# Capital Markets Day 2024

**Meet Group Management**

Darmstadt, October 17, 2024

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# confidence in long-term growth

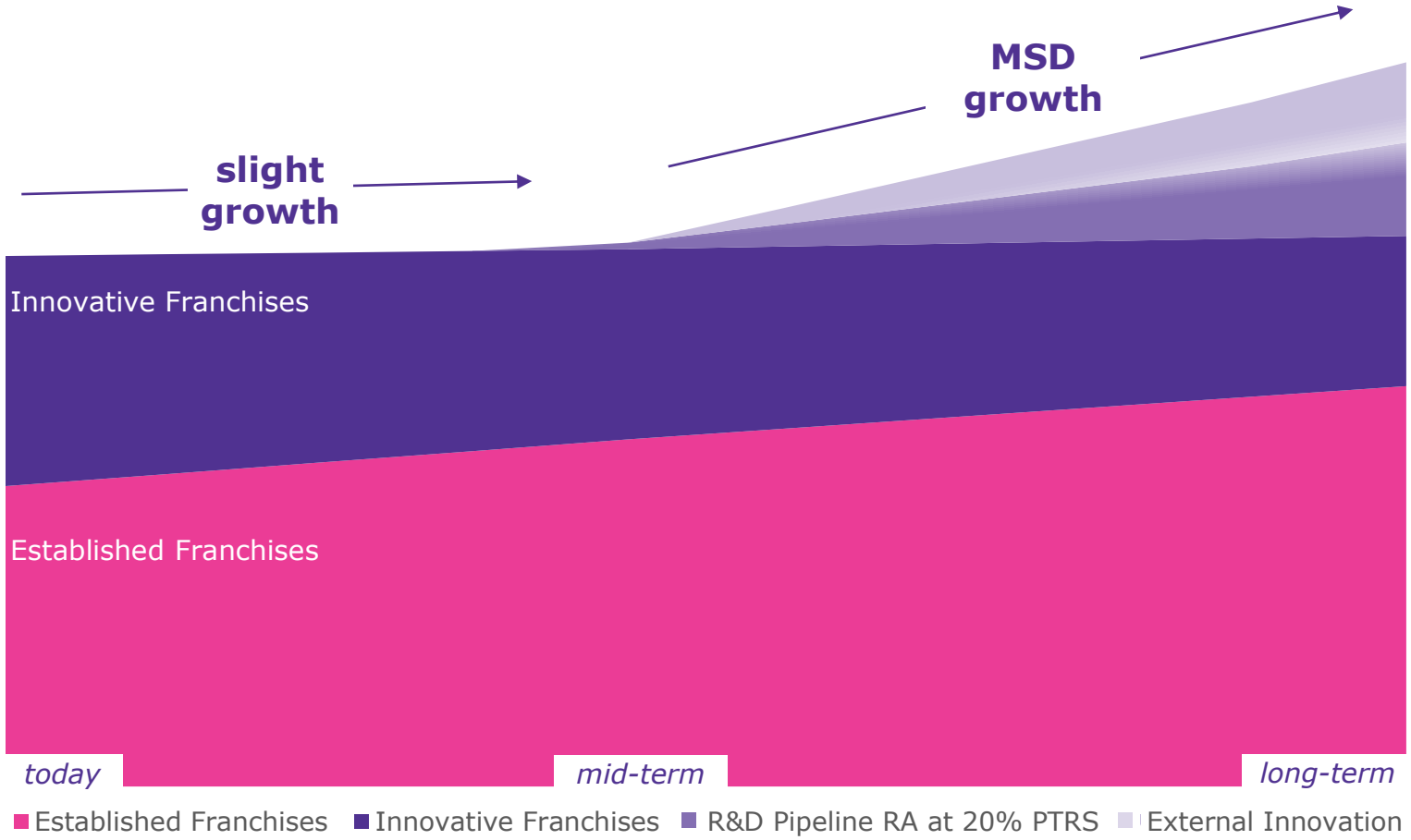
Peter Guenter, CMD Spotlight Session Healthcare
October 17, 2024

# Healthcare
# Resilient product portfolio as base for attractive LT growth potential

**Future** growth drivers incl. pimicotinib in TGCT, enpatoran in CLE/SLE, cladribine capsules in gMG

**Resilience** of commercialized products driven by Established Franchises CM&E and Fertility

*Healthcare sales, illustrational graph applying CAGR based growth rates*




Acronym(s): **TGCT** = tenosynovial giant cell tumor; **CLE** = cutaneous lupus erythematosus; **SLE** = systemic lupus erythematosus; **CM&E** = Cardiovascular Metabolism & Endocrinology; **gMG** = generalized myasthenia gravis; Established Franchises = Commercialized products CM&E + Fertility + Other; Innovative Franchises = Oncology + N&I, dark purple color indicates currently commercialized products; **RA** = risk-adjusted; **PTRS** = Probability of technical and regulatory success; **External innovation** = External licensing, partnering and M&A activities
Visualization based on mid-term and long-term CAGR, not single year performance.

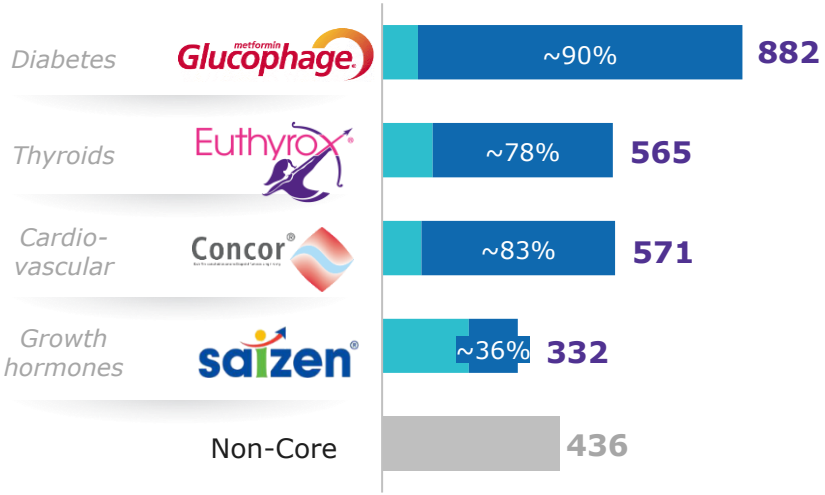
# Established Franchises – CM&E

## Diversified leadership positions, growth driven by developing markets

### CM&E Sales €2.8bn in FY 2023 (~4% CAGR '18-23)[6]

**Sales by Core Brands in m€**[6]

Markets: Mature | Developing




| | Value Market Share (ex US & ex JP) [3] | CAGR 2018 - 2023 [6] | CAGR 2018 - 2023 Market[4] | mid-term growth CAGR |
|---|---|---|---|---|
| Diabetes | ~25% | ~4% | ~4% | ●○○ |
| Thyroids | ~48% | ~9% | ~6% | ●●◐ |
| Cardio-vascular | ~11% | ~4% | ~5% | ●●○ |
| Growth hormones | ~21% | ~7% | ~5% | ●○○ |
| Non-Core | | ~ -4% | NA | |

Low single digit growth | Mid | High

### Position

**#1 Worldwide**[1]
Volume (ex US & ex JP)

**Glucophage** most used biguanide and non-insulin medicine

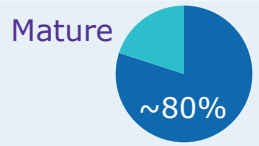
**Euthyrox** most used thyroid treatment

**Concor** most used beta-blocker

**#3 Worldwide**[2]
Value (ex US & ex JP)

**Saizen** with a unique device & digital health ecosystem

**Increasing diagnose & treatment rates**
to further drive growth in developing Markets



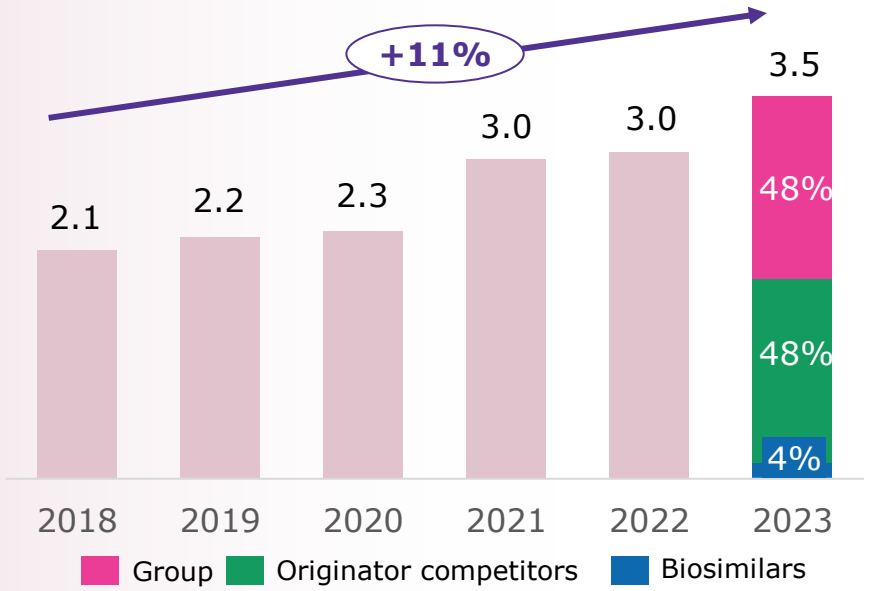

Sales by Region[5, 6] excl. Non-core



**Based on internal analysis by Merck KGaA, Darmstadt, Germany using data from the following sources: 1** IQVIA Analytics Link – based on Volumes MAT Q1 2024: **Glucophage** within BIG (Biguanides – ATC A10J) / NIM (Non-Insulin-Medication – ATC A10H-S) market; **Concor** within BB Market (ATC C7A, C7B); **Euthyrox** within LT4 (Thyroid ATC H3A) market (each for 74 countries ex US & ex JP) **2** IQVIA Analytics Link – based on Values (EURO) MAT Q1 2024: **Saizen** within GH (Growth Hormones ATC H4C) market in 46 countries where available (ex US & ex JP) **3** IQVIA Analytics Link – based on Values FY 2023 (74 countries ex US & ex JP): **Glucophage** within BIG market (Biguanides – ATC A10J) ; **Concor** within BB-Plain Market (ATC C7A); **Euthyrox** within LT4 (Thyroid ATC H3A) market - based on 49 countries across Europe, APAC, MEAR, LATAM and China (ex US & ex JP); **Saizen** within GH (Growth Hormones ATC H4C) market in 46 countries where available (ex US & ex JP). **4** IQVIA Analytics Link & IQVIA MIDAS® – based on Values FY 2018 and FY 2023 (74 countries ex US & ex JP): **Glucophage** within BIG market (Biguanides – ATC A10J) ; **Concor** within BB-Plain Market (ATC C7A); **Euthyrox** within LT4 (Thyroid ATC H3A) market - based on 49 countries across Europe, APAC, MEAR, LATAM and China (ex US & ex JP); **Saizen** within GH (Growth Hormones ATC H4C) market in 46 countries where available (ex US & ex JP). **Each of the above sources reflect estimates of real-world activity. Copyright IQVIA. All rights reserved. 5** Core Brands (excl. Non-Core) in Developed Markets reflect the following countries: NA, EU5, BeNeLux,DACH, Nordics, JP, AUS, HK, SK, TW, SG - Emerging remains rest of world. **6** based on reported sales 2018 and 2023, including an ~80m EUR adjustment in 2018 of in the meantime divested

# Established Franchises - Fertility
## Expanding on our leadership position

### Global Gonadotropin market in € bn[1]




GONAL-f® world's most prescribed r-hFSH treatment[2]

Pergoveris®, the only recomb. FSH+LH product in the market

**Complemented** by a complete portfolio offering
(Ovidrel rhCG, Cetrotide GnrRH antagonist, Crinone progesterone, etc.)

**Growing coverage,** e.g. early access process for Pergoveris in Greater-Bay Area in China under way

**Capacity expansion** of our Fertility production network to cater for constantly growing demand

- **Growing prevalence of infertility** (delayed parenthood and lifestyle habits)
- Increasing awareness and **access to treatment**

**MSD growth CAGR mid-term**

1) Based on internal analysis by Merck KGaA, Darmstadt, Germany using FY values in Euro 2018 (IQVIA MIDAS®) and FY values in Euro 2019-2023 from IQVIA Analytics Link (76 countries), Gonadotropin market includes 12 FSH, LH and hMG molecules; other product classes used in Fertility treatment (hCG, Progesterone, GnRH-antagonist etc.) not included, 2) FY 2023 volumes (standard units) for 5 rFSH molecules from Analytics Link (76 countries), reflecting estimates of real-world activity. 
Acronym(s): **r-hFSH** = recombinant human follicle stimulating hormone; **LH** = luteinizing hormone; recombinant human chorionic gonadotropin; **rhCG** = Recombinant human chorionic gonadotropin; **GnRH** = gonadotropin-releasing hormone

# Innovative Franchises – Commercialized assets

## Competitive pressures moderated by Erbitux + staggered Mavenclad LOE

**ERBITUX® CETUXIMAB** mCRC, SCCHN

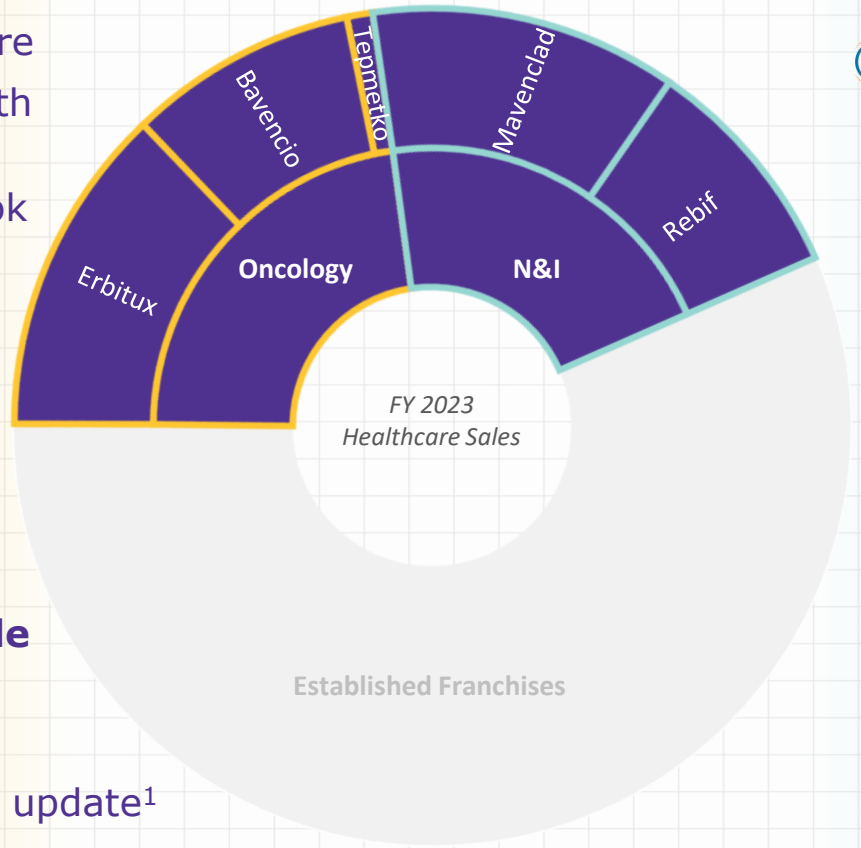
- Leading in mCRC continuum of care
- **Backbone therapy of choice** with more than 200 active trials
- Blockbuster product, stable outlook

**BAVENCIO® avelumab** UC, RCC, MCC

- Established position in 1L mUC
- **Strong value proposition** in competitive market
- Differentiated patient benefit through quality of survival, given **more benign safety profile**

**TEPMETKO® tepotinib** METex14 NSCLC

- Enhanced profile with recent label update[1]
- Low-teens growth in niche indication




**MAVENCLAD® cladribine tablets** RMS

- Most prescribed HE oral in dynamic market[2] across US + EU
- **Blockbuster product** amid maturing growth profile
- LOE base case: US Q4 2026; EU staggered from Q3 2027 to 2030 depending on SPCs granted

**Rebif® (interferon beta-1a)** RMS

- Well established clinical profile
- >2m patient-year experiences[3]
- Decline in line w/ interferon market

1) FDA full approval dated Feb 15, 2024 https://www.fda.gov/drugs/resources-information-approved-drugs/fda-approves-tepotinib-metastatic-non-small-cell-lung-cancer; 2) Based on IQVIA dynamic market data; 3) internal database, data on file

Acronym(s): **mCRC** = metastatic colorectal cancer; **SCCHN** = quamous cell carcinomas of the head and neck; **UC** = urothelical carcinoma; **mUC** = metastatuc urothelical carcinoma; **RCC** = Renal cell carcinoma; **MCC** = merkel cell carcinoma; **NSCLC** = non-small-cell lung cancer; **HE** = High-efficacy; **LOE** = Loss of exclusivity; **SPC** = Supplementay protection certificate

# Innovative Franchises – R&D N&I
## Regaining momentum in N&I innovation, with careful risk control

### Cladribine capsules
Immune reconstitution therapy

High efficacy oral drug aiming at a "treat to target" regimen in generalized myasthenia gravis (gMG)

**Largely de-risked:**

- Well-characterized compound with signal of clinical benefit[1]; direct to Phase III accepted by regulators
- Highly reliable, standard and reproducible study endpoint (MG-ADL)
- Two active drug arms versus placebo and incl. interim analysis, to maximize the success rate

**Study**: MyClad (NCT06463587), registrational **Phase III** study; recruitment ongoing, 1st patient started in Sep-2024

### Enpatoran
Selective and potent dual TLR7/8 inhibitor

Oral therapy with steroid-sparing potential in cutaneous- and systemic lupus erythematosus

**Ongoing de-risking:**

- Cohort A (~100 patients, CLE and cutaneous SLE): Positive PoC, with clinically meaningful efficacy (all doses) and good safety profile
- Cohort B (~350 patients, SLE): passed futility analysis in Q4 2023

**Study**: WILLOW (NCT05162586), PoC study (**Phase II**) in CLE and SLE; full readout expected H1 2025

Next to follow: **M5542** (anti-CTLA/OX40L) in T-cell-mediated autoimmune diseases (Phase I)

Internal innovation
External innovation

1) *Rejdak K, et al. Eur J Neurol. 2020;27:586–9*
Acronym(s): **N&I** = Neurology and Immunology; **TLR** = Toll-like receptor; **MG-ADL** = myasthenia gravis activities of daily living; **PoC** = Proof of concept; **CTLA** = cytotoxic T-lymphocyte-associated protein; **OX40L** = OX40 ligand

# Innovative Franchises – R&D Oncology + External Innovation
## **Executing early oncology strategy, with de-risked late-stage**

### Pimicotinib
Highly selective and potent inhibitor of CSF-1R

Oral therapy for TGCT, a rare, locally aggressive tumor with **Phase III** study (25wk) read-out this year

- **Largely de-risked** with established efficacy of other CSF1Ri's
- Encouraging early-phase data[1]
- **Additional risk sharing** via contractual set-up (full rights in China, optionality RoW)

**Study**: MANEUVER (NCT05804045), **Phase III** double-blind study in TGCT run by our partner Abbisko.

### Early- and mid- stage assets
Including ATRi, PARPi, and ADCs

DDRs: Testing hypotheses for tuvusertib (ATRi) and M9466 (PARP1i) in **Phases II and I**

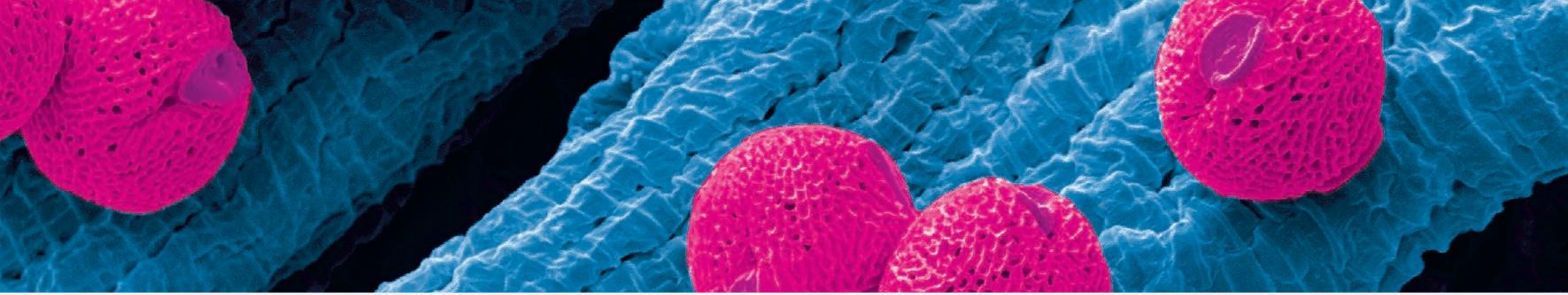
ADCs: two TOPO1 ADCs in the pipeline this year[2], with up to 4 more to follow in the next 3 years

- M9466 (PARP1i) **partially de-risked** by addressing clinically validated target

### Clear criteria for external innovation
- Preferred deals in our existing areas of expertise in Oncology and N&I
- Open to commercially attractive adjacent areas with underserved populations
- Relatively de-risked assets e.g., via established PoC and/or risk sharing

**50% of future launches sourced externally**

1) Phase I data: ORR at w/k 25 by RECIST v1.1: 68.8% in 32 TGCT patients receiving 50mg QD, no apparent liver toxicity observed; 2) M9140 (anti-CEACAM5 exatecan ADC), M3554 (anti-GD2 exatecan ADC).
Acronym(s): **TGCT** = Tenosynovial giant cell tumor; **CSF1R** = Colony stimulating factor 1 receptor; **RoW** = rest of world; **DDR** = DNA damage response; **ATRi** = ATR = Ataxia Telangiectasia and Rad3-related protein; **PARP1i** = PARP1 = Poly [ADP-ribose] polymerase 1; **ADC** = antibody-drug conjugate; **TOPO1** = topoisomerase I



**unique**
product portfolio
offering resilience

**deliver**
on commercial execution
amid strong track record

**growth**
leveraging both internal
and external innovation

**succeed**
by further de-risking
of the pharma pipeline