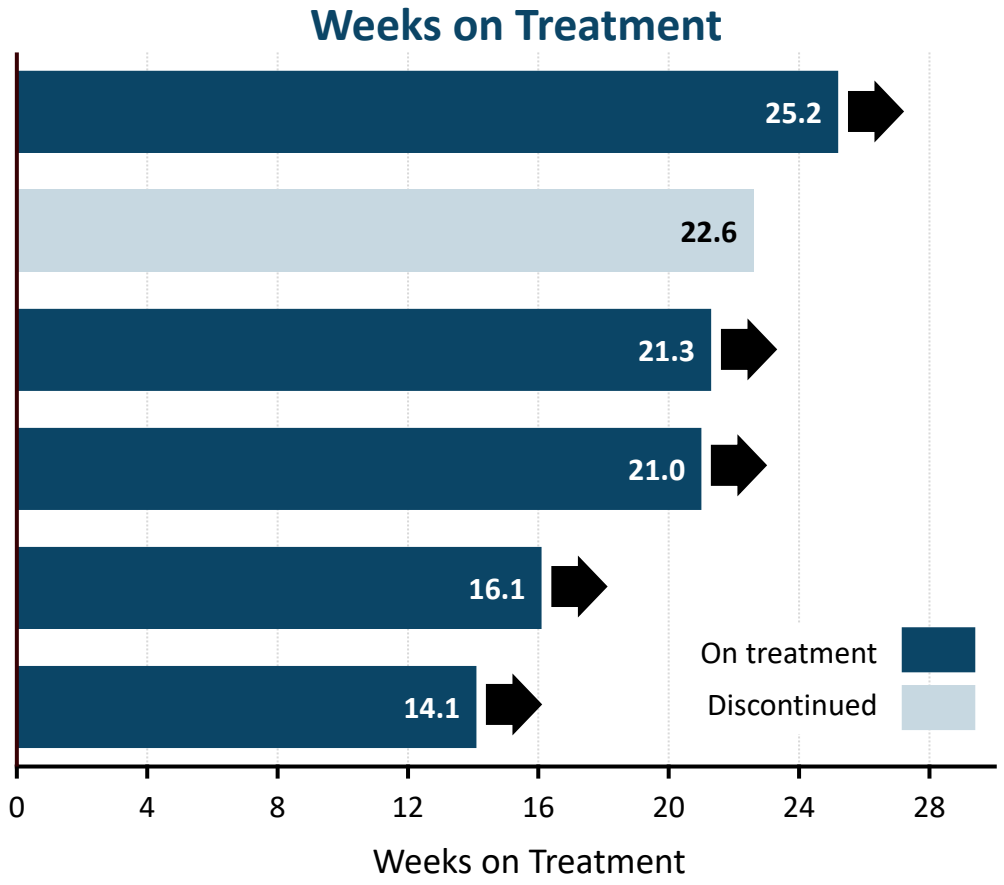
- Liver metastases
- KRAS status

3 mg/kg IGM-8444 + FOLFIRI ± bevacizumab

FOLFIRI* naïve CRC patients show promising activity



All patients with at least
2 scans on study or prior progression

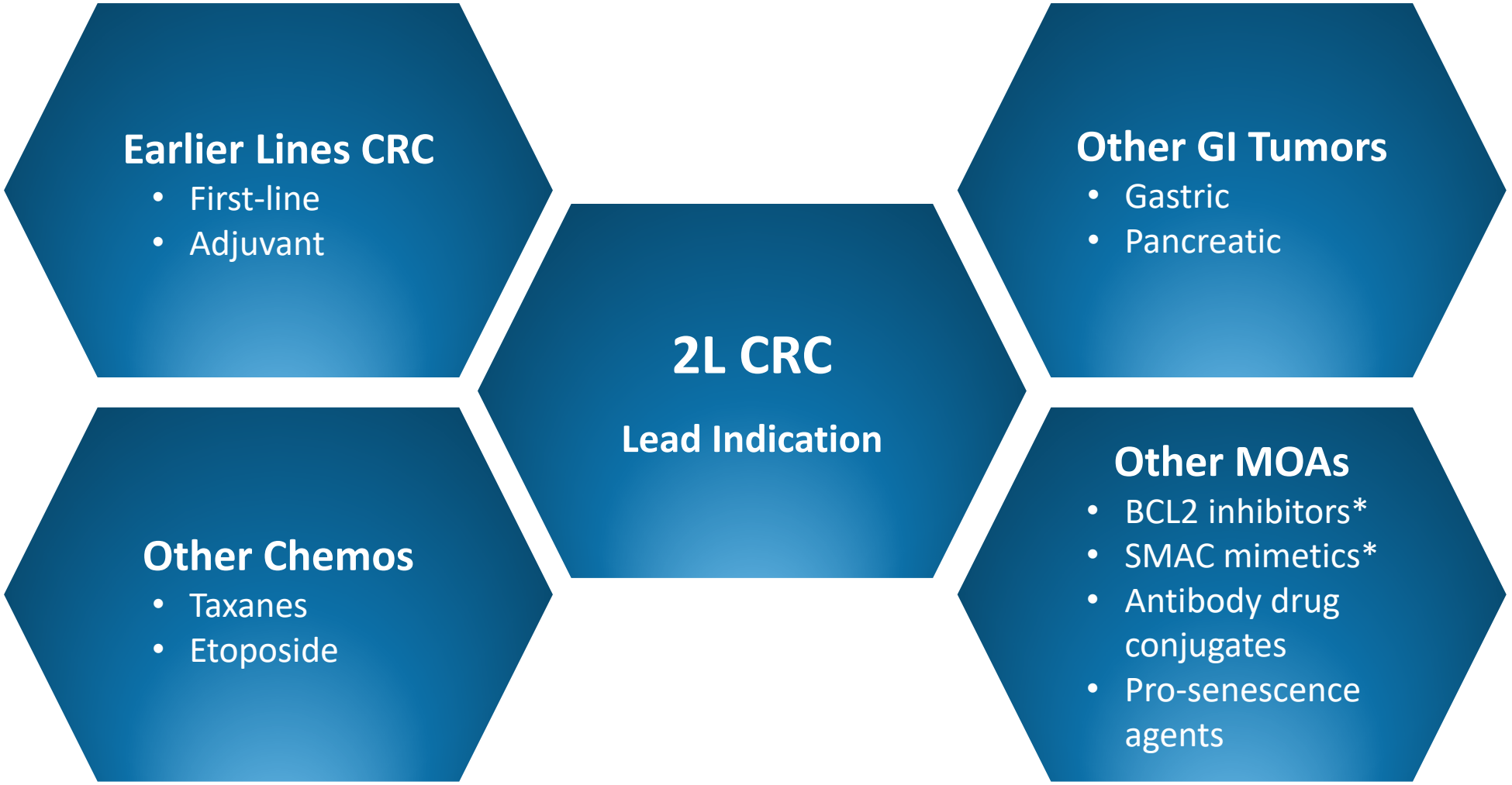


*All 3 mg/kg patients without prior treatment with FOLFIRI, FOLFOXIRI, or other irinotecan containing regimen with 2 scans or prior progression

Sx-surgery; PR-partial response

Data cut-off: April 12, 2023

Future development opportunities



* Phase 1 dose escalation study ongoing

Q&A