# BerGenBio ASA (OSE:BGBIO) DNB Healthcare Conference 2018

12 December 2018 Richard Godfrey, CEO



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### **Corporate Snapshot**

#### **Focussed on AXL**



Leaders in developing selective AXL inhibitors: innovative drugs for aggressive diseases, including immune evasive, drug resistant and metastatic cancers

Diversified pipeline, lead drug is tested in several indications of high unmet medical need and large market potential

Promising efficacy with sustained treatment benefit and confirmed favourable safety

Companion diagnostic

### **Phase II POC Data:**



Monotherapy efficacy

Combination therapy

Biomarker correlation

### **Pipeline**



Bemcentinib\* Phase II

First-in-class highly selective oral AXL inhibitor

**BGB149** 

First-in-class AXL antibody

#### Well funded



Cash runway through to 2020

Included in the OSEBX index from 1st June 2018

### **Experienced Team**



38 staff

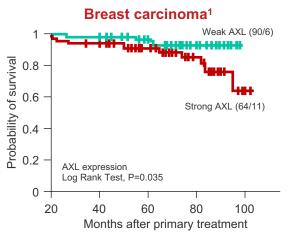
Headquarters and research in Bergen, Norway

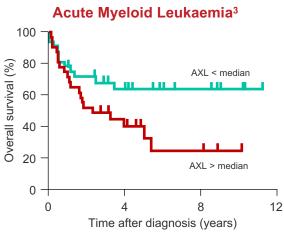
Clinical Trial Management in Oxford, UK

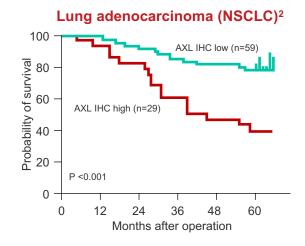


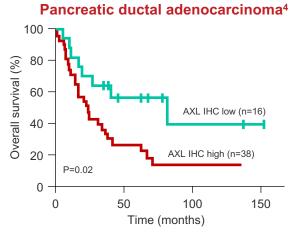
### **AXL** expression correlates with poor patient survival rate

#### **Aggressive cancers**









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

Astrocytic brain tumours	_ N
Breast cancer	N
Gallbladder cancer	N
GI	F
Colon cancer	_ S
Oesophageal cancer	•
Gastric cancer	•
Gynaecological	•
Ovarian cancer	•
Uterine cancer	
HCC	T
HNC	
Haematological	•
• AML	•
• CLL	- •
• CML	_

Melanoma	
Mesothelioma	
NSCLC	
Pancreatic cancer	
Sarcomas	
Ewing Sarcoma	_
Kaposi's 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

**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

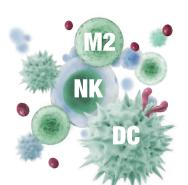
#### **AXL** drives features of aggressive cancer:

- Acquired therapy resistance
- Immune escape
- Metastasis

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

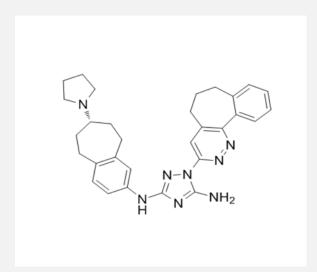
overexpressed in response to hypoxia, immune reaction, cellular stress / therapy

overexpression correlates with worse prognosis in most cancers





### Bemcentinib, first in class highly selective AXL inhibitor



Well tolerated over extended periods of time

Safely combined with chemo, targeted and IO drugs



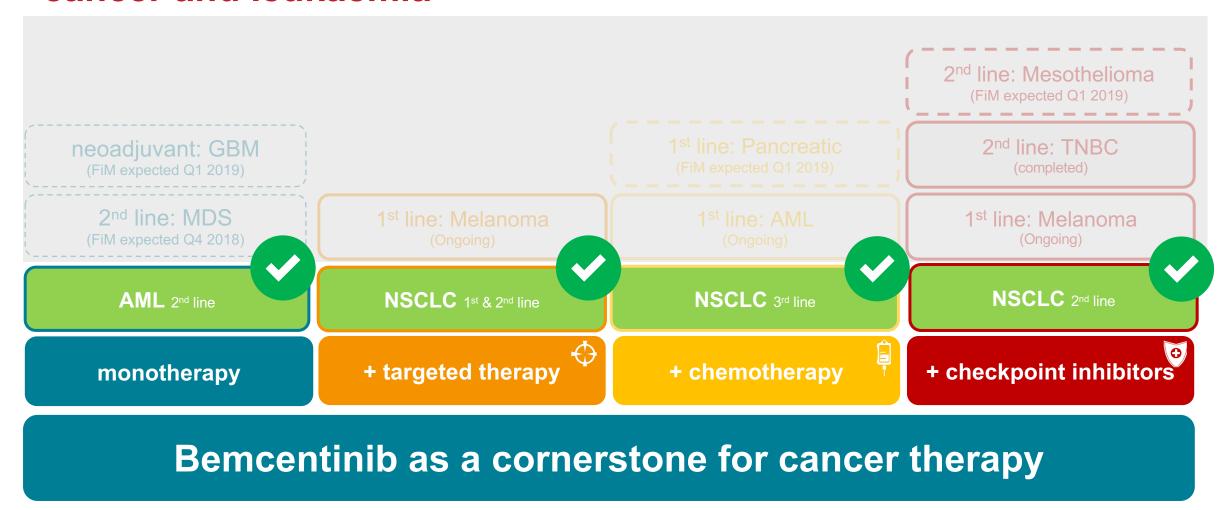
Selective, orally bioavailable, small molecule AXL kinase inhibitor

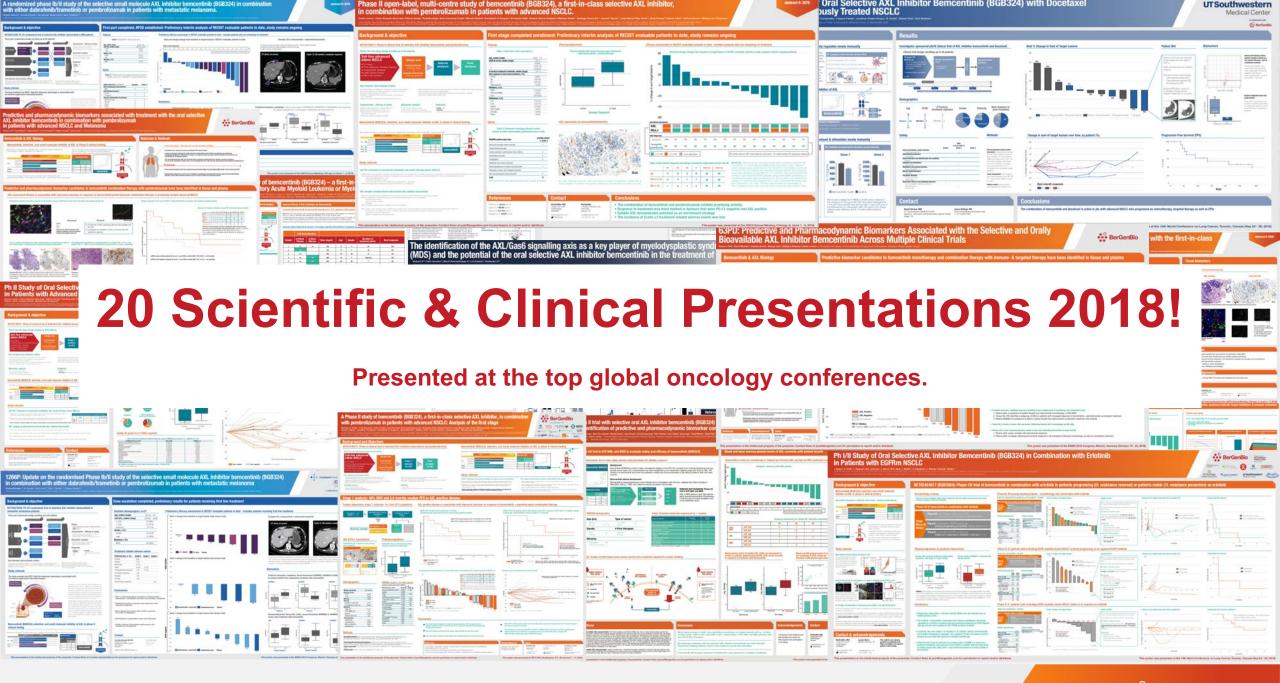
Predictable PK with once daily dosing





## 2018 Phase II proof-of-concept data confirms focus on lung cancer and leukaemia





### Achievements 2018: significant clinical data readouts providing PoC for bemcentinib

**ASCO EHA WCLC ASCO-SITC AACR ESMO** SITC **ASH** NSCLC. AML. Melanoma AML trial update Lung cancer trials Lung cancer, TNBC Preclinical Biomarker update NSCLC data late AML trial data and biomarker update update and AML trial update Update breaking update ✓ AXI biomarkers Responses to Bemcentinib enhances √ 40% ORR in AXI + KEYTRUDA combo Bemcentinib identified bemcentinib responses to pts in combo w/ ✓ Melanoma clinical Late-breaking 43% CR/Cri/CRp well tolerated increases efficacy **KEYTRUDA** ✓ IO. monotherapy abstract: 80% update rate in AXL Bemcentinib induces of checkpoint correlated with AXL ✓ Improved PFS in ✓ chemo. ✓ AXL's role in lowimprovement in PFS biomarker positive diversification of T-cell inhibitors biomarker combo with erlotinib targeted therapies in AXL+ pts vs AXLrisk MDS (prereceptor repertoire and chemo and has monotherapy clinical) (AML) efficacy • • • • • • • • • • • . . . . ••••• February July Januarv March April May August September October November June December AXL mAb **NSCLC NSCLC NSCLC NSCLC AML BGB149** Bem + KEYTRUDA **Bem + KEYTRUDA** 

**Bem + KEYTRUDA** 

starts 2<sup>nd</sup> stage



fully recruits 1st stage

meets 1st efficacy endpoint

starts clinical trial

(anticipated)

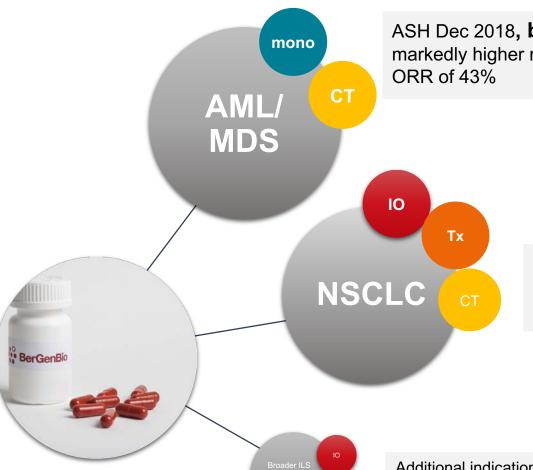
Bem + decitabine

fully recruits

Bem + erlotinib

meets 1st efficacy endpoint

### Clinical development focus: Lung Cancer & leukaemia

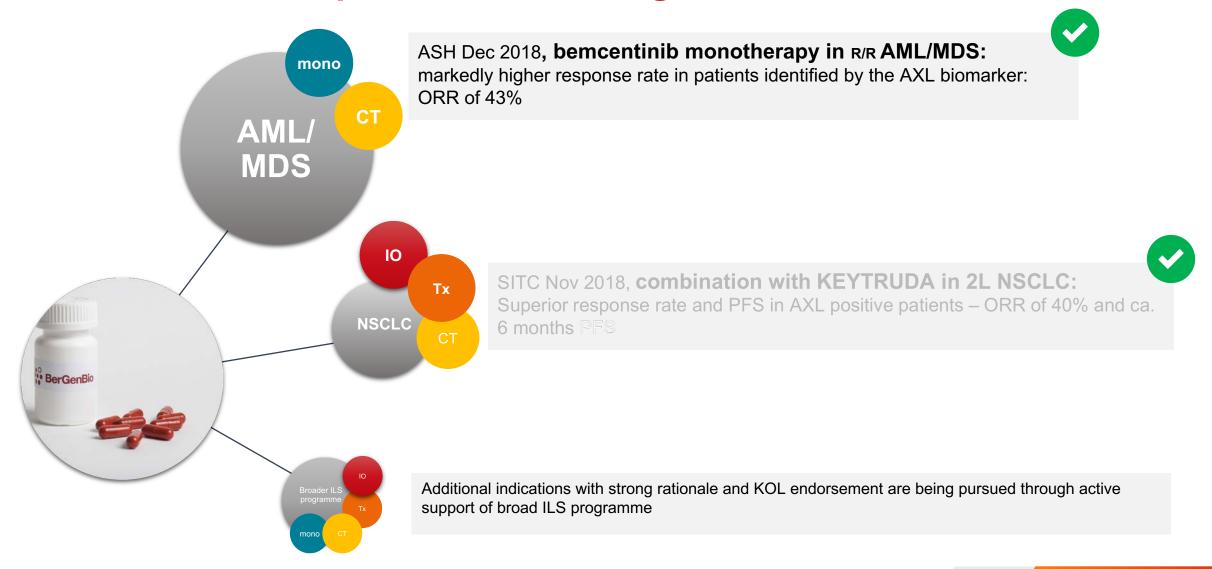


ASH Dec 2018, **bemcentinib monotherapy in R/R AML/MDS:** markedly higher response rate in patients identified by the AXL biomarker: ORR of 43%

SITC Nov 2018, **combination with KEYTRUDA in 2L NSCLC:**Superior response rate and PFS in AXL positive patients – ORR of 40% and ca. 6 months PFS

Additional indications with strong rationale and KOL endorsement are being pursued through active support of broad ILS programme

### Clinical development focus: Lung Cancer & leukaemia



## Acute Myeloid Leukaemia (AML) & Myelodysplastic Syndrome (MDS)

Bemcentinib is being evaluated as a monotherapy and in combination with standard of care to treat AML and high-risk MDS





### MDS & AML: disease characteristics

### **Myelodysplastic syndromes (MDS)**

(pre-leukemia or smoldering leukemia)

Occurs when the blood-forming cells in the bone marrow (the soft inner part of certain bones, where new blood cells are made), become abnormal. This leads to low numbers of one or more types of blood cells.

~ 40,000 new cases per year (U.S. only)<sup>3</sup>

Most diagnoses made in 70s or 80s1

## Acute Myeloid Leukemia (AML)

Cancer of the myeloid line of blood cells, characterized by rapid growth of abnormal cells that build up in the bone marrow and blood and interfere with normal blood cells

Most common type of acute leukemia in adults<sup>1</sup>

~ **20,000 new cases** diagnosed and >10,000 deaths (2018, U.S.)<sup>2</sup>

New strategies to treat older & relapsed/ refractory patients is a urgent, unmet need



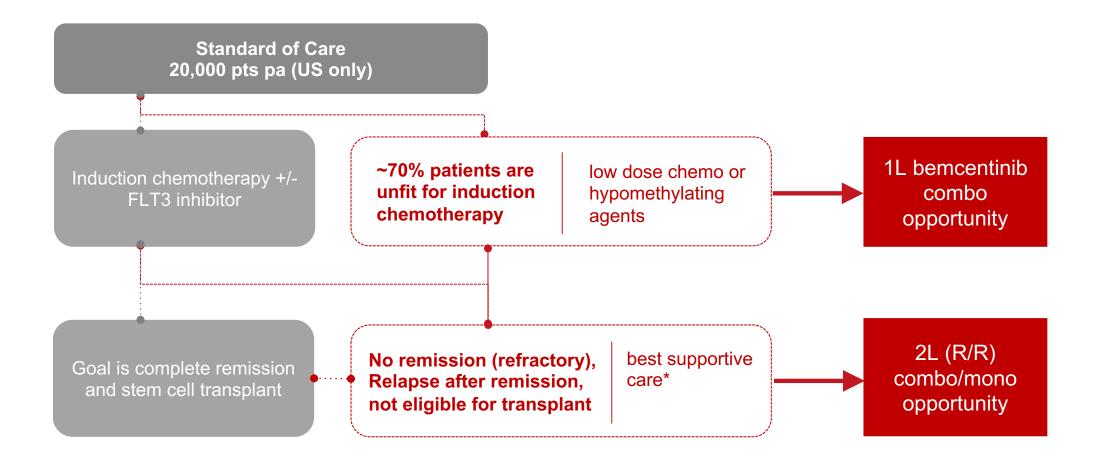
**MDS 40%** 

risk of

developing

into AML.4

## AML & MDS – difficult to treat malignancies, predominantly elderly frail patient population.

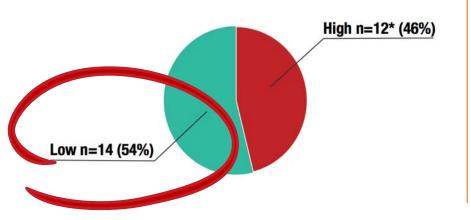


## Bemcentinib monotherapy exhibits potent antileukaemic activity 2L R/R patients



### Soluble AXL (sAXL) at screen:

**Inversely** correlated with AXL receptor activity



#### Superior response rate in patients positive for AXL biomarker

	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%

all patients: 74.5

Median age of

included poor risk and secondary

√ Low incidence of hematological adverse effects

 <sup>2</sup> evaluable patients were not evaluable for sAXL status

<sup>•</sup> Monotherapy responses. One additional response was reported in combination with decitabine for a total of 7 responses in phase I/

<sup>• 1</sup> CR, 4 CRI, 1 CR

PD includes patients who progressed or came off study before having completed 3 cycles of treatment.

<sup>✓</sup> Bemcentinib monotherapy is well tolerated: mild and manageable side effect profile with low incidence of Grade 3/4 events

## Bemcentinib reported superior efficacy in 2L R/R patients



Agent	ORR	comments
<b>Bemcentinib in AXL biomarker pts</b> ASH 2018	43%	Low sAXL patients
Venetoclax Konopleva et al, CancerDisc (2016)	19%	*Now approved for 1L combo with HMAs / low dose chemo
Hypomethylating agents (HMAs) Stahl et al, Blood (2018)	16%	Used off label in R/R pts
Flotetuzumab ASH 2018	19%	Bispecific CD123xCD3
<b>Cyad-01</b> ASH 2018	38%	CAR-T cell therapy

Next ...

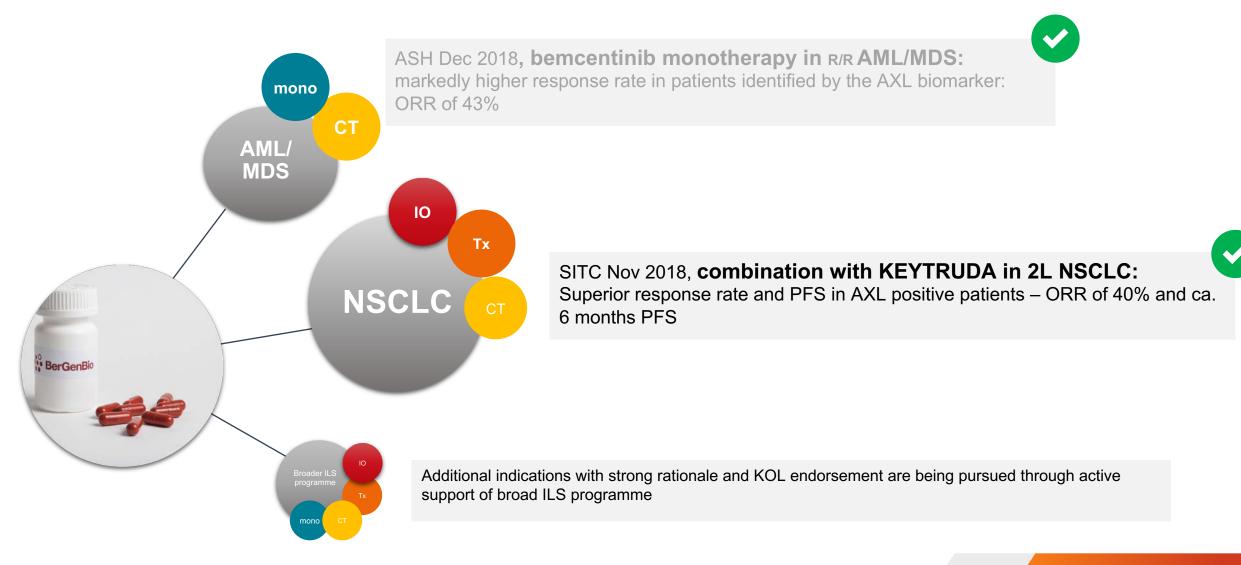
Bemcentinib now being evaluated in combo with HMAs / low dose chemo

**Earlier lines of therapy** 

Top line combo data in Q1 2019



### Clinical development focus: Lung Cancer & leukaemia



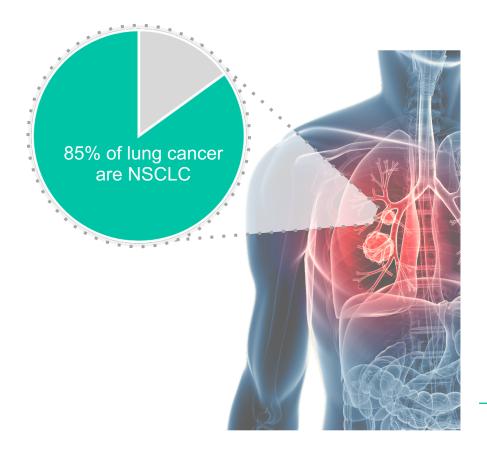
## Non-small Cell Lung Cancer (NSCLC)

Bemcentinib has shown strong potential in NSCLC combining with emerging and standard of care therapies





## NSCLC causes more cancer related deaths than breast, colon, pancreas and prostate combined



## The largest cancer killer, most patients depend on drug therapy

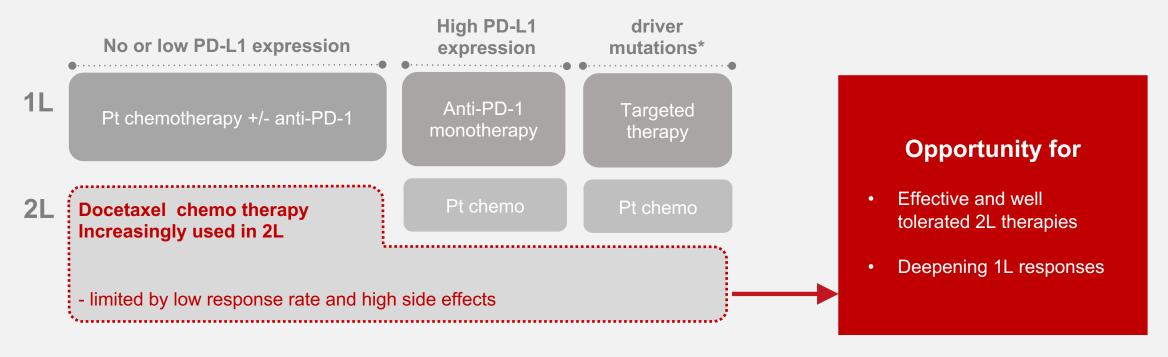
- ➤ 2.09 million new cases of lung cancer diagnosed/yr worldwide, making up 11.6% of all cancer cases¹
- ▶ 1.76 million lung cancer deaths/yr worldwide¹
- ➤ In the U.S, 5-year survival rate is approximately 18.6%, and **4.7%** in patients with distant metastases<sup>2</sup>

Non-small cell lung cancer is the most common type of lung cancer, making up 80-85% of lung cancers

## Lung Cancer: rapidly evolving standard of care... - but still lacking effective chemo free regimens



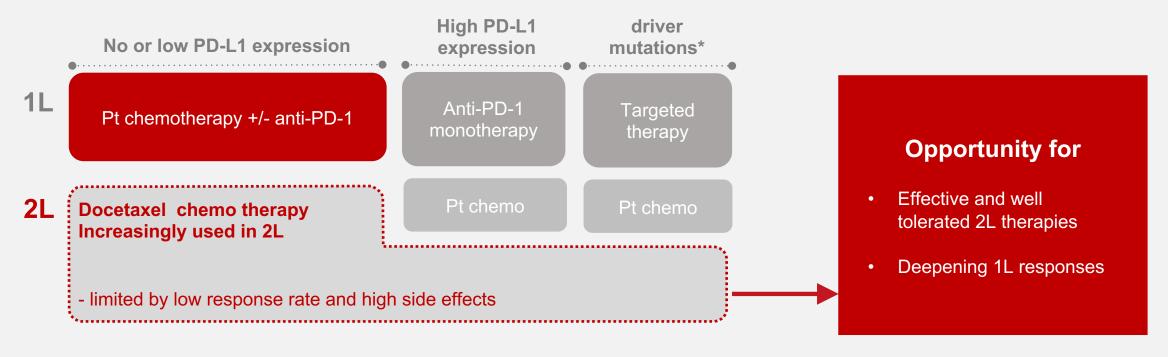
**NSCLC** evolving standard of care (SoC)



## Lung Cancer: rapidly evolving standard of care... - but still lacking effective chemo free regimens



**NSCLC** evolving standard of care (SoC)

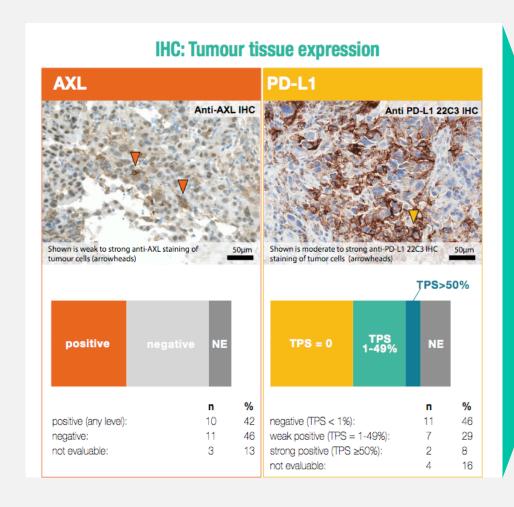






## Biomarker analyses reveal predominantly PD-L1 low/negative patient population, half are AXL positive





Trial has enrolled predominantly PD-L1 negative and weak-positive patients

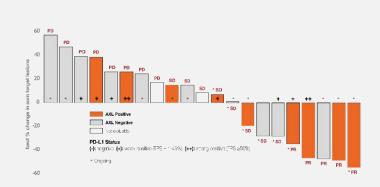
➤ Expected KEYTRUDA monotherapy ORR in these patients is 8 – 14%²





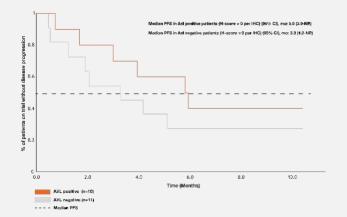


## In AXL positive patients, the bemcentinib + KEYTRUDA combination surpasses anti-PD1 monotherapy\*



Trial	PD-L1 status		ORR (%)	PFS (months)
DODOOO	Mostly (75% of	AXL+	40	5.9
BGBC008	patients) 0 – 49%	AXL-	9	3.3
Kaymata 0011	0 %		9	2.1
Keynote 001 <sup>1</sup>	1 – 49 %		14	2.3
CheckMate 057 <sup>2</sup>	0 – 100 %		19	2.3

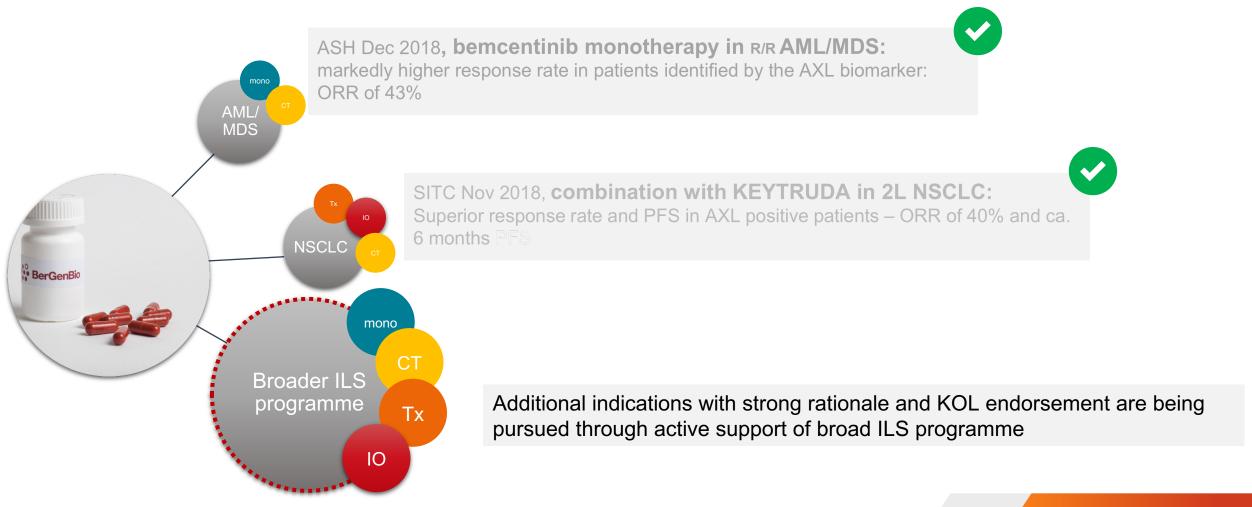
Comparison of bemcentinib combination data (BGBC008) with selected anti-PD-1 monotherapy trial results



- 40% ORR in AXL positive patients and
- ✓ 27% ORR in PD-L1 negative patients
- Progression Free Survival: 5.9 months in AXL positive
- Bemcentinib + KEYTRUDA very well tolerated

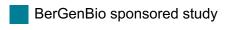


### Clinical development focus: Lung Cancer & leukaemia



### Bemcentinib active pipeline development programmes

			Preclinical	Phase I	Phase II	Phase III	Status
Bemcentinib	– selective	AXL kinase inhibitor, compa	ny sponsored trials				
NSCLC 2 <sup>nd</sup> line  1 <sup>st</sup> & 2 <sup>nd</sup> line		Ph II KEYTRUDA combo	previously treated advanced adenocarcinoma of the lung			MERCK (1)	Stage 1 recruited, 1st efficacy endpoint met
		Ph II TARCEVA combo	advanced NSCLC with	activating mutation of E	GFR		Fully recruited, 1 <sup>st</sup> efficacy endpoint met
AML/MDS	1st & 2nd line	Ph II monotherapy and combo with low dose chemo	<ul><li>AML or previously treat</li></ul>	ed MDS unfit for intensiv	re chemo		Part A recruited / superior RR; Part B ongoing
Bemcentinib	– investiga	tor led trials					
NSCLC	Later line	Ph I/II docetaxel combo	previously treated advanced NSCLC			D. Gerber, UTSW, Dallas TX	ongoing
Welanoma	1st & 2nd line	Ph II randomised combo with KEYTRUDA or TAFINLAR/MEKINIST	newly diagnosed unresectable melanoma			O. Straume, Haukeland, Bergen NO	ongoing
Wesothelioma	2 <sup>nd</sup> line	Ph II combo with KEYTRUDA	Relapsed malignant mesothelioma (prior Pt containing CT)			D. Fennell, Leicester, UK	MERCK <sup>(2)</sup> FPI expected 1Q 19
Pancreatic	1st line	Ph II randomised combo with chemo	Metastatic or recurrent pancreatic adenocarcinoma			M. Beg / Dan v Hoff, UTSW TX ++	STAND FPI expected end of 1Q 19
Glioblastoma	adjuvant	monotherapy	Surgically eligible glioblastoma multiforme			B. Nabors, UoA, Birmingham, AL	FPI expected end of 1Q 19
High risk MDS	2 <sup>nd</sup> line	monotherapy	High risk MDS (prior HMA)			U. Platzbecker, Dresden, Germany	FPI expected end of 4Q
Companion I	Diagnostics	Pipeline	Biomarker Discover	y Biomarl	cer Verification	Validation	
Fissue AXL Soluble AXL Additional solul	ole markers		Correlation with benef targeted and immunot	it from monotherapy, col herapy	mbo with		Correlation with efficacy reporte





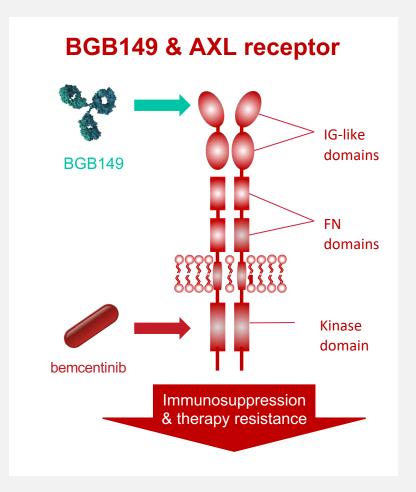


### **BGB149**

AXL mAb - clinical trials start Dec 2018



## BGB149: AXL function blocking antibody programme



#### **Features**

- AXL functionally blocking human antibody
- Highly selective to human AXL: High affinity (K<sub>D</sub>: 500pM)
- MoA and efficacy demonstrated in pre-clinical models
- Preclinical studies demonstrate acceptable toxicology profile for planned clinical studies

#### Status

- Robust, scaleable manufacturing process
- Stability: current drug substance has 18 month stability at <-60 degrees C.
- Toxicity: GLP toxicity reported no major concerns
- CTA approved
- First-in-man clinical trial to be started imminently



## **Financial review**





## Good financial position and cost control



Cash position

**End of Q3: 398.2MNOK** 



Cash burn

YTD: 149.1MNOK

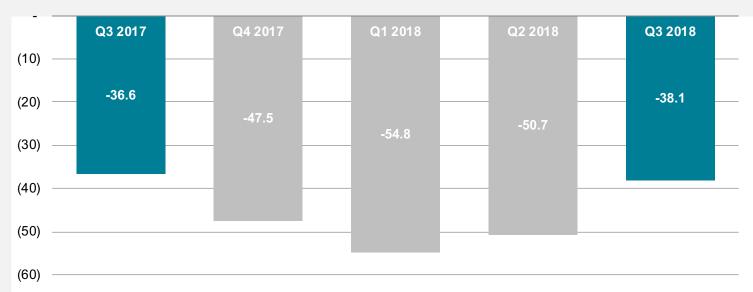


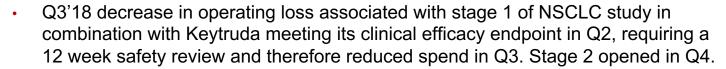
Into 2020 at current burn rate



### **Operating profit (loss)**

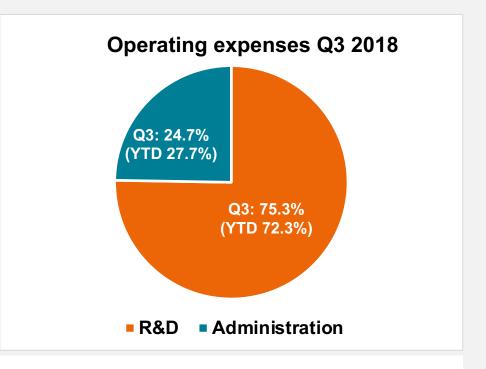
### Operating profit (loss) million NOK





In addition increased cost reduction by grants:

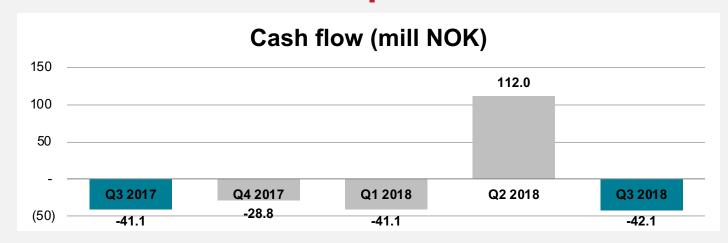
Approval tax refund (Skatte funn) cost reduction in Q3'18 NOK 5.1 mill (Q3'17 NOK 2.3 mill) Other grants Q3'18 NOK 3.3 mill (Q3'17 NOK 0.5 mill)



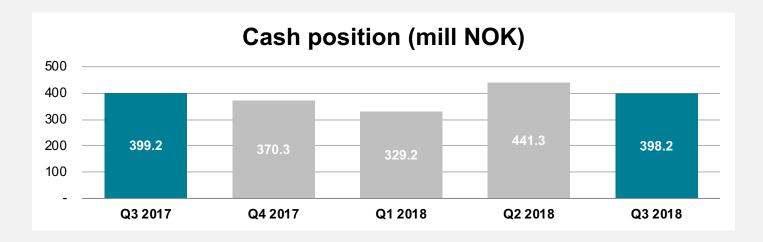
- Effective organisation
- 75.3% (YTD 72.3%) of operating expenses in Q3 2018 attributable to Research & Development activities



### **Cash flow and cash position**



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



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

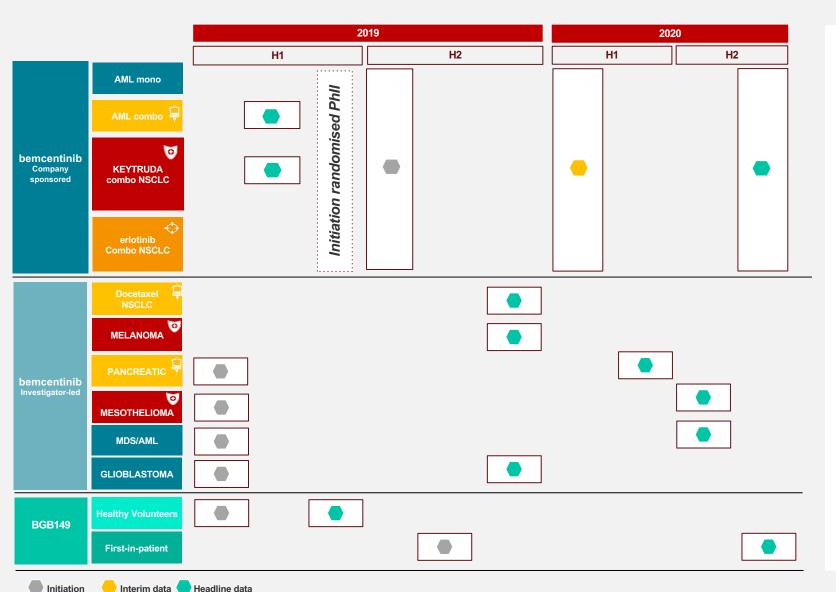


## **Summary and Future Outlook**





### Significant milestones expected in over the coming 18 months



2019 H1 milestones

### **Bemcentinib**

#### **NSCLC**

KEYTRUDA combo from stage 2

#### AML

Chemo combo

Initiation of randomised phase Il studies

Multiple ILS

BGB149 (AXL antibody)

Initiation phase I clinical trial

### **Summary**

Bemcentinib - highly selective, potent, oral AXL inhibitor

Proof-of-concept Phase II clinical data: monotherapy, combination with biomarker correlation

Bemcentinib clinical development programme to focus on Lung Cancer and Leukaemia

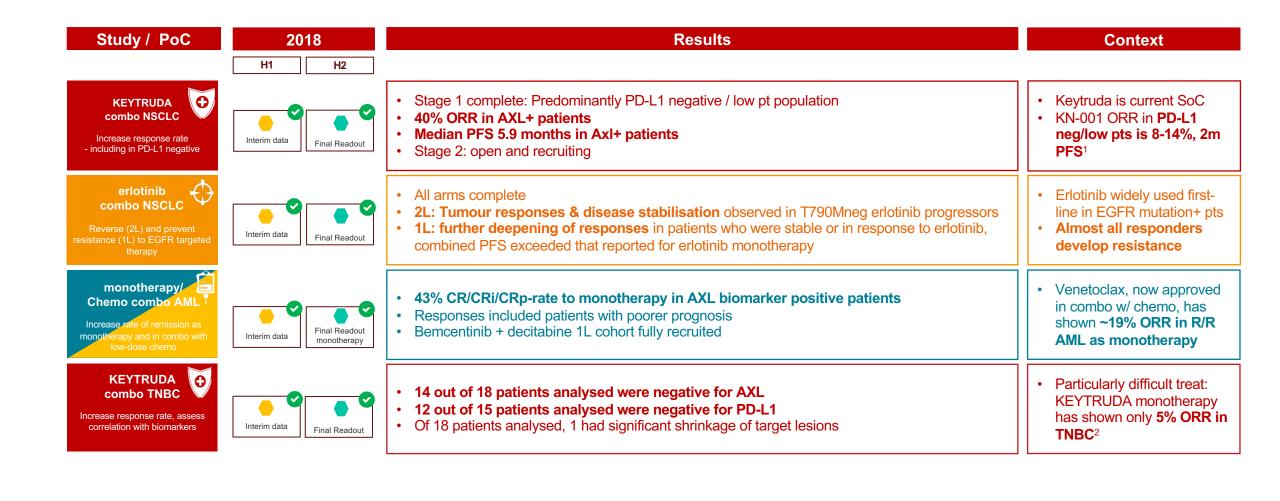
Anticipated cash runway into 2020, with significant milestones in the next 12 months



## Thank you for your attention

Q&A

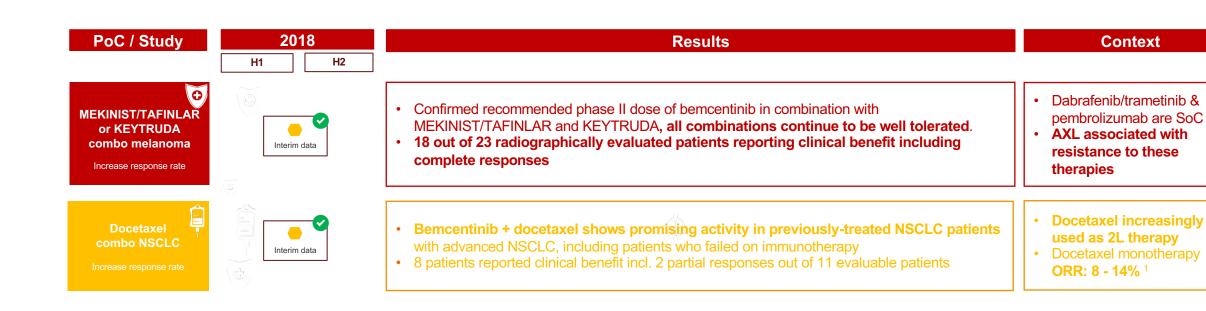
### **Summary results: Company sponsored Ph II studies**





Final Readout

### Overview results: Investigator sponsored studies







Context