igm biosciences®

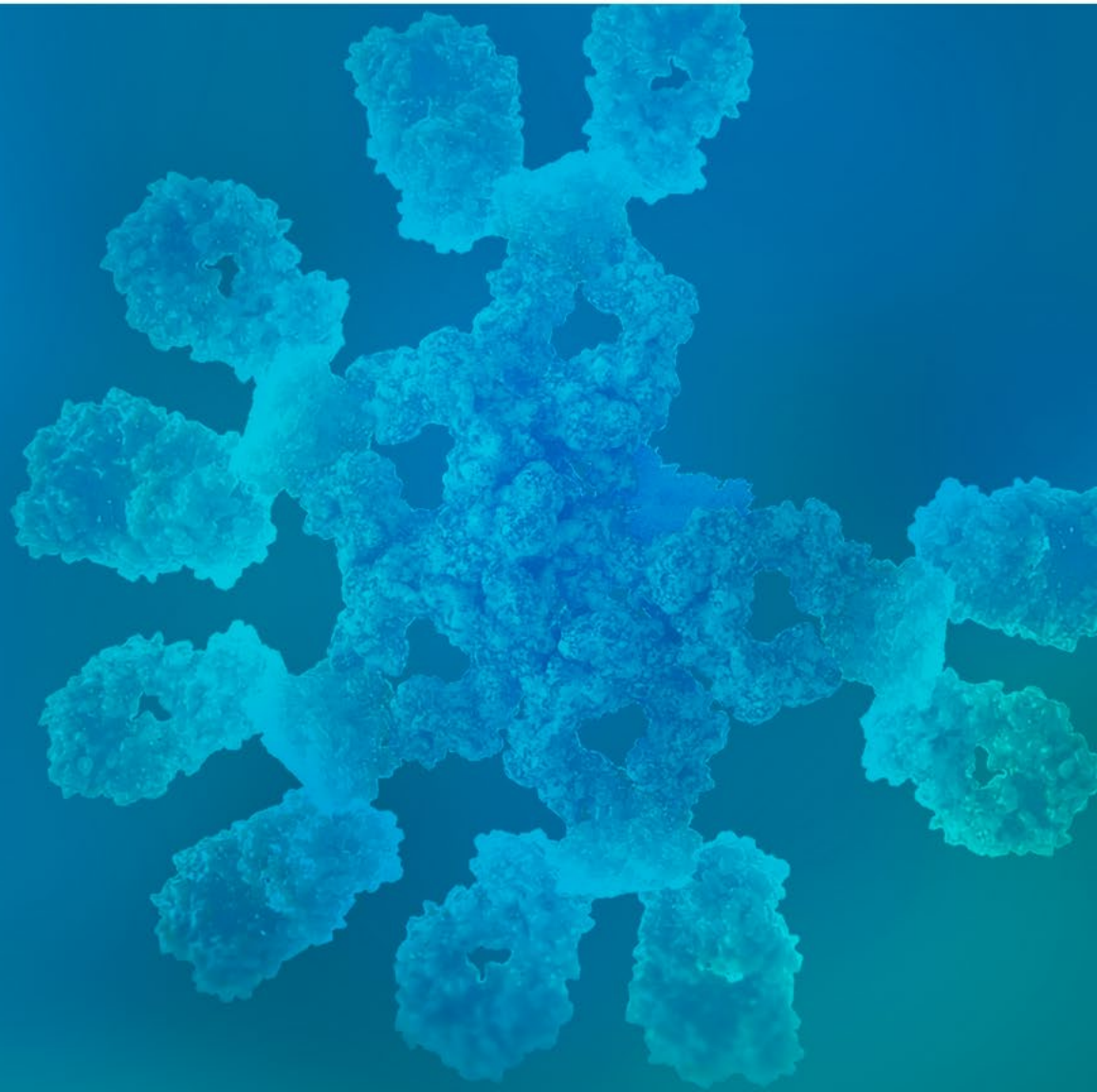
Global Leaders in IgM Antibodies

REIMAGINING

antibody medicines

Corporate Overview

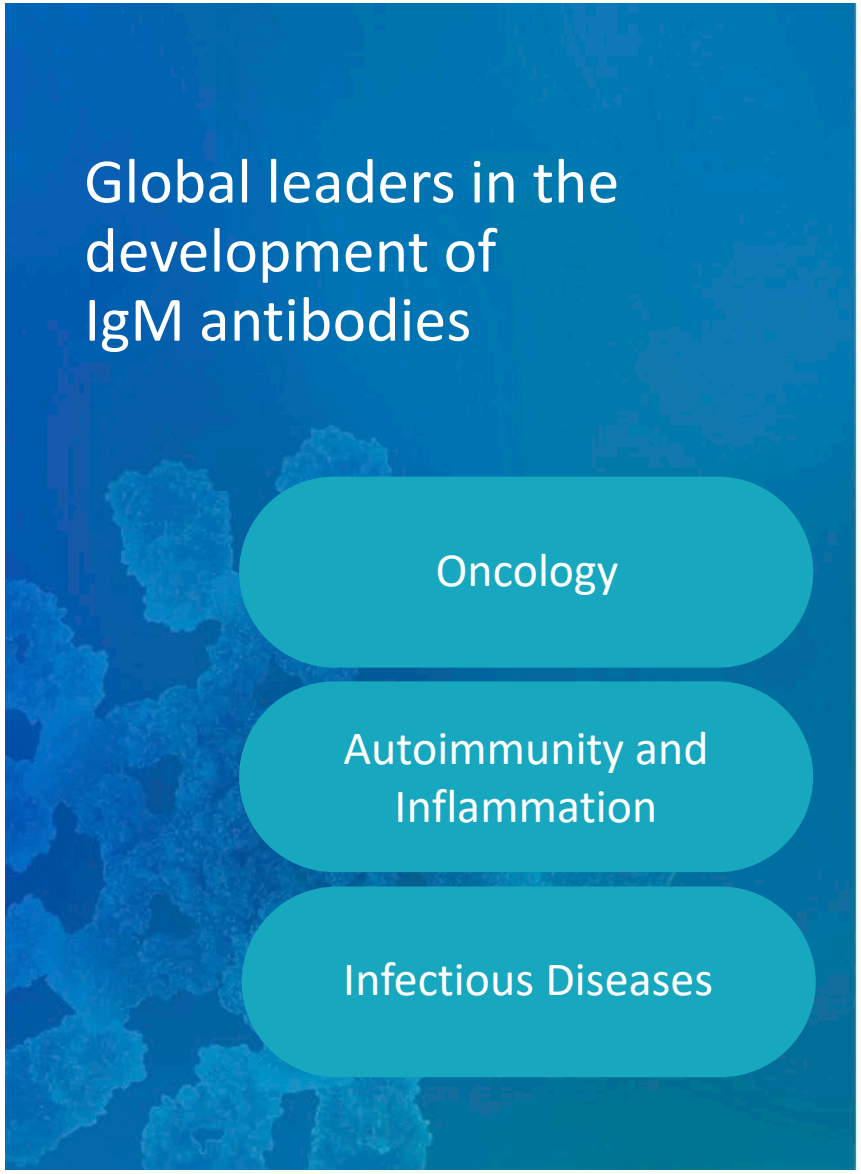
September 2022



Forward-looking statements

This presentation contain “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995 that reflect the current views of IGM Biosciences, Inc. (the “Company,” “we” or “our”) with respect to the Company’s future financial condition, results of operations, business strategy, expectations, milestones and plans, including our expectations regarding the transaction with Sanofi, including all financial aspects of the collaboration and the potential benefits and results of the collaboration. All statements other than statements of historical fact could be deemed forward-looking, including but not limited to statements with words 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; potential delays and disruption resulting from the COVID-19 pandemic and governmental responses to the pandemic, including any impacts to our operations, the manufacture and supply of our product candidates, the progression of our clinical trials, enrollment and maintenance of patients in our current and future clinical trials and on our collaborations and related efforts; the risk of the occurrence of any event, change or other circumstance that could give rise to the termination of collaborations with third parties, including the agreement with Sanofi; our early stages of clinical drug development; our ability to achieve clinical goals; risks related to the use of engineered IgM antibodies, which is a novel and unproven therapeutic approach; our ability to utilize our IgM antibody platform to generate and advance additional product candidates; our ability to advance product candidates into, and successfully complete, clinical trials; 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 estimates of the number of patients who suffer from the diseases we are targeting and the number of patients that may enroll in our clinical trials; the ability to commercialize our product candidates, if approved; our ability and the potential to successfully manufacture and supply our product candidates for clinical trials and for commercial use, if approved; the potential impact of continuing or worsening supply chain constraints; our ability to accurately forecast future financial results and timelines; our anticipated use of our existing resources, our estimates regarding expenses, future revenue, capital requirements and needs for additional financing and our ability to obtain additional capital; the sufficiency of our existing cash and investments to fund our future operating expenses and capital expenditure requirements; the potential diminishing need for therapeutics to address COVID-19, particularly in the United States and other major markets, and the progress and success of alternative therapeutics currently available or in development; our ability to retain the continued service of our key personnel and to identify, hire and retain additional qualified professionals; the implementation of our business model and strategic plans for our business and product candidates; the scope of protection we are able to establish and maintain for intellectual property rights, including our IgM platform, product candidates and discovery programs; 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; general economic and market conditions; and other risks and uncertainties, including those more fully described in the public filings that we have made and will make with the Securities and Exchange Commission (“SEC”), including our Annual Report on Form 10-K filed on March 29, 2022 and our Quarterly Reports on Form 10-Q. 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. The forward-looking statements in this presentation are based on information available to the Company as of the date hereof and, except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason.

Global leaders in the development of IgM antibodies



Strategy: extend our global leadership in IgM antibodies

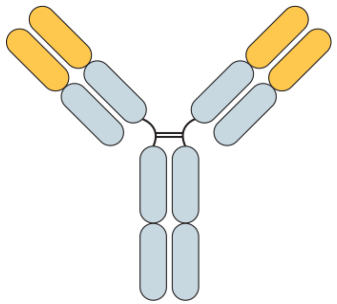
- Advance product candidates and increase R&D efforts
- Expand manufacturing capabilities
- Expand intellectual property portfolio
- Participate in commercialization as appropriate

- Proprietary IgM antibody technology: 36 patent families
- 150+ research, development and manufacturing personnel based in San Francisco Bay Area and Greater Philadelphia Area
- $513 million cash and investments balance as of June 30, 2022

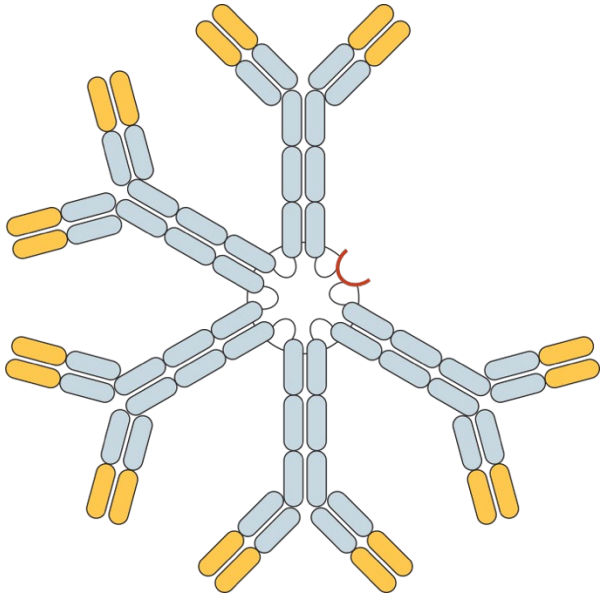
igm biosciences®

IgM antibodies have unique structural attributes compared to IgG antibodies

Additional binding sites lead to greatly superior total binding power (avidity)



IgG



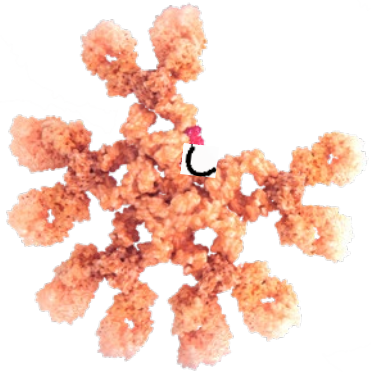
IgM

LEGEND | Target binding domains | Constant domains | Joining chain (J chain)

igm biosciences®

Leaders in IgM antibody engineering and manufacturing

Protein Engineering



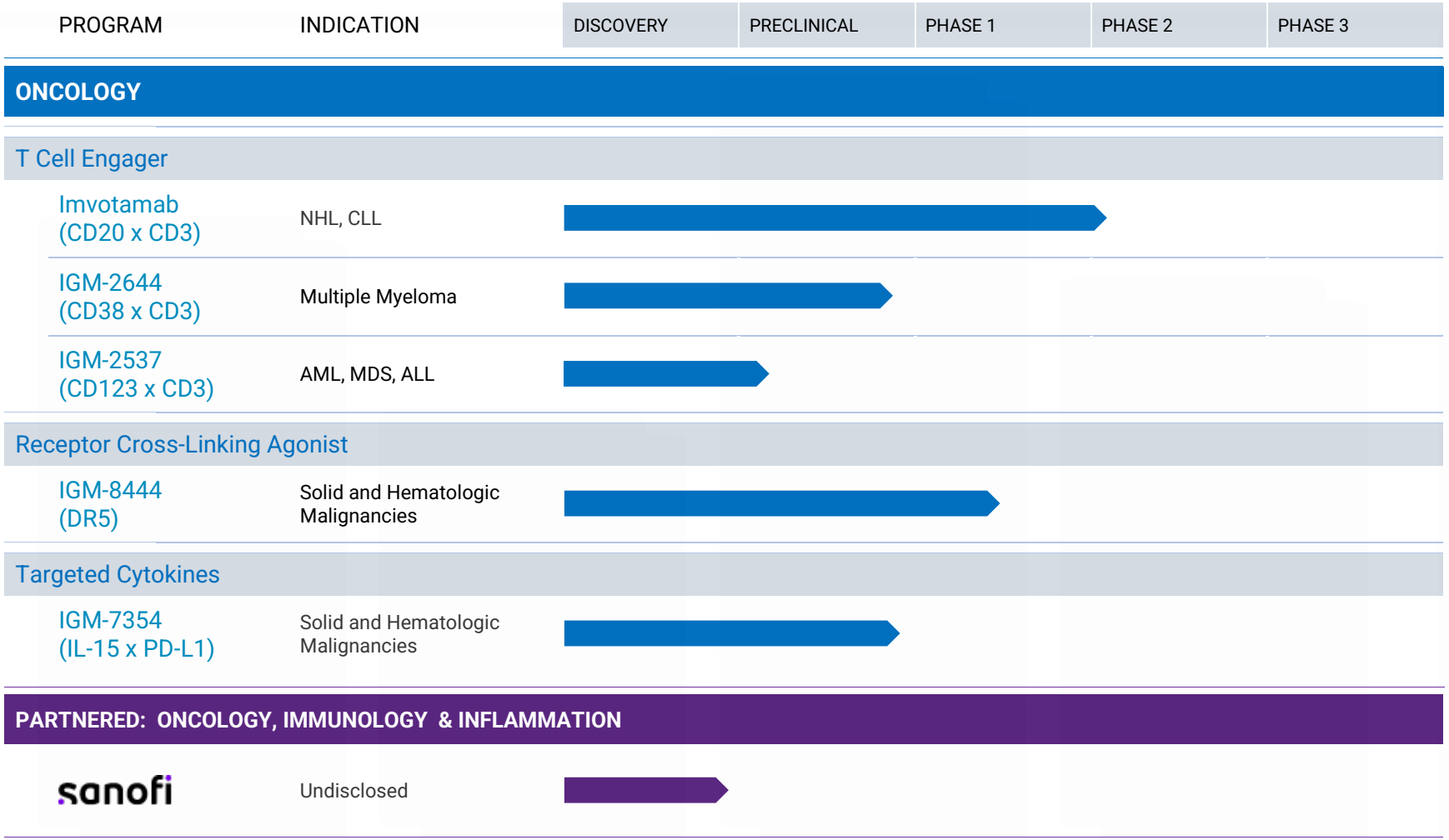
- Conversion of IgGs to IgMs
- Extended half-life IgMs
- Novel bispecific formats

Increased affinity | Increased specificity

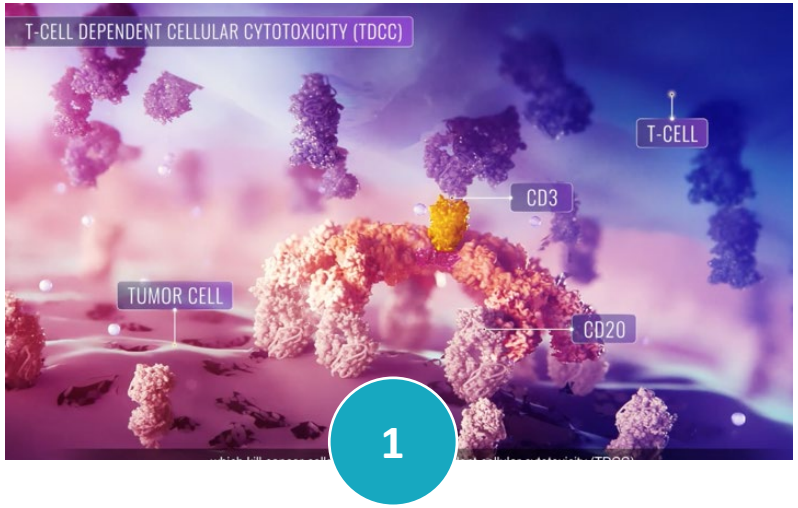
Manufacturing

- Wholly-owned GMP facility
- Industry-standard production
- Cost-effective purification

IGM pipeline



Oncology: three distinct mechanisms of action

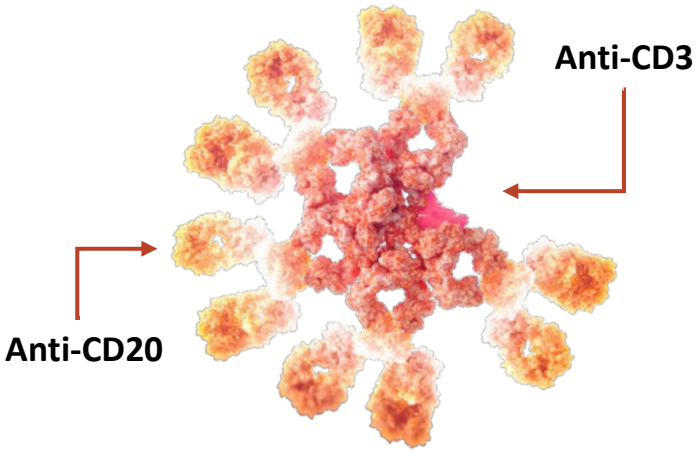


Bispecific T cell Engagers
(e.g., CD20 x CD3, CD38 x CD3)

Multi-Receptor Agonism
(e.g., DR5)

Targeted Cytokine Stimulation
(e.g., IL-15)

Imvotamab: potential backbone therapy in hematology



Monotherapy in late line NHL

- Optimize dosing and schedule
- Establish POC and launch in 3L+ NHL

Combination therapy in earlier lines

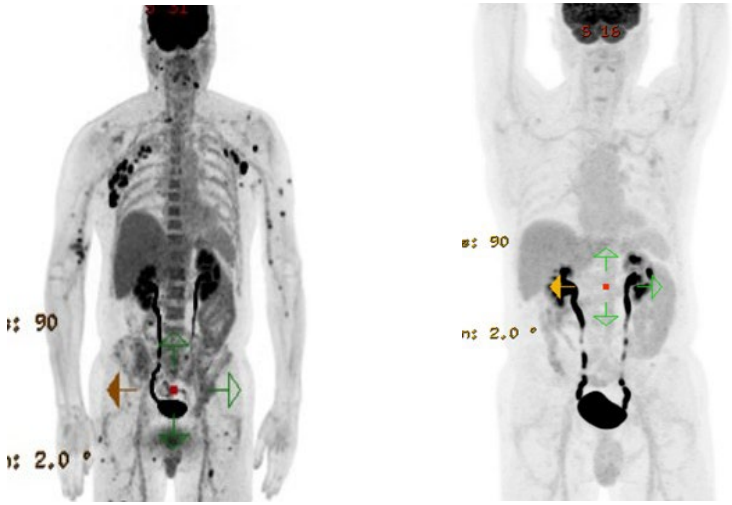
- Explore safety and dosing in combinations
- Define efficacy signals in earlier lines of treatment

Backbone of choice in heme malignancies

- 1L and later line SOC
- Low CD20 B cell malignancies (i.e., CLL)

ASH 2021: imvotamab (IGM-2323) Phase I data

Encouraging safety profile and activity at 100 mg dose level



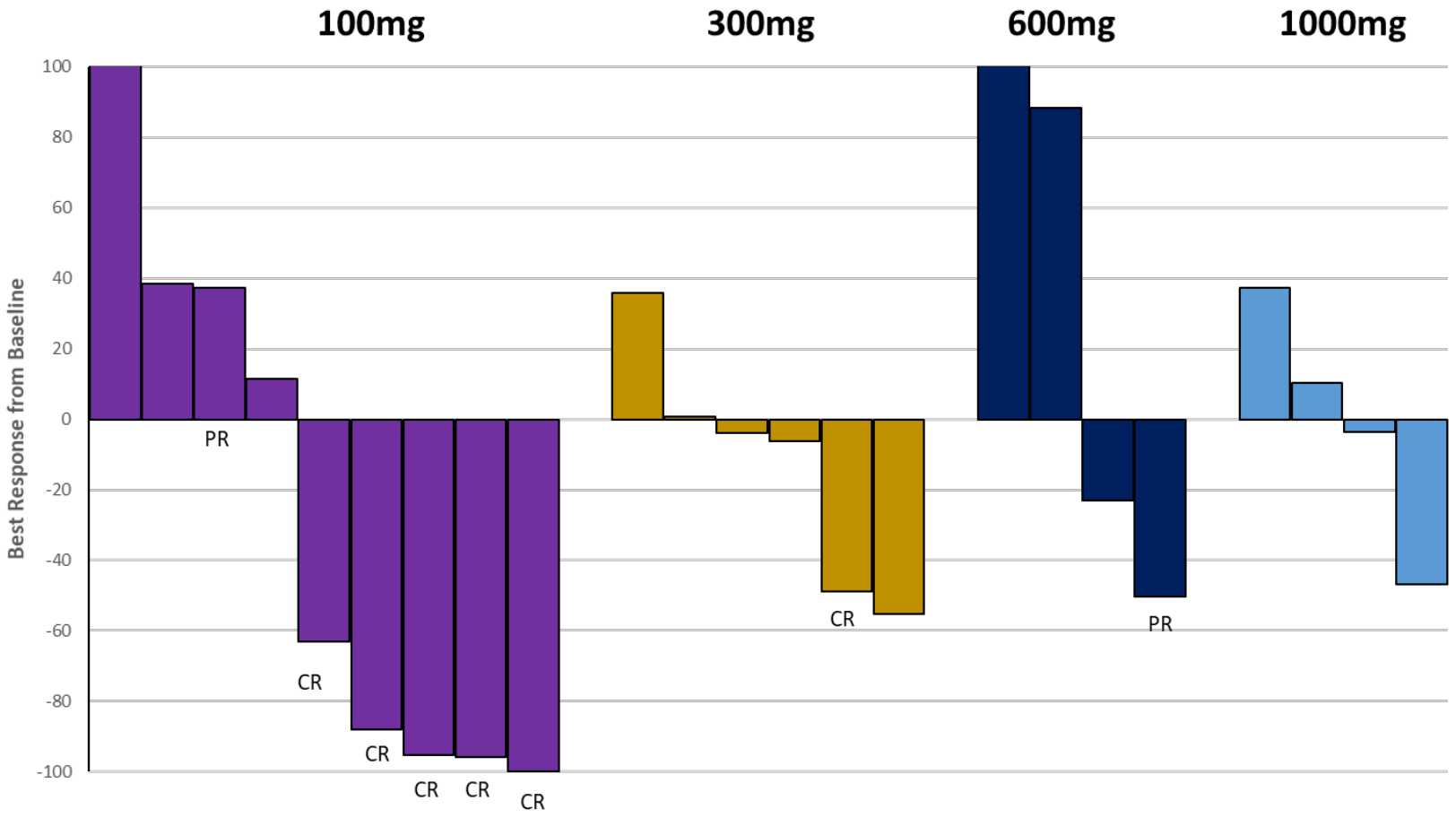
- 63 yo male with Grade 2 FL, progressed on multiple treatment lines
- Achieved CR with imvotamab (IGM-2323)
  - Moved to Q3W dosing
  - Remains in CR (63 weeks)

- **60% ORR** in r/r NHL at 100 mg (10 pts)
  - **50% CR** in DLBCL (3/6 pts)
  - **66% CR** in FL (2/3 pts)
- **Low CRS (19%)**
- **No ICANS observed**
- **Limited neutropenia (4%)**
- No patient discontinuation due to AEs

n = 28 across all titration dose cohorts 100 - 1000 mg

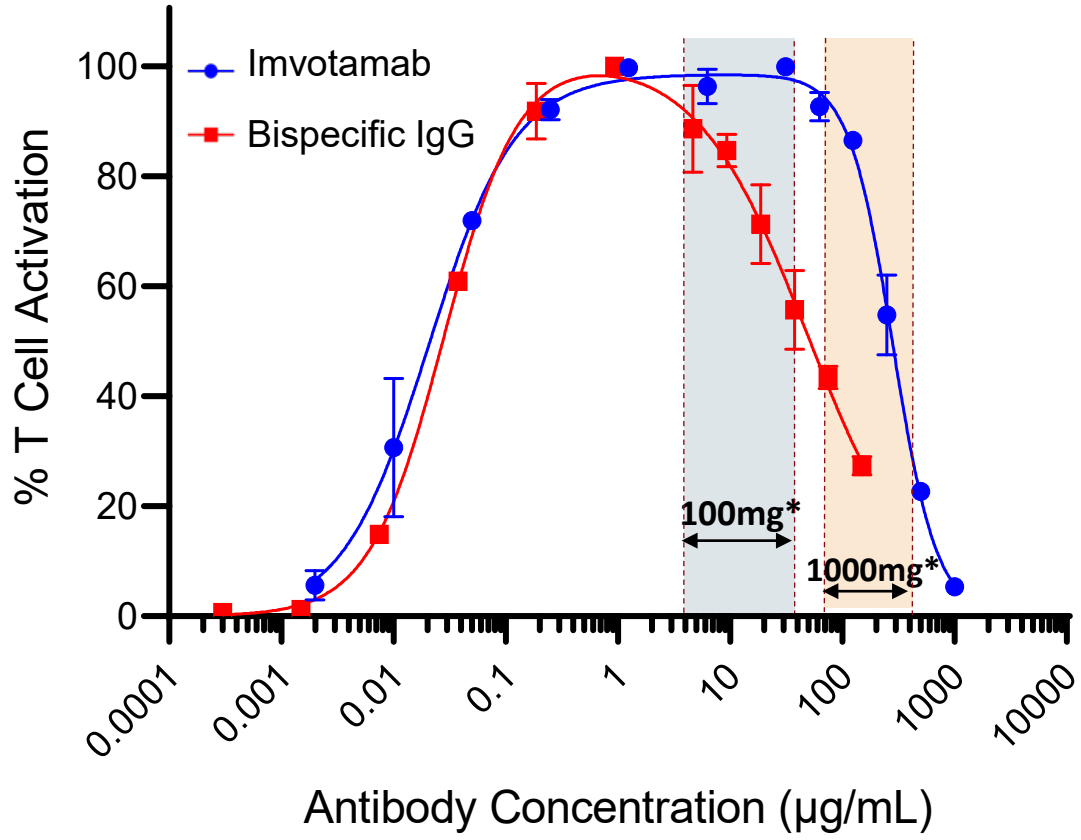
Data cut off: September 10, 2021
Adapted from ASH 2021 , Budde et al, December 11, 2021

Imvotamab showed strongest activity at 100 mg dose level

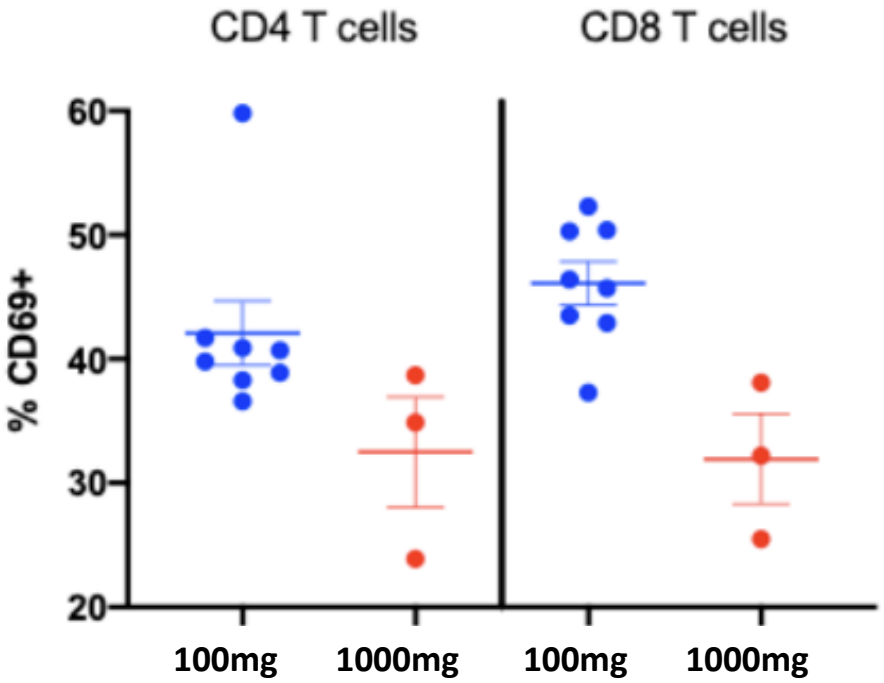


Data as of September 10, 2021
Response assessed with Lugano Classification

Imvotamab: T cell activation at higher antibody concentrations
In vitro assays and clinical biomarkers



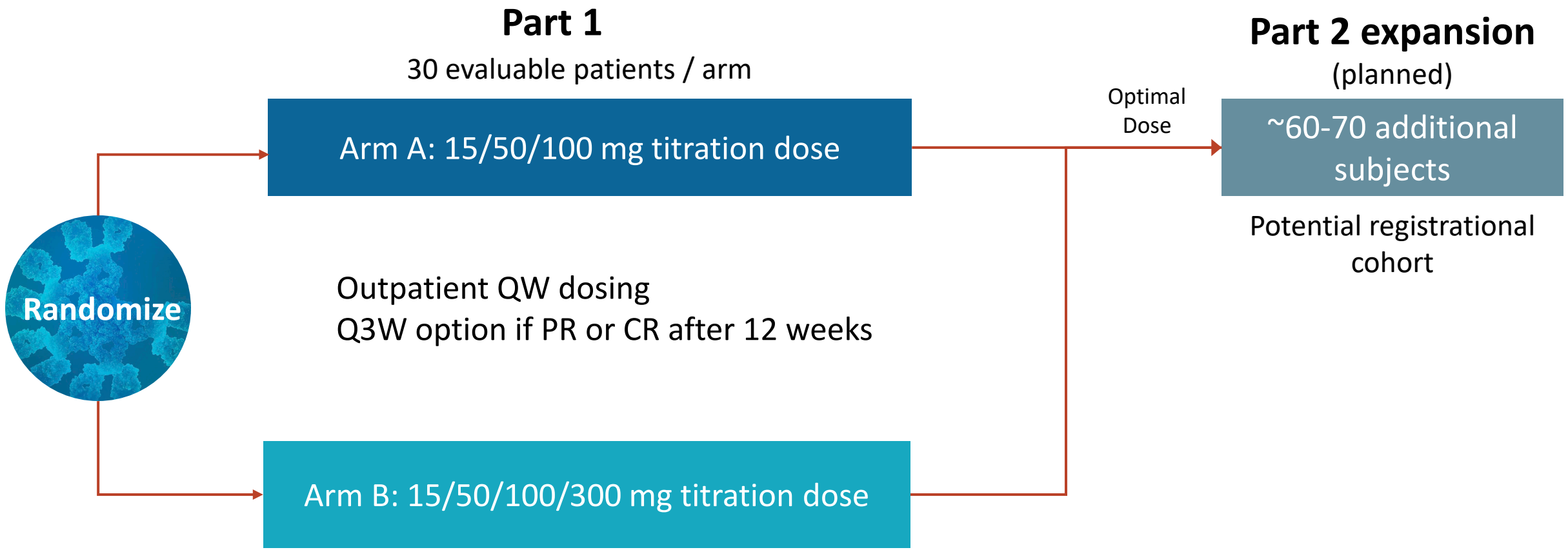
CD69+ peripheral T cells
100 mg and 1000 mg Phase 1 patients
C2D1@24H



* Plasma concentration range for imvotamab seen in Phase 1

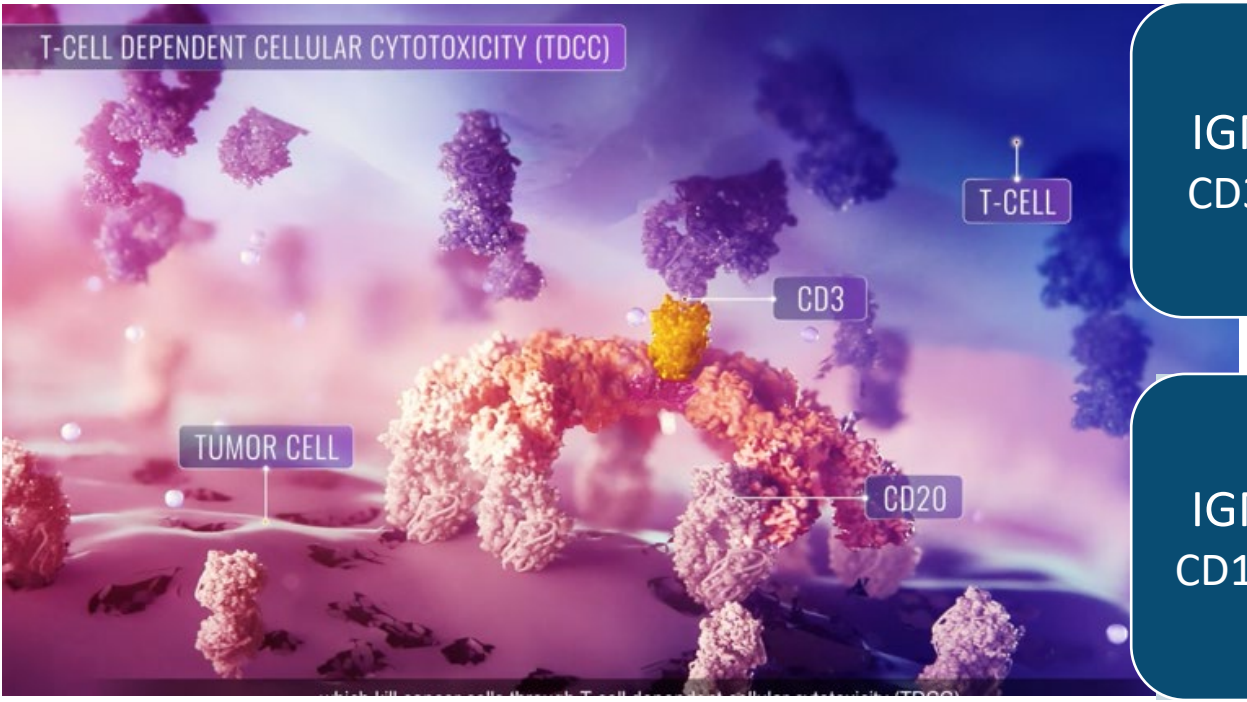
Phase 2 randomized dose-selection study

Seamless expansion into a potential registrational cohort



NOTE: There will be two dose-selection studies: one in DLBCL; the other in FL

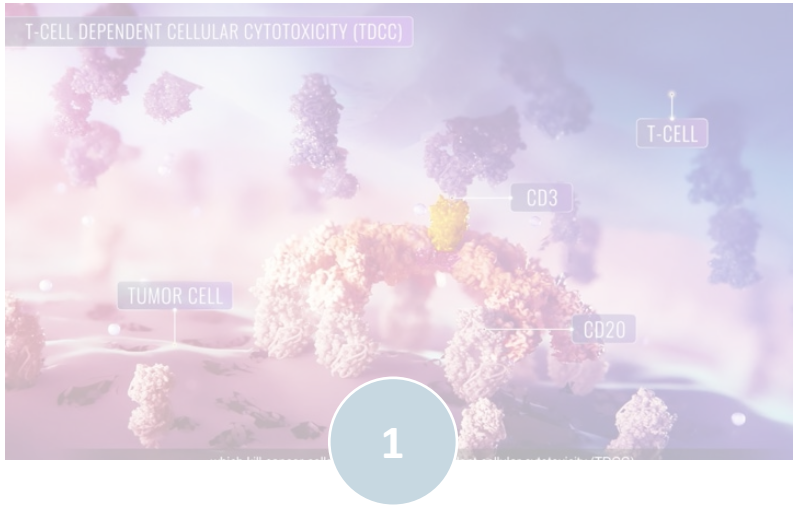
Imvotamab data supports T cell engager pipeline



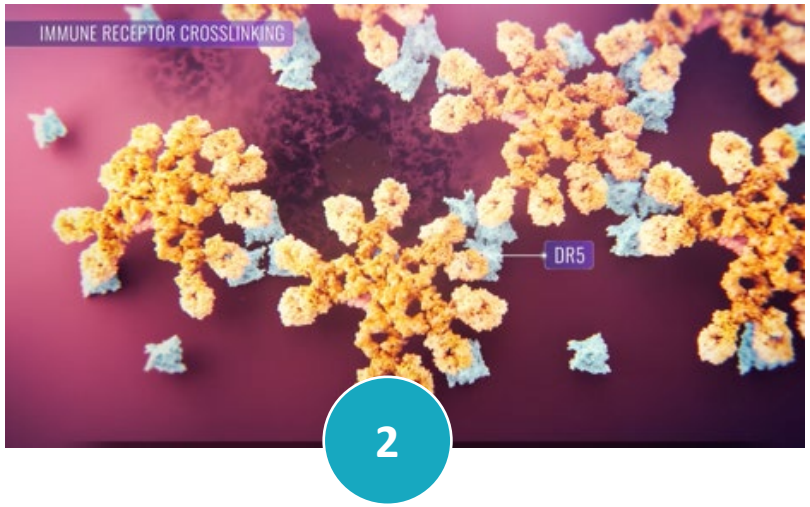
	Indications	Opportunity
IGM-2644 CD38 x CD3	Multiple Myeloma	• ~140K 3L+ MM patients WW*
IGM-2537 CD123 x CD3	AML, MDS, ALL	• High unmet need in 1L MDS and R/R AML and ALL • >125K annual WW incidence*

* Source: GlobalData

Oncology: three distinct mechanisms of action



Bispecific T cell Engagers
(e.g., CD20 x CD3, CD38 x CD3)

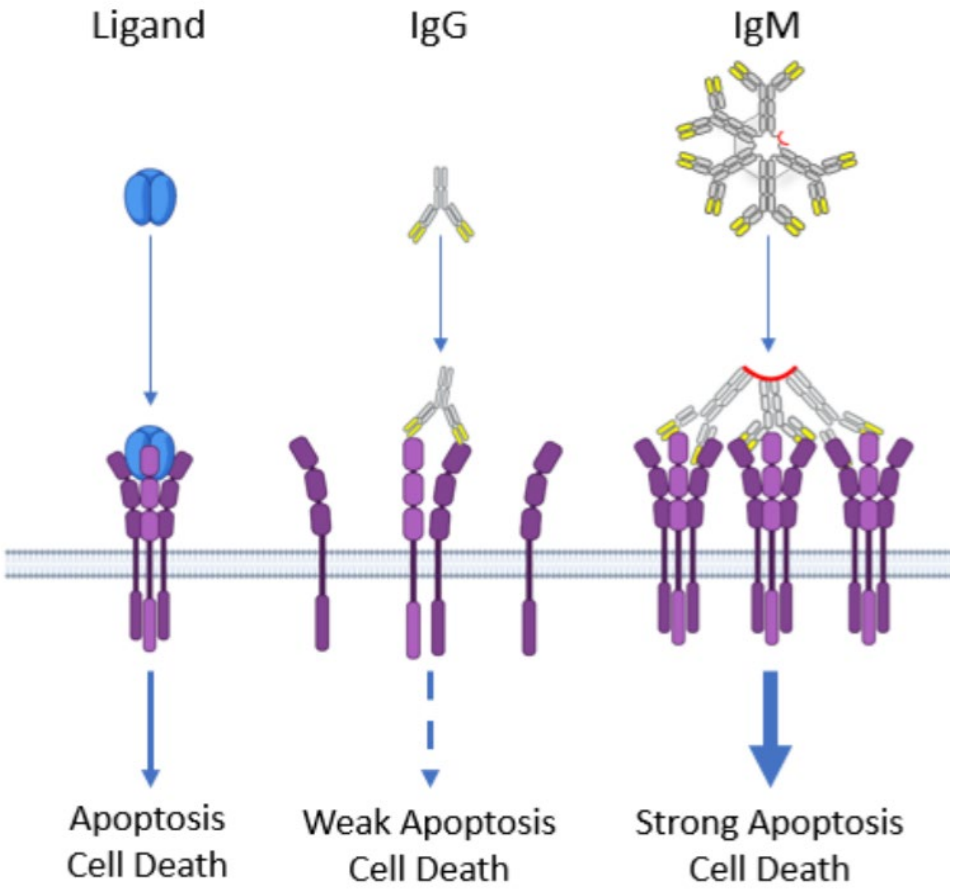


Multi-Receptor Agonism
(e.g., DR5)

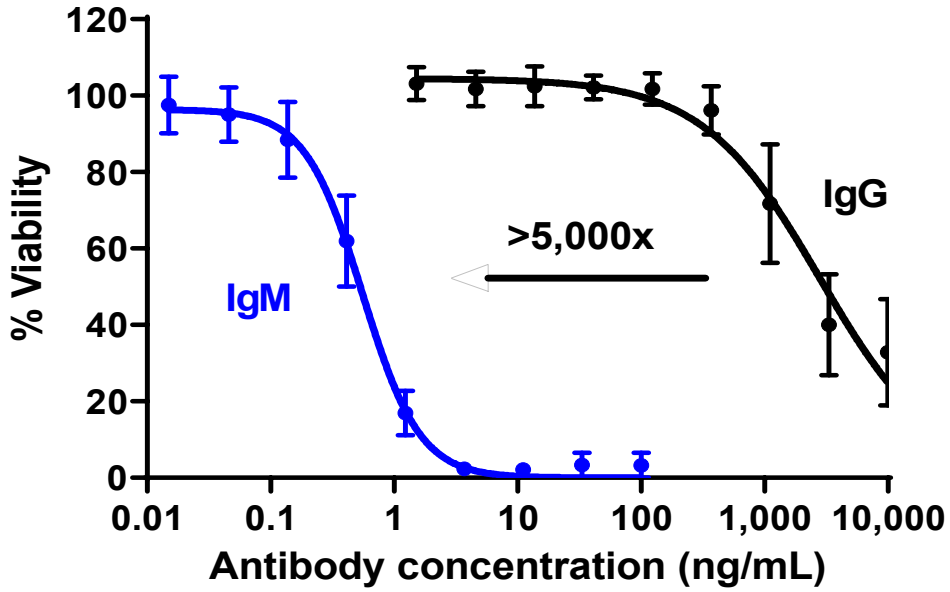
Targeted Cytokine Stimulation
(e.g., IL-15)

Strong DR5 activation requires multi-receptor agonism

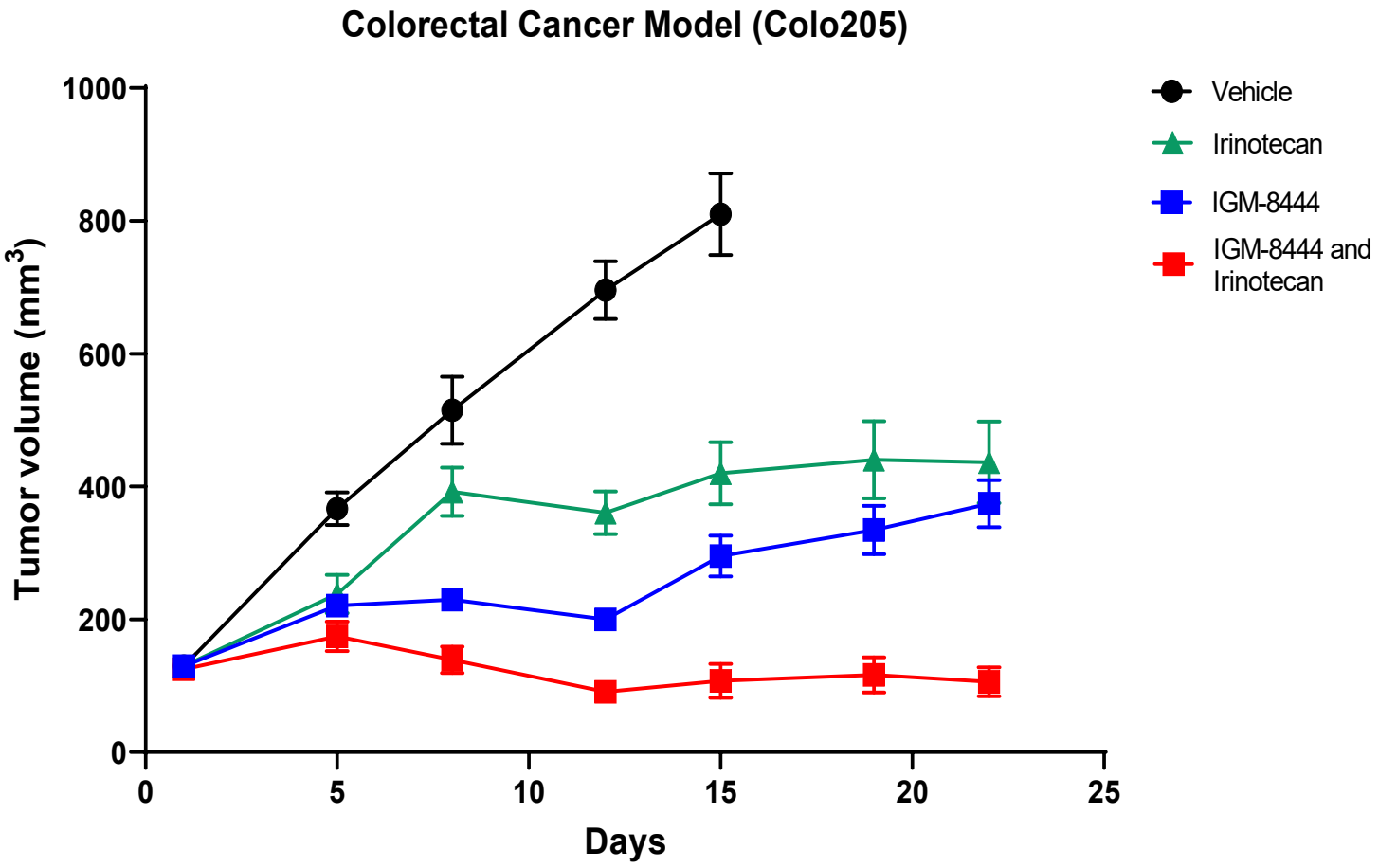
DR5 is highly expressed across many different tumor types



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

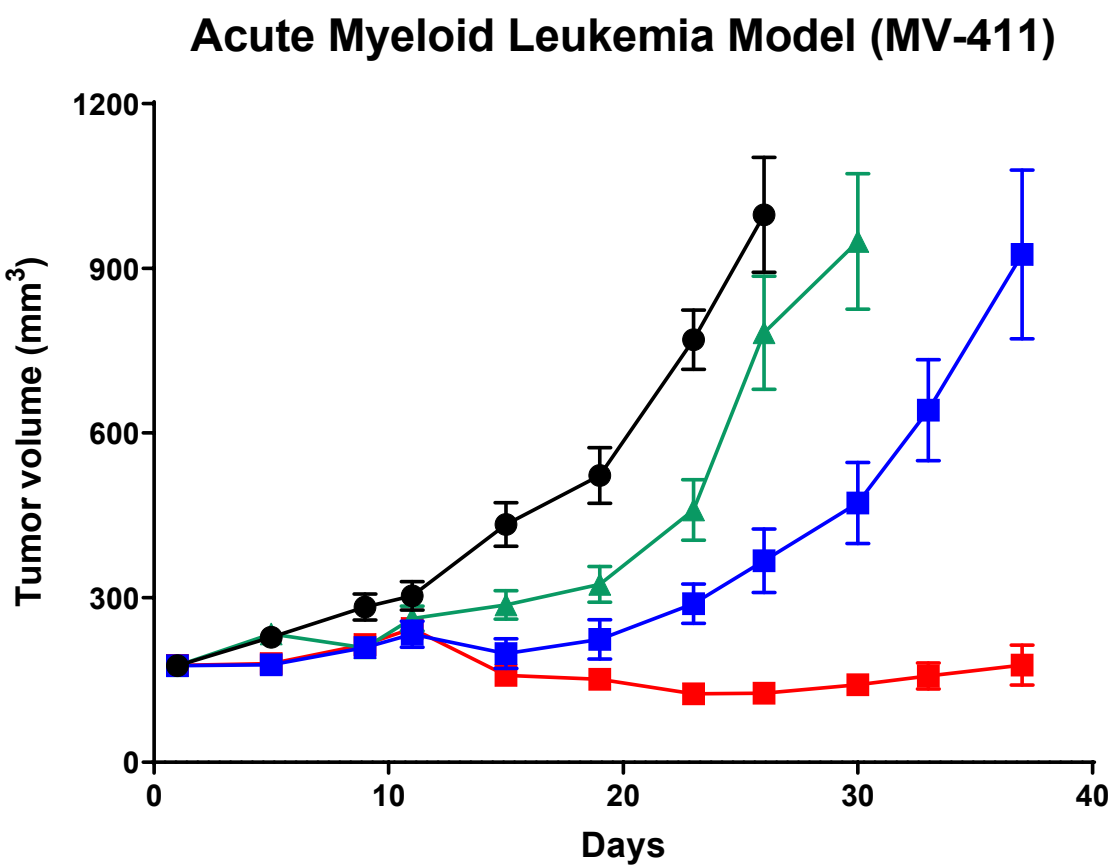


Increased *in vivo* activity seen in combination with irinotecan



IGM-8444 (5 mg/kg Q2D x 7); Irinotecan (100 mg/kg QW x 3)

Synergistic activity seen with IGM-8444 and Bcl-2 inhibitors

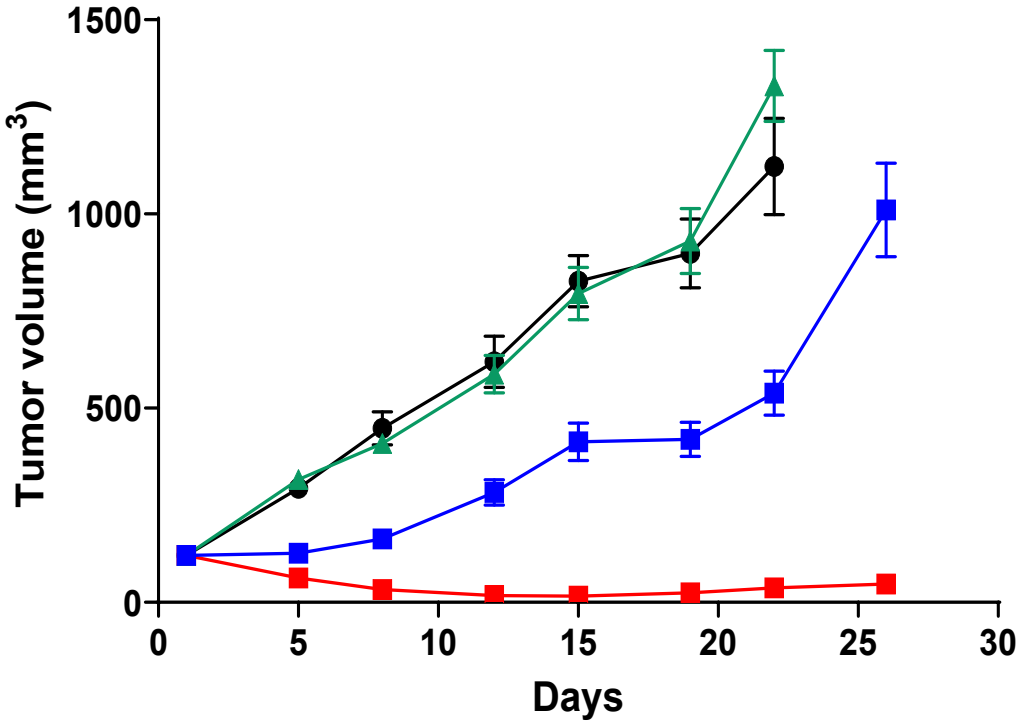


DR5: Extrinsic apoptotic pathway
Bcl-2: Intrinsic apoptotic pathway

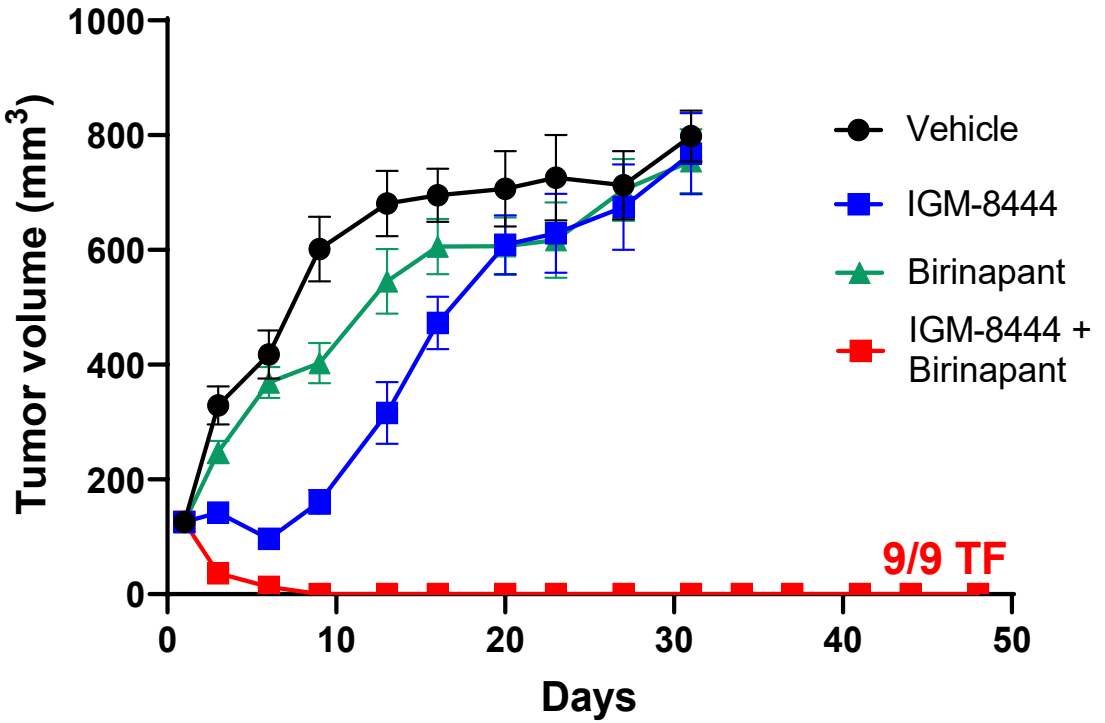
IGM-8444 (5 mg/kg Q2D x 11);
Venetoclax (100 mg/kg QD x 21)

Synergistic activity seen with IGM-8444 and birinapant

Triple Negative Breast Cancer Model
(MDA-MB-231)



Fibrosarcoma Cancer Model
(HT1080)



DR5: extrinsic apoptotic pathway Birinapant: intrinsic apoptotic pathway

Source: Sinclair. "*Multimeric IgM antibodies targeting DR5 are potent and rapid inducers of tumor cell apoptosis In Vitro and In Vivo*". *PEGS Europe, November 2021*
Data on File

IGM-8444 Phase 1 monotherapy and combination studies

Monotherapy Cohort

IGM- 8444

- Standard 3+3 design
- Dosing q2week
- All cohorts cleared
- No DLTs

Ongoing Combination Cohorts

IGM-8444 + FOLFIRI

- 4th dose cohort open
- 3rd dose cohort cleared
- No DLTs observed to date

IGM-8444 + Birinapant

- 4th dose cohort open
- 3rd dose cohort cleared
- No DLTs observed to date

IGM-8444 + Venetoclax

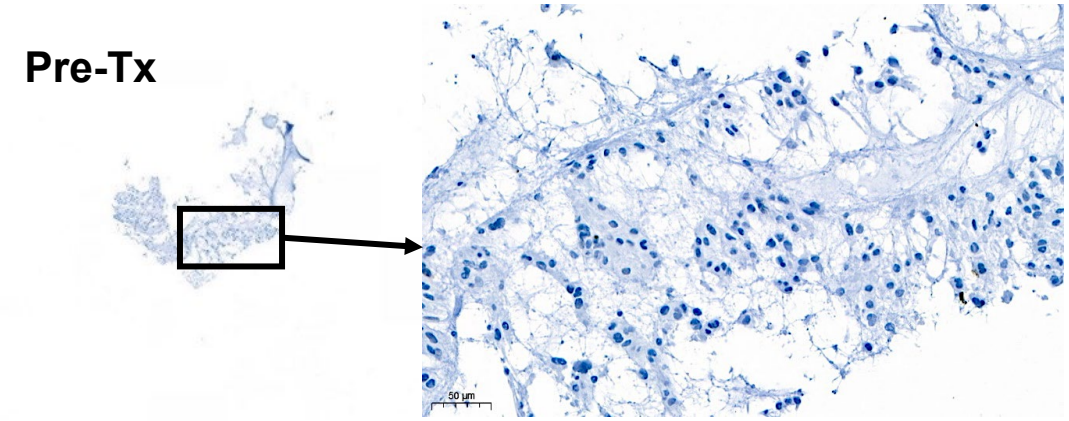
- 1st cohort open

No clinically significant liver toxicity observed to date

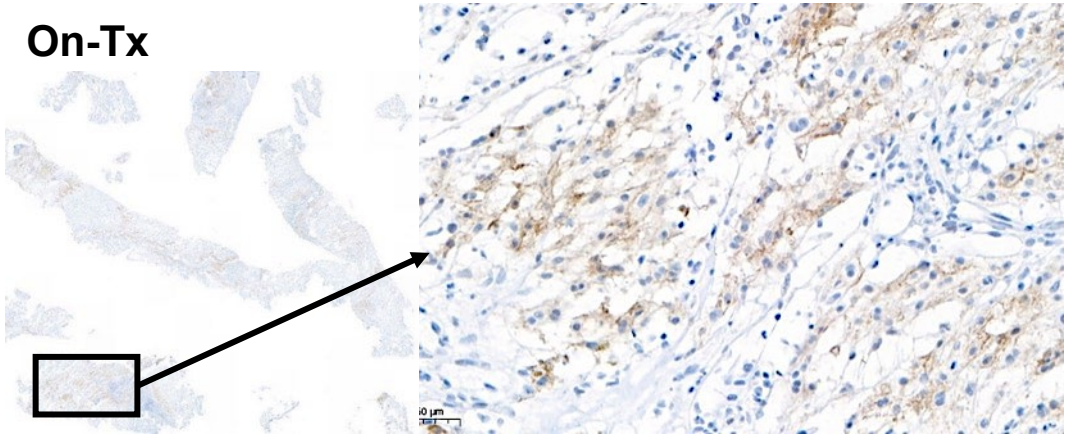
Indications of DR5 activation: cleaved caspase 3 (brown)

102-012 (9A) Chordoma, 3 mg/kg

Pre-Tx

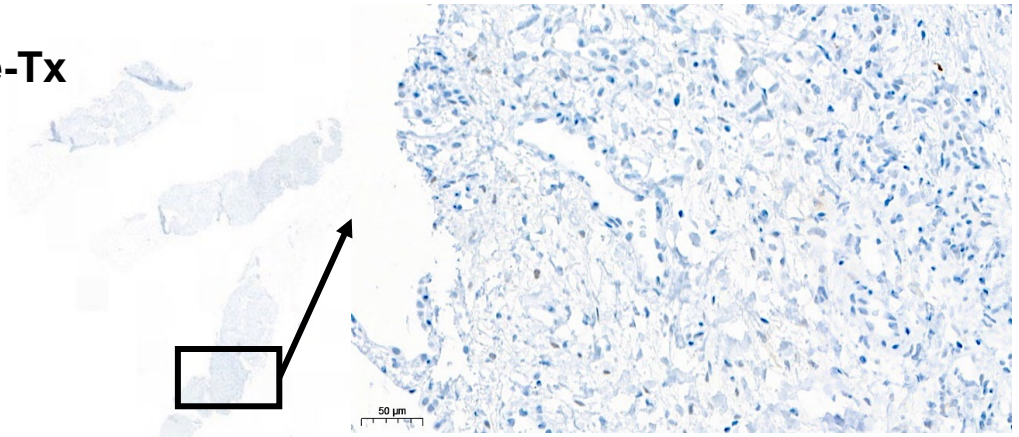


On-Tx



105-023 (17A), Chondrosarcoma, 10 mg/kg

Pre-Tx



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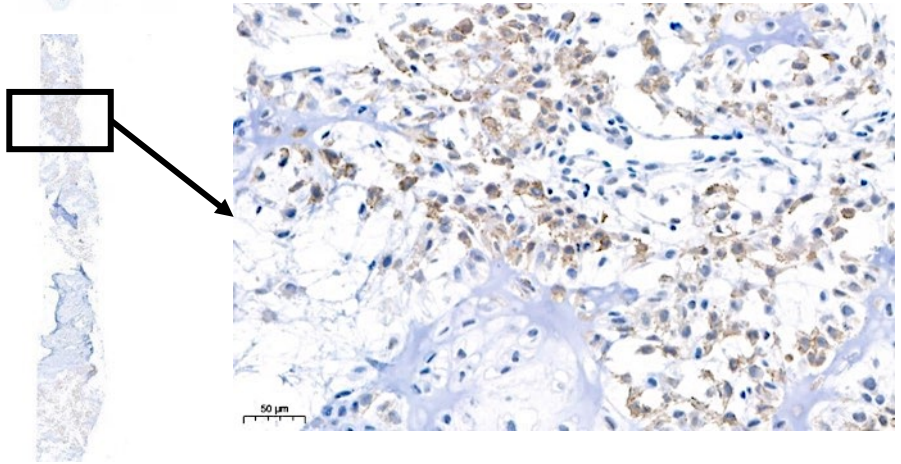
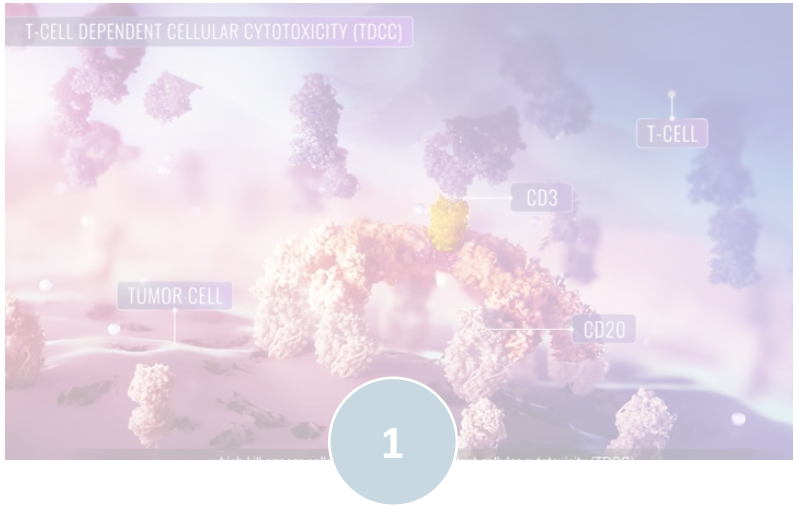


Oncology: three distinct mechanisms of action



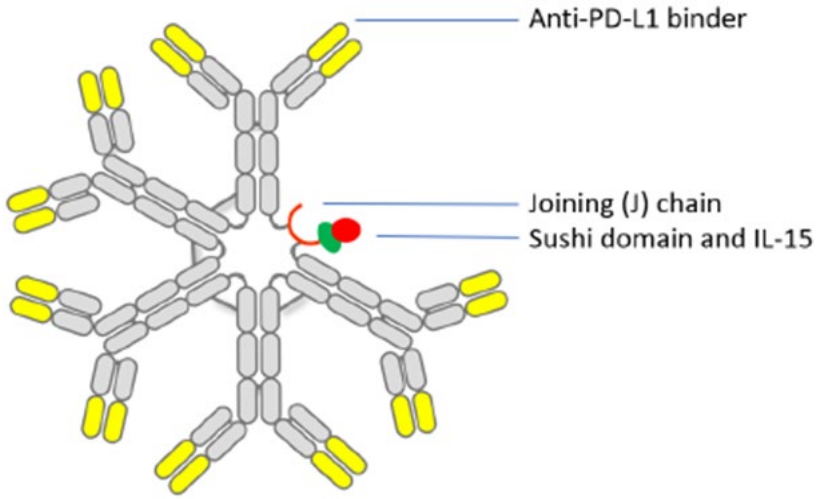
Bispecific T cell Engagers
(e.g., CD20 x CD3, CD38 x CD3)

Multi-Receptor Agonism
(e.g., DR5)

Targeted Cytokine Stimulation
(e.g., IL-15)

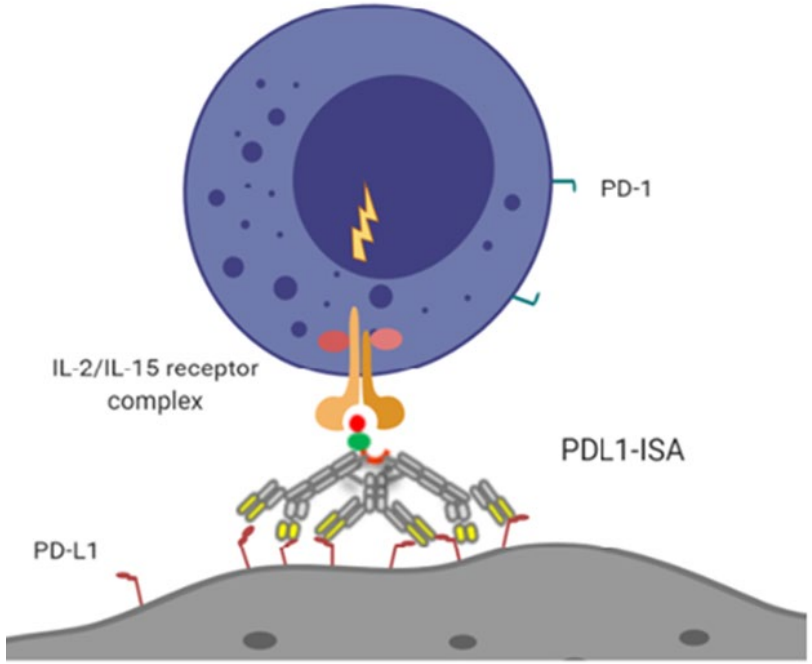
IGM-7354: targeted IL-15 delivery via PD-L1 expressing cells

IGM - 7354



IL-15 x anti-PDL1 IgM

NK or CD8 T cell expansion

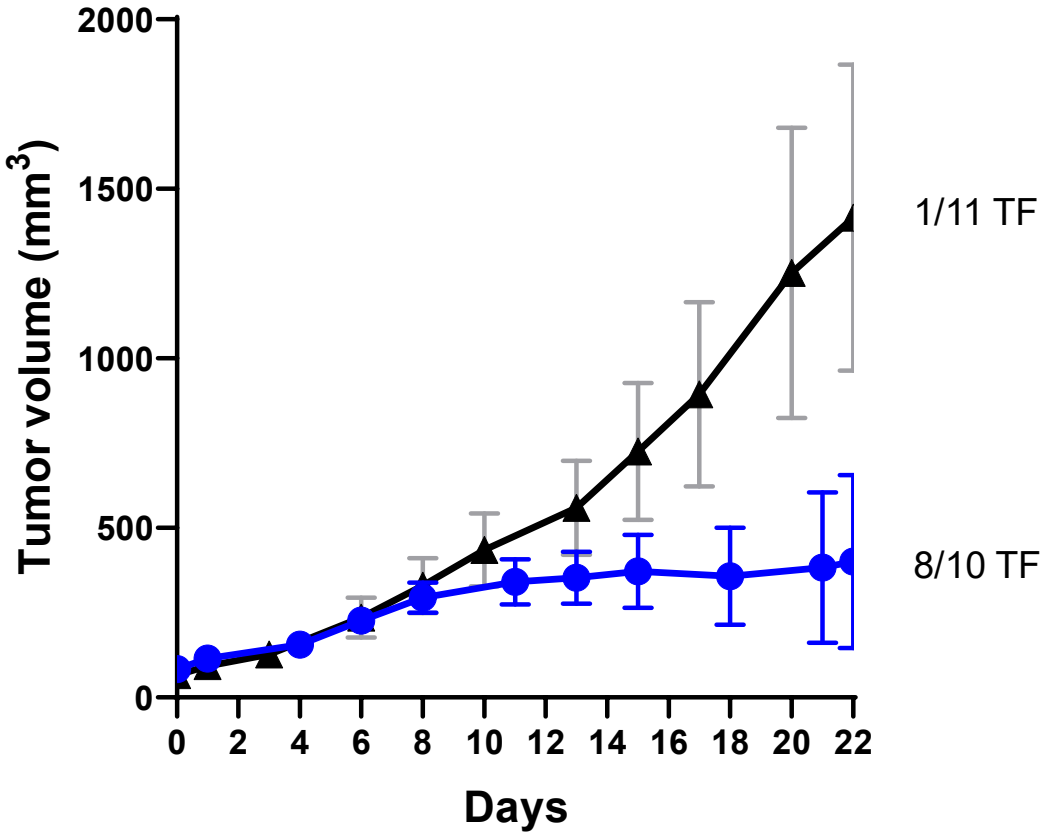


Tumor and/or Antigen Presenting Cell

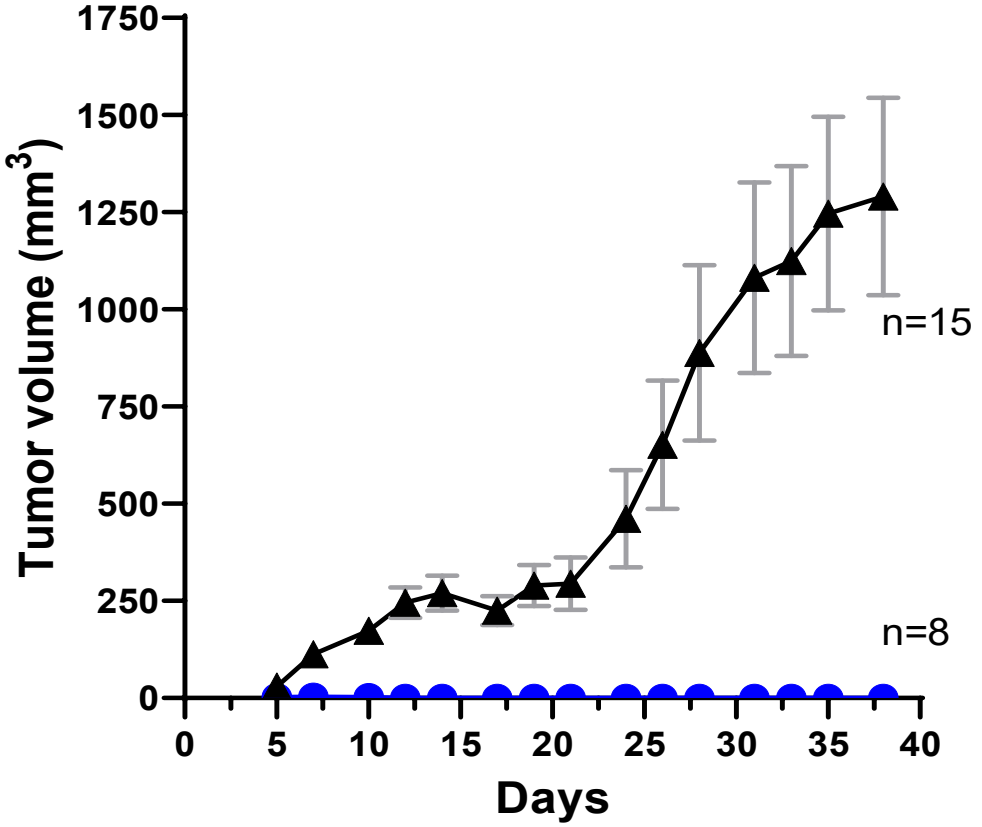
- IGM-7354 presents IL-15 to CD8 and NK cells
- Targeted delivery may increase efficacy and reduce toxicity
- IND submission 2022 (anticipated)

IGM-7354: *in vivo* efficacy and immune memory

Initial treatment of CT26 tumor



CT26 tumor rechallenge



Vehicle; IL-15 x PD-L1 IgM dosed Q2Dx3 at 5 mg/kg

Sanofi and IGM collaboration for oncology, autoimmunity and inflammation targets

- Global research collaboration to leverage proprietary IgM antibody technology platform to create, develop and commercialize agonists against **3 oncology targets** and **3 autoimmunity and inflammation targets**
- $150M upfront payment from Sanofi and potentially over $6B in preclinical, clinical, regulatory and commercial milestone payments

Oncology (3 targets)

- IGM to lead R&D through BLA/MAA approval for first indication and assume related costs
- Sanofi to lead subsequent development efforts

Autoimmunity & Inflammation (3 targets)

- IGM to lead R&D through Phase I
- Sanofi to lead subsequent development efforts

SANOFI responsible for worldwide commercialization

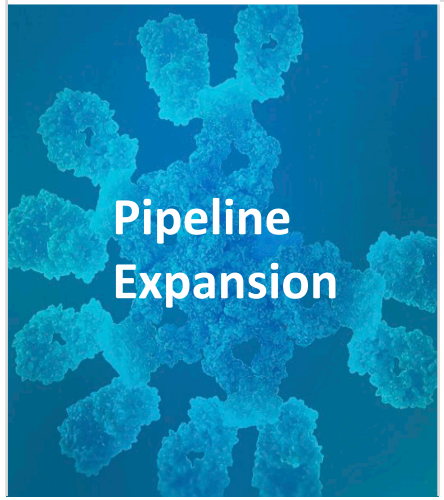
Multiple catalysts anticipated over next twelve months

IGM-8444 (DR5)

- ❑ Phase 1 initial combination data

Imvotamab (CD20 x CD3)

- ❑ Phase 2 initial data



IGM-7354 (IL-15 x PD-L1)

- ❑ IND Submission

IGM-2644 (CD38 x CD3)

- ❑ IND Submission