EVALUESERVE

ESMO 2022 Pre-Conference Summary

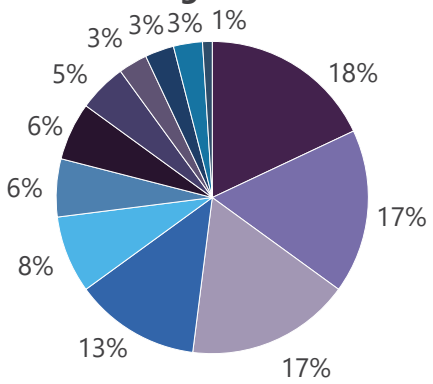
ESMO 2022 Overview

ESMO'22 By The Numbers

1600+	~75	45+	120+	~10
E-posters	Late Breaking Abstracts (LBAs)	Abstract submission categories	Total participant companies	Participant societies

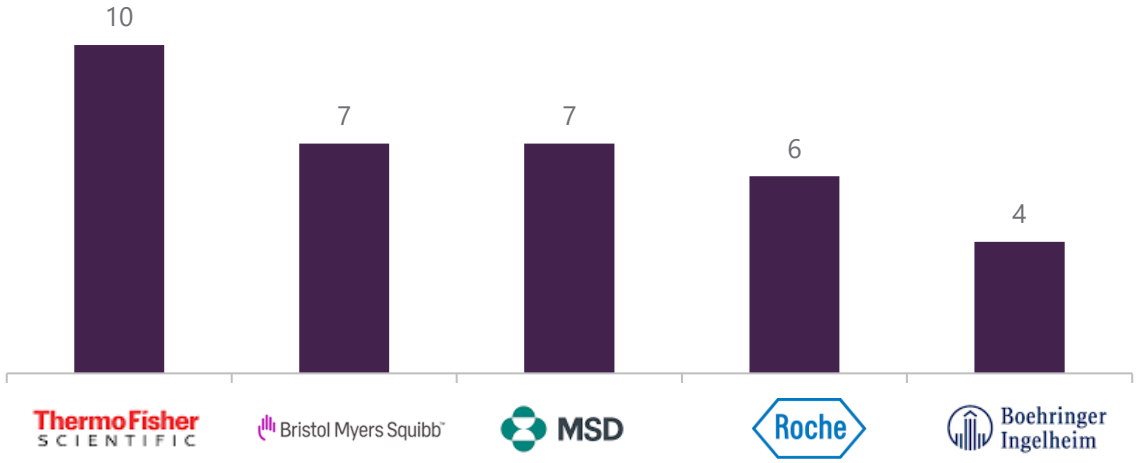
At-a-glance

Overarching Session Coverage



- Breast Cancer
- Lung Cancer
- Urinary Tract Cancer
- GI
- Gynecological Cancer
- Skin Cancer
- Head and Neck Cancer
- Brain Cancer
- Hematological Malignancies
- Endocrine Cancer
- Sarcoma
- Solid Tumors

Industry Satellite Symposia Presence



- 150+ sessions planned across 12 broad oncology indications
- Breast cancer accounts for maximum number of sessions (~30) to be presented during the conference, followed by Lung cancer and UT cancer accounting for 17% each

- ThermoFisher leads the top 5 companies with major conference presence through "Industry Satellite Symposia"
- Other key players include BMS, MSD, Roche and BI

Top Industry Satellite Symposia presenters across key segments

1 GI Tumors

>> Active participation from 13 companies (20+ presentations) <<

SERVIER, MSD, MIRATI THERAPEUTICS, Bristol Myers Squibb, MERCK, gsk, Incyte, IPSEN, Pfizer, janssen, NOVARTIS, ThermoFisher SCIENTIFIC, Daiichi-Sankyo

2 NSCLC

>> Active participation from 11 companies (15+ presentations) <<

Roche, Bristol Myers Squibb, MIRATI THERAPEUTICS, ACE Oncology, janssen, Boehringer Ingelheim, NOVARTIS, ThermoFisher SCIENTIFIC, IPSEN, AMGEN, Daiichi-Sankyo

3 Breast Cancer

>> Active participation from 8 companies (10+ presentations) <<

MSD, Roche, NOVARTIS, Pfizer, Seagen, GILEAD Creating Possible, ThermoFisher SCIENTIFIC, Daiichi-Sankyo

4 Developmental Therapeutics

>> Active participation from 6 companies (5+ presentations) <<

SERVIER, Roche, ThermoFisher SCIENTIFIC, Boehringer Ingelheim, janssen, Daiichi-Sankyo

*Analysis limited to participation across most active indication categories in "Industry Satellite Symposia"

Key abstracts set to be presented at ESMO 2022

728 O — Ph1 dose escalation data of IMC-F106C	IMMUNOCORE	• **Debut data from the first & only off-the-shelf PRAME targeted ImmTAC** (T-cell redirecting bispecific protein) in solid tumors • Could validate a large multi-billion potential opportunity
1133 P — Additional Ph2 safety data from adagrasib's KRYSTAL-1	MIRATI THERAPEUTICS	• Additional **practice-informing AE patterns of adagrasib** to strengthen probability of success in 2L NSCLC as combination under analysis demonstrated less toxicity during previous prelim data readout
315 O — Full expansion cohort safety & efficacy data for Ph1b (CodeBreaK 101) for sotorasib + panitumumab	AMGEN	• Expected to further fuel the existing preclinical evidence of synergistic angle of adding of an EGFR inhibitor to KRASG12C inhibition
735 MO — Updated safety and efficacy Ph1 (SURPASS) data of ADP-A2M4CD8 (MAGE-A4)	Adaptimmune	• Expected to build on the existing encouraging efficacy data reported at ESMO'21, indicating majority of pts experiencing disease control and RECIST responses in several solid tumor types
214 MO — Detailed OS data from Ph3 TROPiCS-02 study for Trodelvy (sacituzumab govitecan)	GILEAD Creating Possible	• Gilead in second interim analysis (Aug'22) indicated **statistically significant and clinically meaningful OS benefit with sacituzumab in HR+/HER2- breast cancer**. Detailed results expected to be presented at ESMO'22
617 O — Initial clinical data from Ph1 (China focused) lemzo + aza doublet	I-MAB BIOPHARMA	• Post latest (Aug'22) global Ph1b trial discontinuation for the triplet, lemzoparlimab + ven + aza, in ND IC IE AML and MDS, this **data is likely to decide fate of the asset** in one of the key indication being perused (i.e., MDS)
754 P — Monotherapy: dose escalation clinical data from Ph1/2 for AFM-24	AFFIMED	• With distinctive MOA acting independent of EGFR signaling coupled with encouraging prelim clinical data and targeting broad STs population, this **readout could supplement to potential of emerging new SOC for EGFR+ solid tumors**
519 MO — Long term survival analysis for Ph3 EMPOWER-Cervical of cemiplimab (#)	REGENERON	• This **long-term survival data likely to strengthen existing findings of cemiplimab** resulting in statistically significant benefit vs chemo in the R/M cervical cancer pts for GHS/QoL and physical functioning

Pre-Conference Analysis of Key Abstracts

FIH data from Ph1 dose-escalation study of IMC-F106C, the first and the only off-the-shelf TCE bispecific protein in solid tumors

Background

Tumor	Asset (Target)	Highlight
Solid Tumors	IMC-F106C (PRAME)	Initial clinical data

Trial Design

Phase NCT	Location	LoT	Arms	Regimen
Ph1/2 NCT04262466	US, UK	2L+	2	Mono & Combo (+ anti-PD-L1)

Key Highlights

FIHresults AT ESMO'22

Solid Tumors

ImmTAC

FirstInClass

PRAME biomarker

Bispecific protein

First off-the-shelf TCE

Eye catching data

Therapeutic Agent

KOLs Expecting

Asset Deep Dive

The **first PRAME targeted ImmTAC** in multiple solid tumors.

Also, the **first & only off-the-shelf** therapeutic against PRAME prognostic biomarker

In the Ph1 dose escalation study, 39 patients were enrolled. The company planned to report data from at least 20 PRAME+ and efficacy evaluable patients at ESMO'22

ESMO data should provide greater insight into which indications could be best suited for IMC-F106C

NSCLC viewed to be an interesting potential first indication

Analyst Opinions/KOL view

- IMC-F106C holds blockbuster drug potential and could generate peak annual revenues of $3 Bn+ - *H.C. WAINWRIGHT*
- Analysts are highly optimistic of upcoming readout, specially when another key PRAME competitor Immatics' IMA203 set low bar with ORR of 13% (or 11% ORR in the ITT population) – *Cowen Research*
- *One of the key presentations under radar of multiple analysts at ESMO'22 (Jefferies, Barclays etc.)*

"**Researcher, Germany**" highlighted potential in the debut data readout for IMC-F106 in solid tumors at ESMO'22

Onco group, US also demonstrated optimism towards IMCF106C initial Ph1 data

IMMUNOCORE **#7280 - Ph1 dose escalation data of IMC-F106C, the first PRAME × CD3 ImmTAC bispecific protein in solid tumors**

Sotorasib's additional safety data presentation; high success probability in 2L NSCLC as the combination appears less toxic

Background

Tumor	Asset (Target)	Highlight
NSCLC	Adagrasib (KRASG12C)	Updated safety data for KRASG12Cm NSCLC

Trial Design

Phase NCT	Location	LoT	Arms	Regimen
Ph1/2 KRYSTAL-1	US, Puerto Rico	1L+	9+	Mono & Combo (+ EGFRi, anti-PD-L1)

Key Highlights

Positive analyst opinion

Adagrasib

Potential Approval

Promising safety & efficacy data at ASCO'22

Updated safety data

KRASG12C-mutated NSCLC

KRYSTAL-1 Ph2 study

Positive analyst opinion

Asset Deep Dive

FDA accepted Mirati's NDA for adagrasib as treatment of previously treated $KRAS^{G12C}$m NSCLC in Feb'22

PDUFA date: 14th Dec'22

The company will provide further clarity on regulatory pathways of KRYSTAL-1 monotherapy arm of STK11 co-mutations in IL-NSCLC later this year

Initial data at ASCO'22 suggested adagrasib was well tolerated and has promising efficacy (mDoR was 16.4 mos, mPFS was 11.1 mos) in $KRAS^{G12C}$m NSCLC pts

Pre-clinical data showed low potency, longer t-half, high selectivity, wide tissue distribution and good therapeutic index for KRASG12C

Analyst Opinions/KOL view

- "We view the front-line NSCLC setting as key for the value of the KRASG12C franchise and MRTX's adagrasib + pembrolizumab combination seems to be easier to combine in this population" - ***JMP Securities***
- Liver toxicity and TRAEs are generally lower with MRTX's adagrasib + PD-1 vs. sotorasib combos, despite monotherapy lead-in - ***JMP Securities***
- This upcoming data also highlighted as key ESMO'22 presentation by several analysts - ***Jefferies***
- Adagrasib could capture higher market in 1L/2L NSCLC as compared to Amgen's Lumakras, but adagrasib data needs to mature. Adagrasib has success probability of 90% in 2L NSCLC and 50% in 1L NSCLC - ***BMO Capital***

Oncology researcher, Ireland emphasized on the associated toxicity results disclosed so far from the trial

Another Biotech group eagerly waits for the upcoming data readout at ESMO'22 and expect to further build on previously reported at ASCO'22

MIRATI THERAPEUTICS

#1133P - Additional practice-informing AE patterns and management in the KRYSTAL-1 Ph2 study of adagrasib in patients with KRASG12C-mutated NSCLC

Updated clinical data of sotorasib could build on existing preclinical research evaluating synergistic potential of EGFR and KRAS^{G12C} inhibition

Background

Tumor	Asset (Target)	Highlight
CRC	Sotorasib (KRASG12C)	Full expansion data of CRC

Trial Design

Phase NCT	Location	LoT	Arms	Regimen
Ph1/2 CodeBreaK 101	Global (US, EU)	1L+	3	Mono & Combo (+ EGFRi)

Key Highlights

Exciting data at ESMO'22

Sotorasib +panitumumab

Solid Tumors

Updated clinical data

KRASG12C-mutated CRC

Phase 1b study

Encouraging data as reported for NSCLC arm

Asset Deep Dive

Sotorasib targets KRAS^{G12C}, a promising marker in solid tumors. Ph1 initial **data anticipated Q3, 2022** at ESMO 2022

Initial results **at ESMO'21**, this combo showed **ORR of 27% and DCR of 81%** and majority of TRAEs were gr1-2, no gr4 or fatal TRAEs observed in KRAS^{G12C}mCRC patients

Promising efficacy/safety data from same trial's NSCLC arm presented at WCLC'22 was hugely appreciated overall and similar data is expected for CRC as well

Based on encouraging safety and efficacy data at ESMO'21, company started enrolling in Ph3 study of this combo in 3L+ CRC

Analyst Opinions/KOL view

- The previous results presented for Sotorasib created huge buzz around twitter and positive sentiments of KOLs on it, hence analysts have positive opinion for colorectal arm
  - The study highlighted as one of the key titles coverage in ESMO'22 by many analysts - ***BMO Capital***
- Sotorasib + PD-1 mAbs (pembrolizumab and atezolizumab) has been associated with liver toxicity and no real efficacy increase vs monotherapy to account for the increased toxicity in NSCLC. The new combination (Sotorasib + Panitumumab) data in CRC is expected to be encouraging – ***JMP Securities***

Researcher, England encouraged by Sotorasib, antitumor activity in NSCLC reported at WCLC'22

Researchers from Germany & US also highlighted the hepatotoxicity issues associated with the concurrent administration of sotorasib and Pembrolizumab

AMGEN

#315O - Sotorasib in combination with panitumumab in refractory KRAS G12C mutated colorectal cancer: safety and efficacy for phase 1b full expansion cohort

Upcoming Ph1 data anticipated to solidify existing disease control and RECIST responses reported across solid tumors for ADP-A2M4CD8

Background

Tumor	Asset (Target)	Highlight
MAGE-A4 Positive Tumors	ADP-A2M4CD8 (MAGE-A4)	Updated safety and efficacy result

Trial Design

Phase NCT	Location	LoT	Arm	Regimen
Ph1 SURPASS	US, EU, Canada	1L	1	Mono & Combo (+ nivolumab)

Key Highlights

First Next-gen therapy

MAGE-4

Solid Tumors ADPA2M4CD8

Promising topline data

unresectable or metastatic tumors

SURPASS Ph1 study

Positive analyst opinion

Asset Deep Dive

The **first "next-gen" therapy** for MAGE-A4 that can express CD8α co-receptor alongside engineered TCR

Pre-clinical data showed co-expression of CD8α can boost immune response against solid tumors, **increases anti-tumor activity** by using CD4+ cells into CD8+ killer or cytotoxic T-cells while keeping CD4+ function

Topline data from the same trial for 22 pts presented at ESMO'21 demonstrated **ORR 36%** and **DCR 86%** across 5 STs and promising durability

Efficacy data from 43 evaluable pts to be presented at ESMO'22

Analyst Opinions/KOL view

- Even though the analysts are encouraged by development made so far with ADAP-A2M4CD8 still some speculation remains with ability of single TCR's to drive meaningful response rates- ***Barclays Research***
- Post initial encouraging data across 5 solid tumors (ovarian, H&N, esophagogastric junction, bladder, and synovial sarcoma cancers) presented at ESMO'21, analyst are equally excited for upcoming data in ovarian and esophageal cancers
- Several other analyst and KOLs are **positively looking** for the updated data at ESMO'22 - ***Barclays, Mizuho Securities***

"Researcher, Germany" showed excitement around upcoming results of ADP-A2M4CD8 combination study with nivolumab

"Researcher, France demonstrated optimism from the updated data for ADPA2M4CD8 SURPASS trial in ESMO'22

Adaptimmune

#735MO- Updated safety and efficacy from SURPASS, Ph1 trial of ADPA2M4CD8, a T-cell therapy, in previously treated unresectable or metastatic tumors

Along with improving PFS 3X at 1-year mark, Trodelvy has also improved QoL over physician's choice of chemo in TROPiCS-02

Background

Tumor	Asset (Target)	Highlight
Breast cancer	Trodelvy (TROP-2)	Second interim analysis

Trial Design

Phase NCT	Location	LoT	Arm	Regimen
Ph3 TROPiCS-02	Global (US, EU)	2L+	1	Mono

Key Highlights

Exciting data at ESMO'22

Added in NCCN guidelines

Ph3 TROPiCS-02

Seeking approval in mBC

HR+/HER2–mBC

Primary endpoint met

Sacituzumab govitecan

First TROP-2 directed ADC for mBC

Asset Deep Dive

Gilead reported meeting PEP of PFS (**5.5 mos for SG vs 4 mos for chemo of physician's choice**). Detailed analysis was **presented at ASCO'22**

Drug has already been **added in NCCN guidelines** as category 2A recommendation for HR+/HER2-mBC based on positive data reported at ASCO'22

It is **first TROP-2 directed ADC** against BC which has shown significantly increased OS (SEP), as reported in company PR, in Aug'22. Detailed data to be disclosed at ESMO'22

Detailed upcoming OS data to further supplement the related **sBLA submitted** to the FDA for HR+/HER2 mBC

Analyst Opinions/KOL view

- Updated results from this result will likely provide updated data for SG compared with single-agent chemotherapy that may lead to a novel, effective later-line treatment option for patients with HR+/HER2- mBC to address a dire unmet medical need
- "We expect FDA to approve Trodelvy for HR+/HER2-mBC, but we need to see OS data to assess its competitive profile vs. AZN's Enhertu" - Analyst from ***SVB Securities***
- Consensus forecasts Trodelvy could generate peak revenues of USD **2.1Bn and 3.3Bn in 2025 and 2028** respectively - ***investment bank Barclays***

Big Oncology group, US look forward to the TROPiCS-02 study results, in HR+/HER2-mBC

Analyst from Scrip remain thrilled around Gilead's second interim analysis for TROPiCS-02 but also warn around upcoming competitive headwinds from AstraZeneca/Daiichi Sankyo's Enhertu

GILEAD Creating Possible

#214MO - Sacituzumab govitecan (SG) efficacy in HR+/HER2–MBC by HER2 immunohistochemistry (IHC) status in the phase 3 TROPiCS-02 study

Encouraging efficacy results observed with lemzoparlimab in 1L HR-MDS prelim Ph2 results, especially in pts with median follow-up of ≥ 6 months

Background

Tumor	Asset (Target)	Highlight
ND or R/R IR/HR-MDS	Lemzoparlimab (CD47)	Initial clinical data

Trial Design

Phase NCT	Location	LoT	Arms	Regimen
Ph1/2 NCT04202003	China	ND, R/R	2	Mono & Combo (+ Aza)

Key Highlights

Initial clinical results

Optimistic around data

Lemzoparlimab

Front-runner in China

HR-MDS

Ph1/2 results

Recent triplet trial discontinuation

First CD47 product in China

Analyst Opinions/KOL view

- Amidst the latest discontinuation coming as a set-back for I-Mab, positive data from this trial could further decide the position of lemzo in the crowded CD47 space
- Lemzoparlimab preliminary Ph2 results in 1L HR-MDS showed encouraging efficacy signal, especially in the patients with median follow-up duration ≥ 6 months
- Highlighted as one of the interesting datasets to be presented at ESMO'22 - ***BMO Capital*** (*ESMO 2022 Titles: What Caught Our Attention*), **Jefferies** (**Top 10 Datasets To Watch**)

Oncology group, US remain optimistic around this upcoming final I-MAB's initial Ph2 data for lemzoparlimab in ESMO'22

Researcher, China highlighted the recent global triplet trial discontinuation by partner AbbVie MDS & AML pts

Asset Deep Dive

As disclosed in I-Mab's FY'21 results, the company is looking for registration of lemzo in China first and hopes to launch the product in next 3 years (2025)

Company claims lemzo being a differentiated CD47 with low RBC binding, minimizing chances of severe anemia

No priming dose or sink effect, favorable safety profile (ASH'21) and strong anti-tumor activity (AML/MDS) boosts company's confidence even further

I-Mab confirmed in its 6-K filing (Aug'22), that partner AbbVie to discontinue global Ph1b lemzo+ven+aza triplet study in AML/MDS pts. Decision not derived by any unexpected the trial (additional details awaited)

I-MAB BIOPHARMA

#617O - Lemzoparlimab, a differentiated anti-CD47 monoclonal antibody, in combo with aza in patients with newly diagnosed HR-MDS: initial clinical results

AFM24 evokes hope to benefit broad set of patients with hard-to-treat EGFR-expressing cancers

Background

Tumor	Asset (Target)	Highlight
Solid Tumors	AFM24 (EGFR)	Updated clinical result

Trial Design

Phase NCT	Location	LoT	Arms	Regimen
Ph1/2 AFM24-101	US, Korea, Spain, UK	1L+	1	Mono

Key Highlights

Updated data at ESMO'22

Potential treatment paradigm disruptor

AFM24

Ph1 results

EGFR-STs

Targeting huge market

Promising topline data

New standard of care

Asset Deep Dive

Given distinctive MOA AFM24 is potentially eligible for treatment of all EGFR+ tumors, regardless of EGFR-pathway mutations and EGFR receptor density

Latest correlative data (NK'22) support rationale for AFM24 as mono and two combo that are currently under way in separate ph1/2a studies with SNK01 and with Tecentriq

First results for mono trial (AFM24-101) presented well-managed safety profile, PD activity for doses ≥160 mg and SD: 8/24 response evaluable pts

Preclinical data at **AACR'22** showed, EGFR+ solid tumor cell lines can be killed by NK cell-mediated immunity, regardless of EGFR gene's mutation status

Analyst Opinions/KOL view

- AFM24 represents large market opportunity targeting several STs
  - For the broad clinical AFM24 program, patients are recruited in three studies, two of which are combination studies, in 7 indications [including RCC, NSCLC (EGFRm), colorectal cancer (KRAS wild-type, MSS), GEJ etc.)
- Global therapeutics market for EGFR+ tumors projected to surpass 1.5 Mn pts by 2022 – *Affimed Corporate Presentation Jun'22*
- Several key analyst reports also included this study in their shortlisted titles to be focused in ESMO'22 – ***Jeffries & Barclays***

A KOL US, remain thrilled for AFM24 complete dose escalation data as mono at ESMO'22, but also expressed uncertainty if the data will include exploratory higher dose or not

Another KOL US, expressed concern around unclear efficacy data readout timeline for AFM24 in EGFR+ STs

AFFIMED

#754P - A Phase 1/2a dose escalation study of AFM24 in patients with EGFR solid tumors: Results from Phase 1

Cemiplimab outperforms investigator's choice chemotherapy in the 2L cervical carcinoma, based on existing data

Background

Tumor	Asset (Target)	Highlight
Cervical cancer	Cemiplimab (PD-1)	Updated clinical result

Trial Design

Phase NCT	Location	LoT	Arms	Regimen
Ph3 EMPOWER-Cervical 1	Global (US, EU)	2L+	1	Mono

Key Highlights

Met Primary Endpoints

EMPOWER-1

Improved OS, PFS & ORR

2L Cervical cancer

Positive pivotal data

Regeneron's oncology backbone

Outperforming results at ESMO'21

Asset Deep Dive

Ph3 positive data of Cemiplimab from the same trial was presented at ESMO'21 virtual plenary where it exhibited improved results than chemo

Cemiplimab showed **improved OS (31%), PFS (25%) & ORR (16%)** in overall population of cervical cancer with along with elevated GHS/QOL

sBLA filed in Sep'21 for 2L cervical cancer was **voluntarily** withdrawn **(Jan'22)** as company & FDA couldn't come to common grounds for p**ost marketing studies**

sBLA was filed on initial data of this EMPOWER Ph3 trial itself. The company is in active discussion with regulatory authorities outside US

Analyst Opinions/KOL view

- After BCC, CSCC & NSCLC, cervical cancer is the fourth indication which has demonstrated positive pivotal data for cemiplimab
- Based on the previous reported results analysts remain optimistic around this long-term survival data to be presented at ESMO'22
  - The Cemiplimab long-term survival data is interesting to look for - ***BMO Capital Markets***
- Several other analysts remain positive and showed interest in upcoming data – ***Barclays, Jeffries***

The upcoming long-term survival data catching attention from KOLs - **Oncology group, US**

Cemiplimab continues to be the backbone of Regeneron's oncology pipeline, **Onco researcher, France**

REGENERON

#519MO - Phase 3 EMPOWER-Cervical 1/GOG-3016/ENGOT-cx9 trial of cemiplimab in R/M cervical cancer: Long-term survival analysis

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