

# BerGenBio ASA



Nordnet  
15<sup>th</sup> January 2019



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# \$BGBIO - Investment Highlights



## Clinical portfolio of first-in-class AXL inhibitors

Leaders in developing selective AXL inhibitors

Two clinical assets: bemcentinib (Ph2), AXL-antibody BGB149 (Ph1)

AXL is a novel oncology target to overcome immune evasion, therapy resistance & spread

**Pipeline opportunities in multiple cancers and fibrosis**



## Ph2 data in NSCLC & AML with selective AXL inhibitor bemcentinib

Monotherapy and combinations with immune-, targeted and chemotherapies

Biomarker correlation across programme, parallel CDx development

AXL positive patients:  
**40% ORR in 2L NSCLC (KEYTRUDA combo)**  
**43% ORR in R/R AML/MDS (monotherapy)**

**Randomised programme to start H2 2019**



## Resourced to deliver significant milestones

Clinical trial collaborations with Merck and leading academic centres

AXL ADC out licensed to ADC Therapeutics SA

38 staff at two locations:  
HQ & R&D in Bergen, Norway;  
Clinical Development in Oxford, UK

**Cash (USD50m, Sep 30 '18) to milestones: Ph2 bemcentinib, Ph1 BGB149**



# World Class Experienced management team



**RICHARD GODFREY**  
MRPharmS, MBA  
Chief Executive Officer



**ALAN BARGE, MD**  
MD  
Chief Medical Officer (interim)



**RUNE SKEIE**  
Chief Financial Officer



**ANTHONY BROWN**  
PHD, MBA  
Chief Scientific Officer



**PROF JAMES LORENS**  
PHD  
Co-founder, senior scientific advisor



UNIVERSITY OF BERGEN



# Clinical data in 2018 & 2019

2019

## ASCO\*

**NSCLC: Bem + KEYTRUDA**  
2<sup>nd</sup> stage ORR  
OS 1<sup>st</sup> stage

## EHA\*

**AML: Bem + low dose chemo**  
Efficacy  
Biomarker update

## WCLC\*

**NSCLC: Bem + KEYTRUDA**  
2<sup>nd</sup> stage PFS  
First stage survival update

## SITC\*

**Other indications:  
Bem + KEYTRUDA**  
IIT programme

## ASH\*

**AML: Bem + low  
dose chemo**  
Survival

### Q1

- 1L/2L AML chemo combo top line data
- Complete recruitment stage 2 bem + KEYTRUDA (NSCLC)

### Q2/Q3

- **Initiate randomised potentially pivotal programme**
- Complete Phase 1 BGB149

### Q4

- Initiate first-in-patient trials BGB149

\* expected

January

February

March

April

May

June

July

August

September

October

November

December

2018

## ASCO-SITC

Lung cancer, TNBC  
and AML trial update

- ✓ KEYTRUDA combo well tolerated
- ✓ Bemcentinib induces diversification of T-cell receptor repertoire (AML)

## AACR

Preclinical  
Update

Bemcentinib  
increases efficacy  
of checkpoint  
inhibitors

## ASCO

NSCLC, AML, Melanoma  
and biomarker update

Bemcentinib enhances  
responses to  
✓ IO,  
✓ chemo,  
✓ targeted therapies  
✓ and has monotherapy  
efficacy

## EHA

AML trial update

Responses to  
bemcentinib  
monotherapy  
correlated with AXL  
biomarker

## WCLC

Lung cancer trials  
update

- ✓ 40% ORR in AXL+ pts in combo w/ KEYTRUDA
- ✓ Improved PFS in combo with erlotinib and chemo

## ESMO

Biomarker update

- ✓ AXL biomarkers identified
- ✓ Melanoma clinical update
- ✓ AXL's role in low-risk MDS (pre-clinical)

## SITC

NSCLC data late  
breaking

**Late-breaking abstract:** 5.9m PFS in AXL+ previously treated NSCL in combo w/ KEYTRUDA (c80% improvement in AXL+ pts vs AXL-)

## ASH

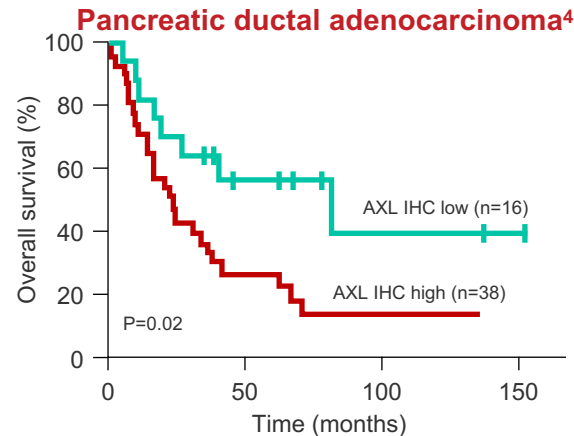
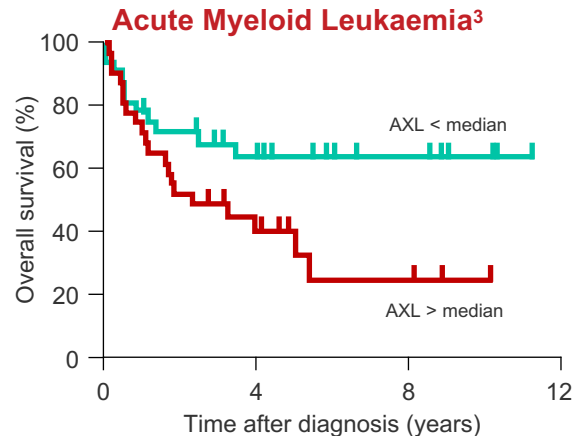
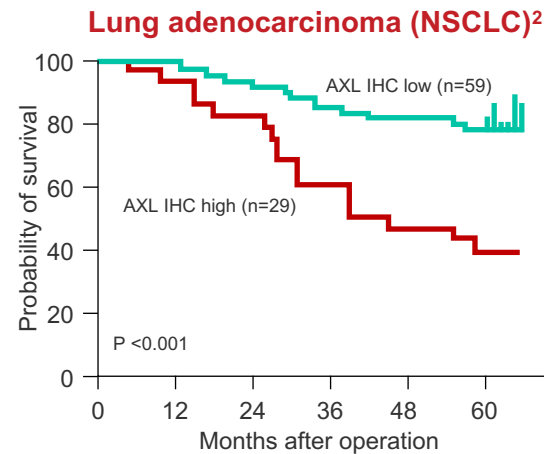
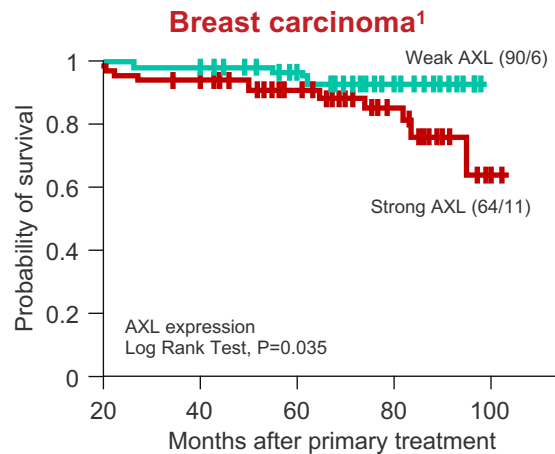
AML trial data  
update

43% CR/Cri/CRp rate in AXL biomarker positive pts



# AXL is independent negative prognostic factor in most cancers

## Strong AXL expression correlates with poor survival rate



## Broad evidence of AXL linked with poor prognosis<sup>5</sup>

Astrocytic brain tumours

Breast cancer

Gallbladder cancer

GI

- Colon cancer

- Oesophageal cancer

- Gastric cancer

Gynaecological

- Ovarian cancer

- Uterine cancer

HCC

HNC

Haematological

- AML

- CLL

- CML

Melanoma

Mesothelioma

NSCLC

Pancreatic cancer

Sarcomas

- Ewing Sarcoma

- Kaposi sarcoma

- Liposarcoma

- Osteosarcoma

Skin SCC

Thyroid cancer

Urological

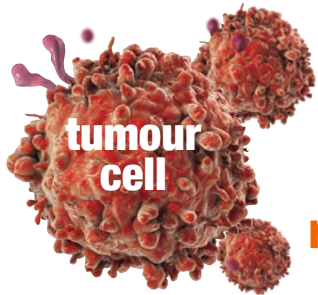
- Bladder cancer

- Prostate cancer

- RCC



# AXL receptor tyrosine kinase drives aggressive disease including therapy resistant, immune-evasive tumours

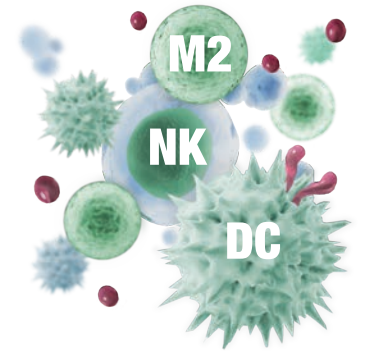


**Drives tumour cell plasticity:  
non-genetic resistance mechanism**

AXL drives features of aggressive cancer:

- Acquired therapy resistance
- Immune escape
- Metastasis

**Key suppressor of innate  
immune response**



AXL is an innate immune checkpoint:

- M1 to M2 macrophage polarisation
- Decreased antigen presentation by DCs
- Immunosuppressive cytokine profile

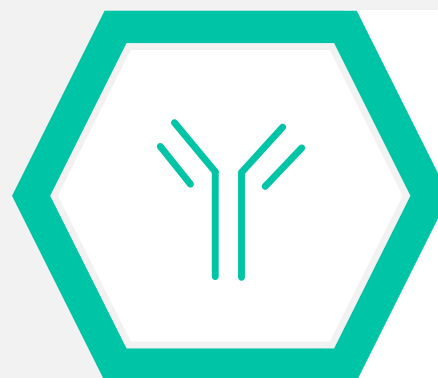
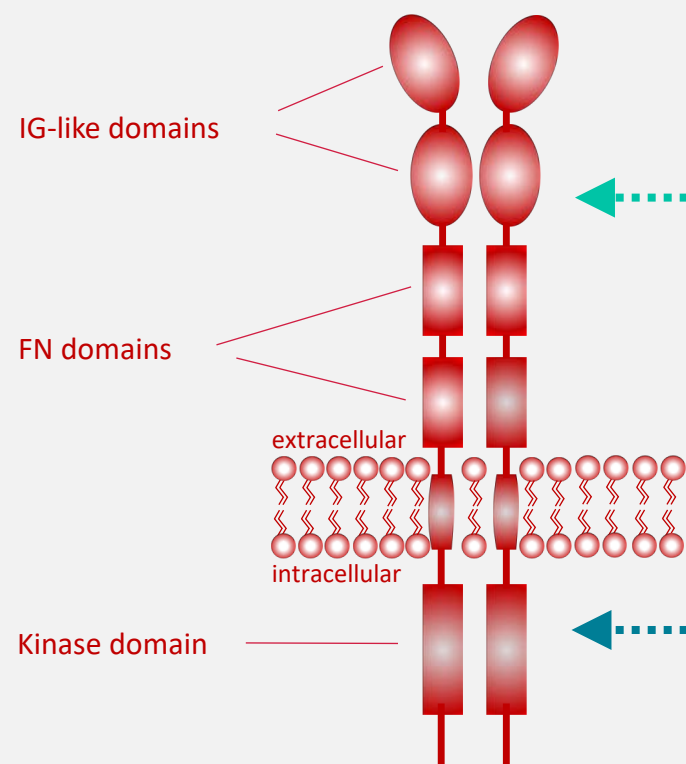
very **low** expression under healthy  
**physiological conditions** (ko  
mouse phenotypically normal)

overexpressed in response to  
**hypoxia, immune reaction,**  
**cellular stress** / therapy

overexpression correlates with  
**worse prognosis** in most  
**cancers**



# Two first-in-class selective AXL inhibitors



## **BGB149**

- AXL function blocking antibody
- Highly selective to human AXL
- Robust, scalable manufacturing process






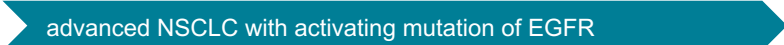










## **Bemcentinib (BGB324)**

- Orally bioavailable small molecule TKI
- Highly selective for AXL
- Straight forward CMC



# Clinical development programmes of AXL inhibitors

> 350 patients at 50 sites across Europe and USA

		Preclinical	Phase I	Phase II	Phase III	Status
Selective AXL kinase inhibitors						
Bemcentinib: selective oral small molecule AXL inhibitor						
	NSCLC + KEYTRUDA (2L, IO naïve)	 previously treated advanced adenocarcinoma of the lung			 MERCK (1)	Stage 1 complete, 40% ORR in AXL+; stage 2 ongoing
	NSCLC + TARCEVA (1L & 2L)	 advanced NSCLC with activating mutation of EGFR				Fully recruited, 1 <sup>st</sup> efficacy endpoint met
	NSCLC + docetaxel (later line) <sup>(2)</sup>	 previously treated advanced NSCLC				IIT, ongoing – latest update WCLC 2018
	AML single agent + low dose chemo (1L & 2L)	 AML or previously treated MDS unfit for intensive chemo				Ph1b complete, 43% ORR in AXL+ R/R AML/MDS; Ph2 ongoing
	IIT programme in additional oncology indications <sup>(2)</sup>	 Melanoma, mesothelioma, pancreatic, glioblastoma, MDS				IIT, ongoing & in set-up
	Fibrosis - <i>preclinical</i>	 IPF, NASH				Pre-clinical work published throughout 2018
BGB149: anti-AXL mAb						
	Healthy volunteers – phase 1a dose escalation	 Healthy volunteer SAD				
BGB601: AXL ADC <i>outlicensed</i>						
	Metastatic cancers	 Pre-IND				
Companion Diagnostics Pipeline		Biomarker Discovery	Biomarker Verification		Validation	
Tissue AXL Soluble AXL Additional soluble markers		 Correlation with benefit from monotherapy, combo with targeted and immunotherapy				Correlation with efficacy reported





## Near term goals

### Bemcentinib – selective AXL inhibitor

Complete PoC phase IIa programme in NSCLC & AML/MDS	H1 2019
Start randomised potentially pivotal programme	H2 2019
Complete randomised potentially pivotal programme	H2 2020

### BGB149 – AXL function blocking antibody

Complete First-in-Man clinical trial	H1 2019
Advance BGB149 into disease indications	H2 2019



# **Bemcentinib: First-in-class highly selective AXL inhibitor in Phase II**

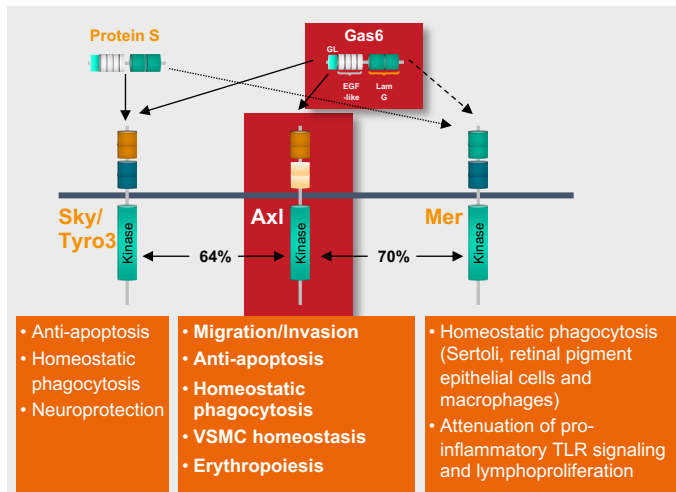




# Bemcentinib: uniquely selective for AXL, excellent clinical safety profile

## AXL is the only TAM member that drives aggressive cancer

- TAM family members Tyro and Mer have homeostatic roles<sup>1</sup>
- TAM kinase domains are highly homologous
- TAM ligands promiscuous



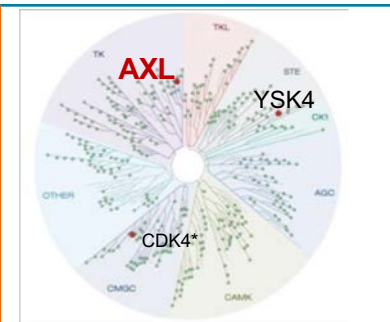
## Bemcentinib was discovered by cell-based counterscreen and as a result is highly selective for AXL

- Bemcentinib is highly potent and selective, particularly over other TAM receptors
- Not spectrum-selective: no activity against Met, Flt3, Ron

Cell based selectivity assay:  $EC_{50}$  ( $\mu M$ )<sup>2</sup>

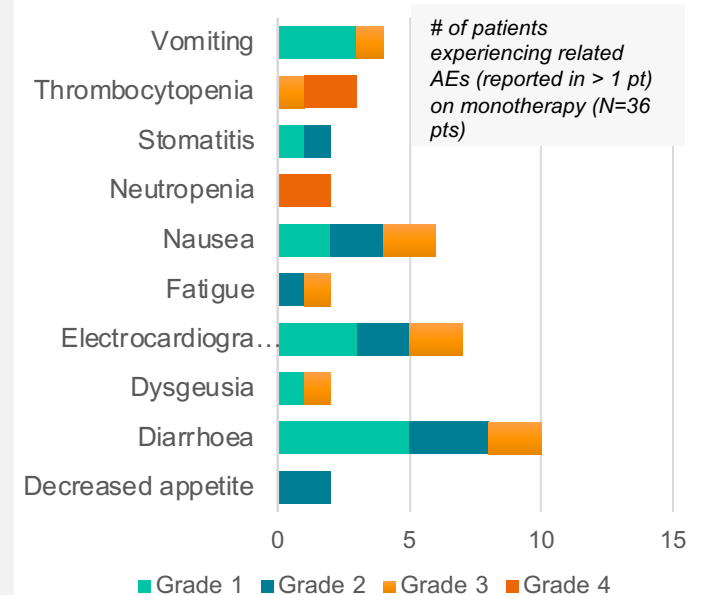
AXL	0.014
Mer	49.49
Tyro	>160

KinomeScan at 4nM bemcentinib (biochemical selectivity assay)



## Bemcentinib has excellent clinical safety profile

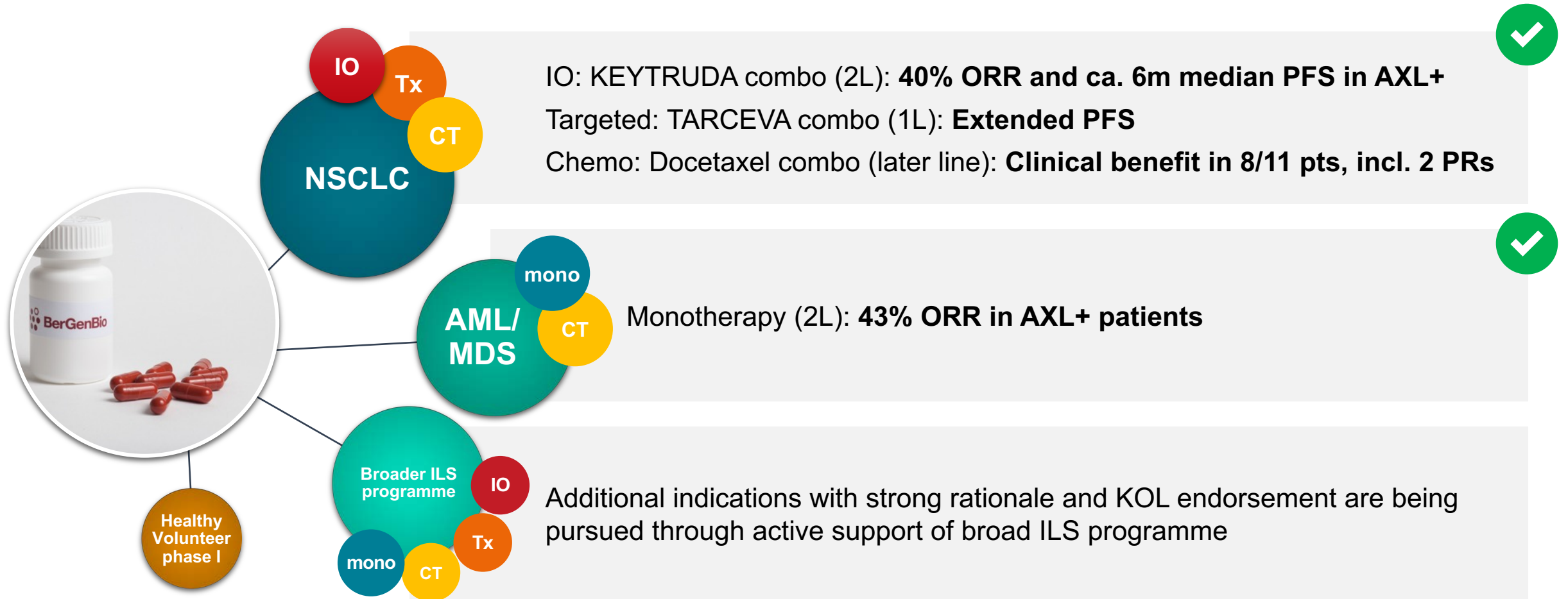
- Combo did not lead to new findings
- Safety profile monotherapy:





# Phase II PoC data

## - Focus on NSCLC & leukaemia





# Bemcentinib PoC data summary: Monotherapy and combinations

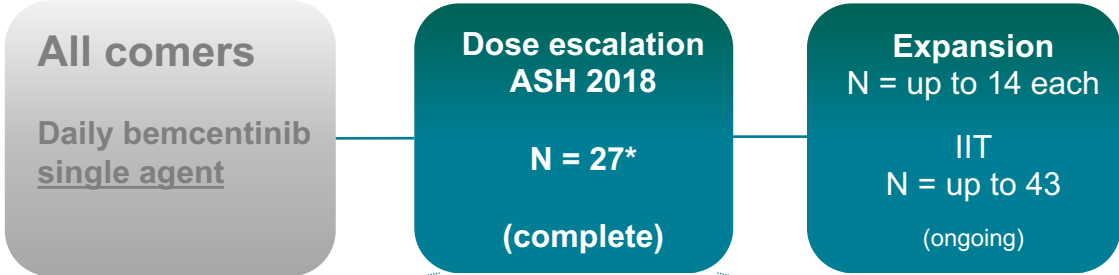




# Monotherapy efficacy with biomarker correlation



Relapsed / refractory AML & MDS,  
unfit for intensive chemo (BGBC003)



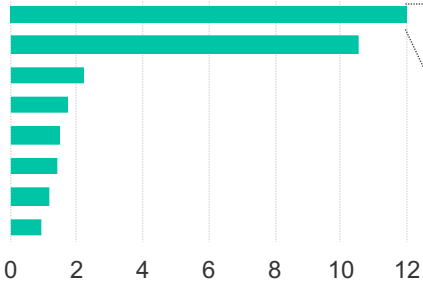
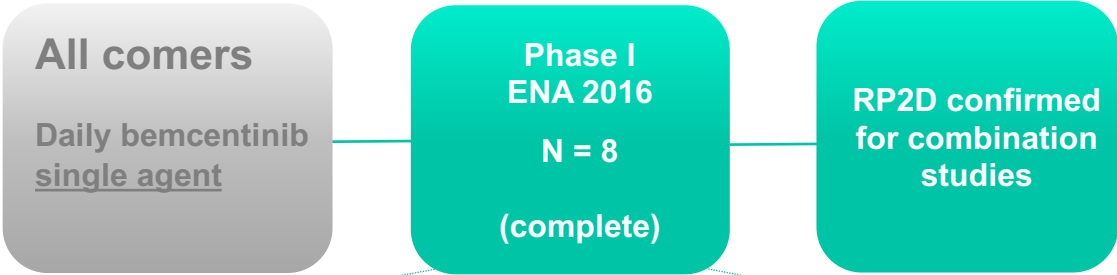
	Overall (n=27)		sAXL low (n=14)		sAXL high (n=11)	
	n	%	n	%	n	%
CR/CRI/CRp	6	22%	6	43%	0	0%
SD	8	30%	3	21%	5	45%
PD*	13	48%	5	36%	6	55%
ORR	6	22%	6	43%	0	0%

Median age of all patients: 74.5  
Responses included poor risk and secondary disease  
mDoR = 3.4 months

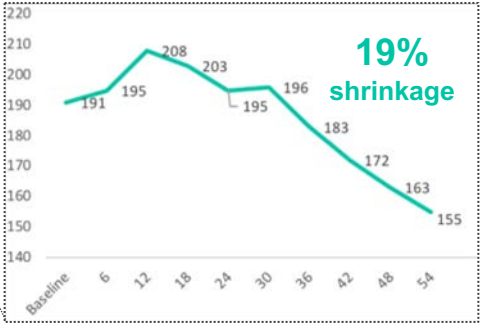
43% ORR in patients with +sAXL biomarker



Later line NSCLC, EGFR wt and  
mutant (BGBC004, trial complete)



Time on treatment (months)



25% DCR for ca 1 year, including 1 minor response



# KEYTRUDA efficacy increased in combination and correlated with tumour AXL

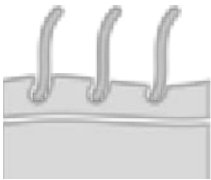


Advanced NSCLC, 1 prior line of Pt, IO-naïve (BGBC008)

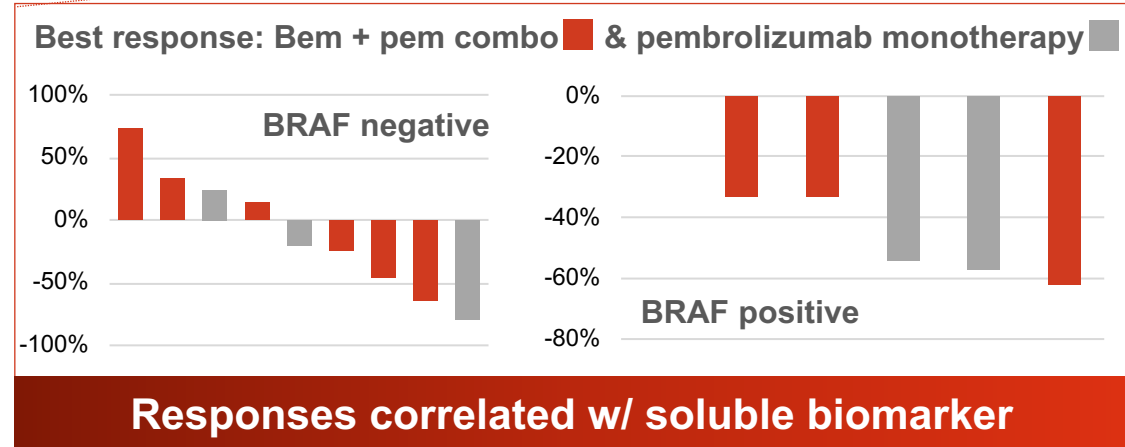


Biomarker at screen	AXL pos	AXL neg
ORR	40%	9%
CBR	70%	45%
mPFS	5.9 months	3.3 months

40% ORR and 5.9 mth mPFS in AXL+ patients



Newly diagnosed advanced melanoma (BGBIL006)

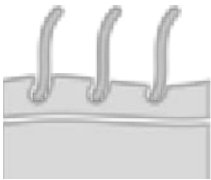
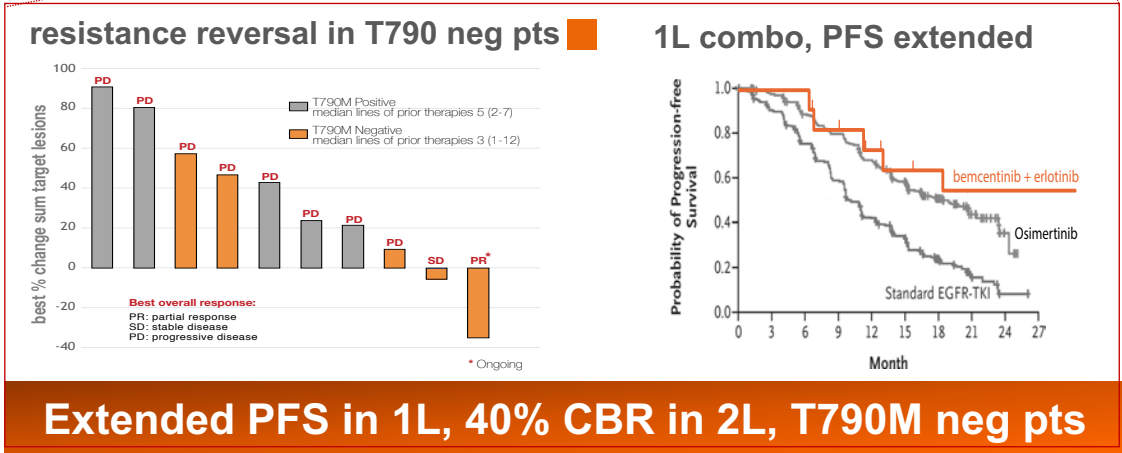
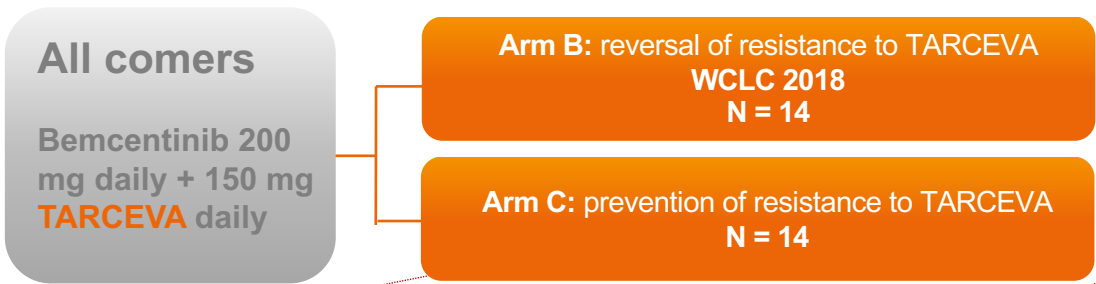




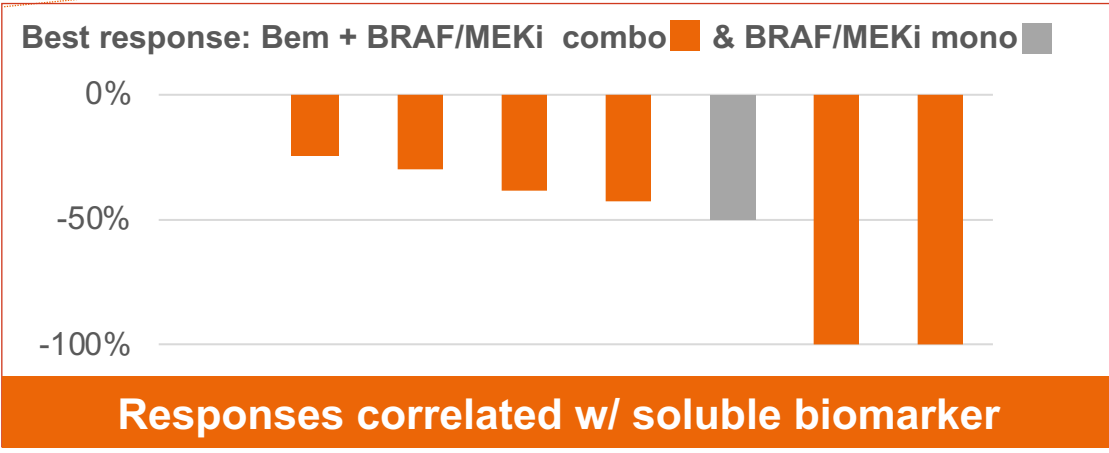
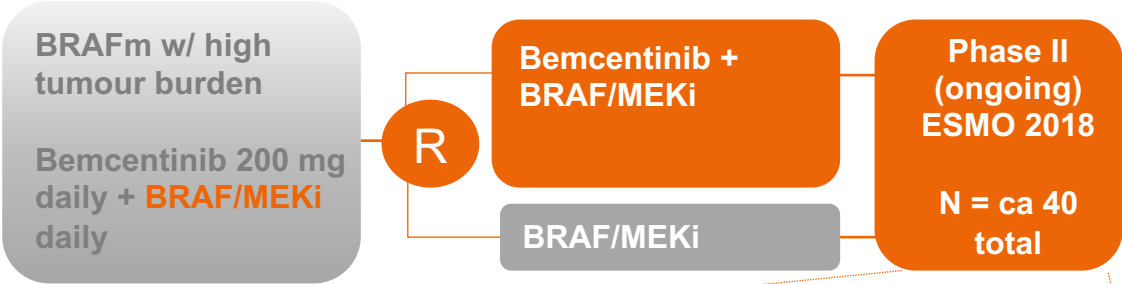
# Prevention and reversal of resistance to targeted therapy



## Advanced NSCLC, first and second line (BGBC004, trial complete)



## Newly diagnosed advanced melanoma (BGBIL006)





# Prevention and reversal of resistance to chemotherapy



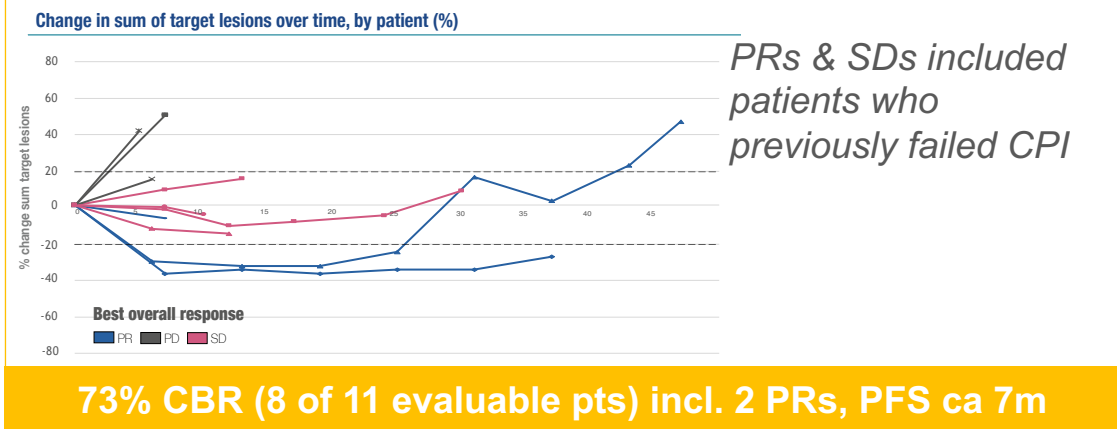
Later line NSCLC, includes CPI failures (BGBIL005)

All comers

Daily bemcentinib + docetaxel q3w  
Dose escalation & expansion

Phase I/II (ongoing)  
WCLC 2018

N = up to 30



Additional indications to read out in 2019 (BGBC003, IIT programme)

- AML low dose chemo combo
- Pancreatic, randomised combo of bemcentinib with gemcitabine, nab-paclitaxel & cisplatin



# Clinical Development opportunities for bemcentinib



Phase IIa	Phase IIb/III
<b>AML / MDS</b> (complete) <b>Glioblastoma</b> (ongoing, IIT) <b>EMT signature selected</b> (potential)	
<b>AML / MDS + LDCT</b> <b>Pancreatic</b> , (IIT in set-up) <b>NSCLC</b> (ongoing, IIT)	
<b>NSCLC (PD-L1 all comers)</b> • IO naïve (ongoing, stage 1 complete) <b>Melanoma</b> , (ongoing, IIT) <b>Mesothelioma</b> (IIT in set-up) <b>Bladder ++, CAR-T combos</b> (under consideration)	
<b>NSCLC + EGFRi</b> (complete) <b>Melanoma</b> , (ongoing, IIT) <b>PARPi combos ++</b> (under consideration)	
Multitude of maintenance opportunities given very favourable safety profile	



# Bemcentinib: First-in-class highly selective AXL inhibitor in phll

**Strong biological rationale:** AXL widely recognised as driver of aggressive cancers and innate immune checkpoint

**Excellent clinical safety profile:** successfully combines with major classes of cancer drugs with no insignificant added tox

**Strong biomarker correlation:** blood and tissue based predictive and response biomarkers identified across complete clinical programme

**PoC in AML and NSCLC:** 43% ORR in AXL+ r/r AML as **monotherapy** and 40% ORR & 6m PFS in AXL+ NSCLC in **combo w/ KEYTRUDA**

**Randomised studies with the potential to be pivotal starting 2019**

**Additional indications:** Broad programme of IITs exploring additional oncology indications, strong pre-clinical rationale in fibrosis

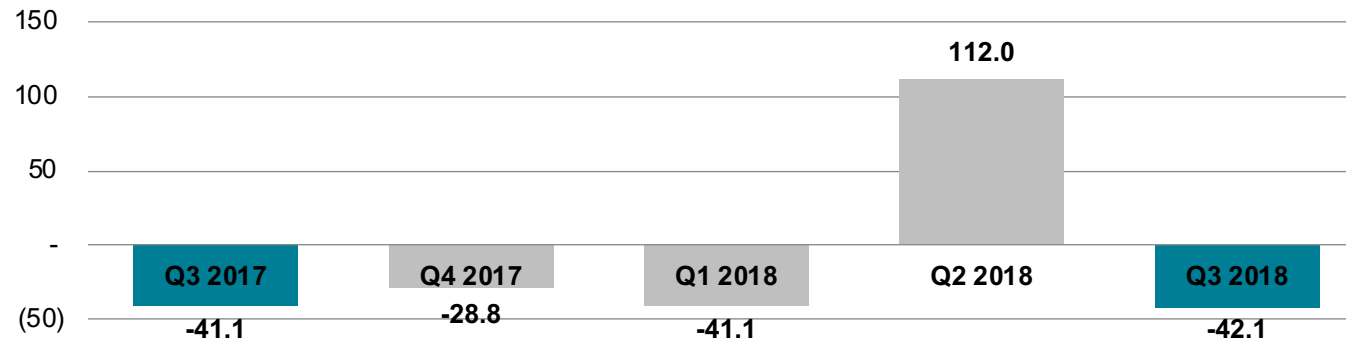


# Key financial figures



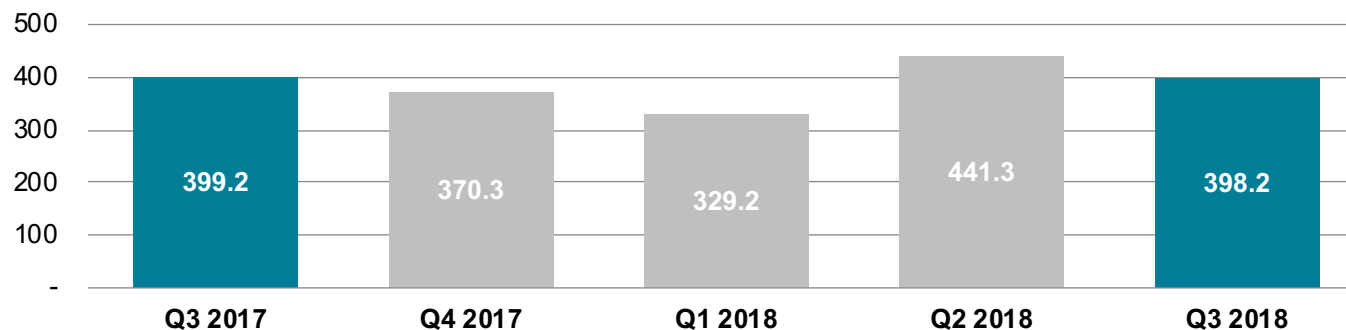
# Cash flow and cash position

Cash flow (mill NOK)



- Private placement Q2,18 strengthened cash position - gross funds raised NOK 187.5m
- Quarterly cash burn average at NOK 44.8m

Cash position (mill NOK)



- Cash position gives runway to deliver key clinical read outs from ongoing clinical studies
- Cash runway into 2020 based on current burn rate



# Summary

**Two first-in-class highly selective, potent, AXL inhibitors**

**Bemcentinib Proof-of-concept Phase II clinical data**

**Bemcentinib clinical development programme to focus on Lung Cancer and Leukaemia**

**Anticipated cash runway into 2020, with significant milestones in the next 12 months**