

# AXL inhibition to prolong life

First-in-class medicines to treat aggressive cancers

Jefferies London Healthcare Conference – November 15-16<sup>th</sup> 2017

Richard Godfrey, CEO



# Disclaimer

Certain statements contained in this presentation constitute forward-looking statements. Forward-looking statements are statements that are not historical facts and they can be identified by the use of forward-looking terminology, including the words "anticipate", "believe", "intend", "estimate", "expect", "will", "may", "should" and words of similar meaning. By their nature, forward-looking statements involve a number of risks, uncertainties and assumptions that could cause actual results or events to differ materially from those expressed or implied by the forward-looking statements. Accordingly, no assurance is given that such forward-looking statements will prove to have been correct. They speak only as at the date of the presentation and no representation or warranty, expressed or implied, is made by BerGenBio ASA or its affiliates ("BerGenBio"), or by any of their respective members, directors, officers or employees that any of these forward-looking statements

or forecasts will come to pass or that any forecast result will be achieved and you are cautioned not to place any undue influence on any forward-looking statement. BerGenBio is making no representation or warranty, expressed or implied, as to the accuracy, reliability or completeness of this presentation, and neither BerGenBio nor any of its directors, officers or employees will have any liability to you or any other person resulting from the use of this presentation.

Copyright of all published material, including photographs, drawings and images in this presentation remain with BerGenBio and relevant third parties, as appropriate. Consequently, no reproduction in any form of the presentation, or parts thereof, is permitted without the prior written permission, and only with appropriate acknowledgements.

# Corporate snapshot

## Background

Leaders in developing therapeutics that target AXL, a protein that makes cancers and their environment highly aggressive and which is associated with poorer outcomes across many 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 supported by biomarker tests

## BGB324

First-in-class highly selective small molecule AXL inhibitor

Broad phase II clinical programme in NSCLC, TNBC, AML/MDS, melanoma

## Pipeline

BGB324

AXL antibody

AXL ADC (partnered)

Immunomodulatory small molecules

## OSE:BGBIO

Raised USD 50m in IPO on OSE in April '17

USD 120m market cap (Nov 13<sup>th</sup> 2017)

## Corporate

35 staff

Headquarters and research in Bergen, Norway; Clinical Trial Management in Oxford, UK

# Developing AXL inhibitors to target aggressive cancers

50%

of people will get  
a form of cancer  
in their lifetime

90%

of cancer deaths  
due to aggressive  
cancer



**Treat. Reverse. Stop.**

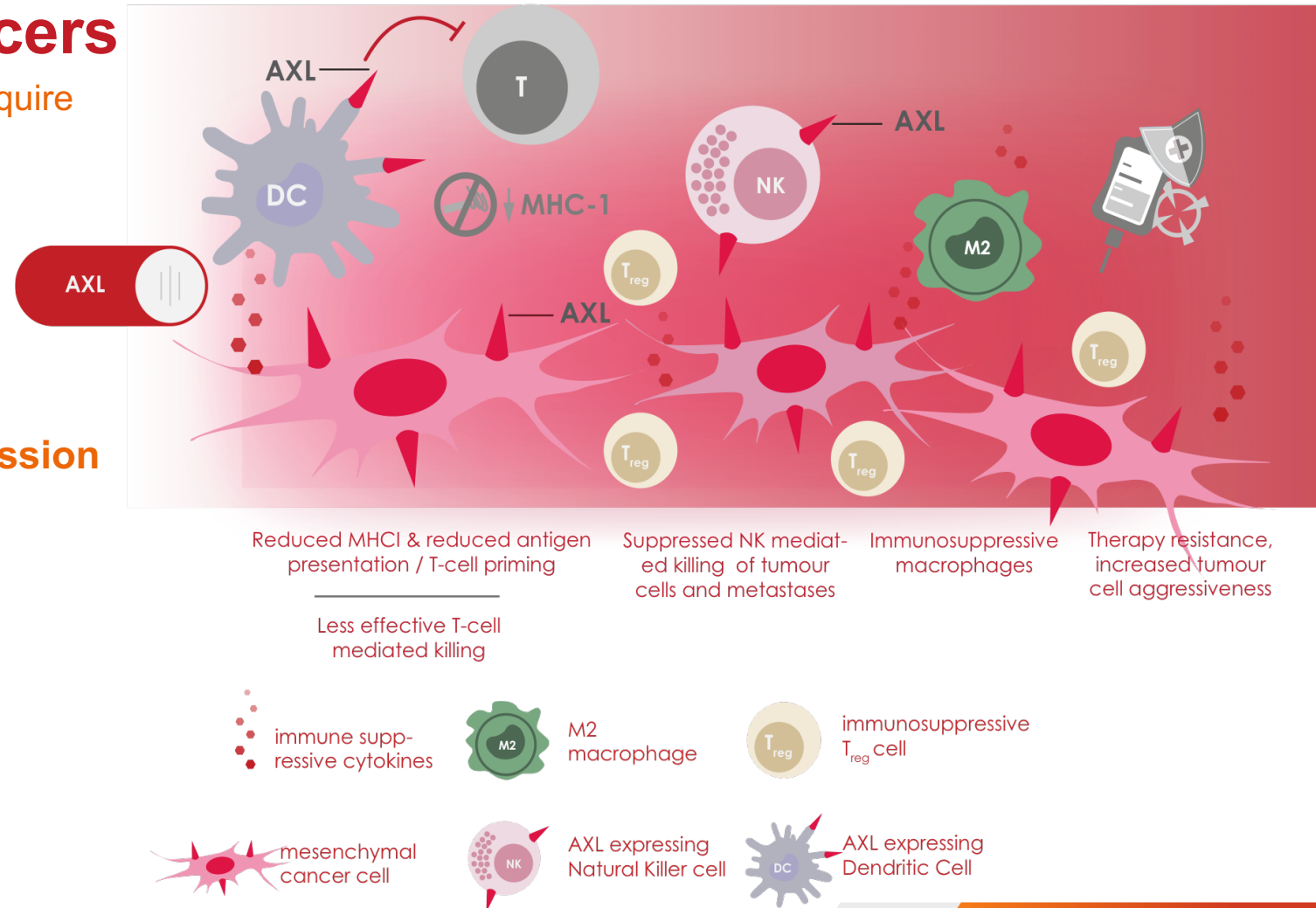


# Aggressive cancers

evade the immune system, acquire drug resistance and spread

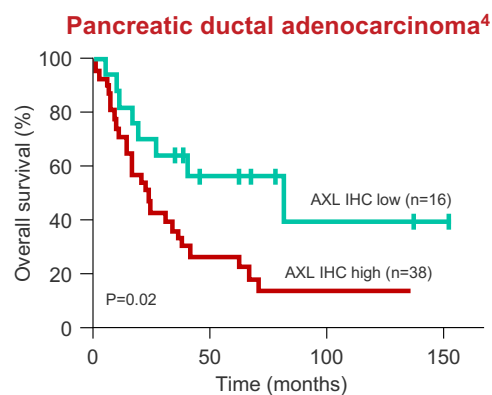
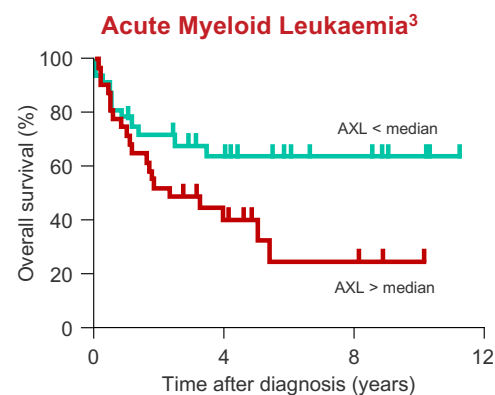
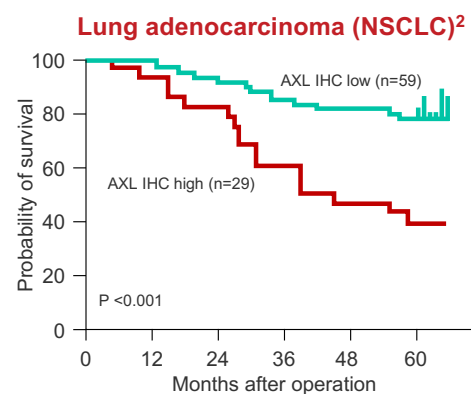
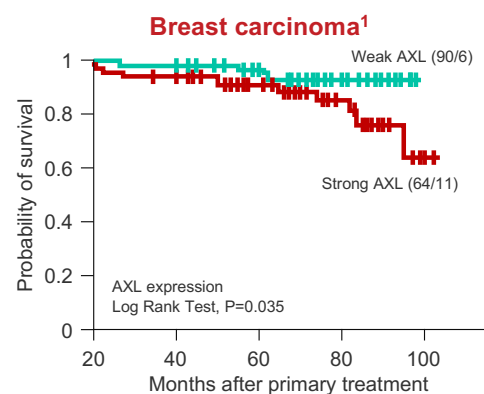
**AXL is a key regulator of aggressive cancers driving:**

- **Innate immune suppression**
- **Therapy resistance**
- **Cancer spread**



# AXL correlates with poor prognosis

## Strong AXL expression correlates with poor survival rate



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

Astrocytic brain tumors

Breast cancer

Gallbladder cancer

GI

- Colon cancer

- Esophageal 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

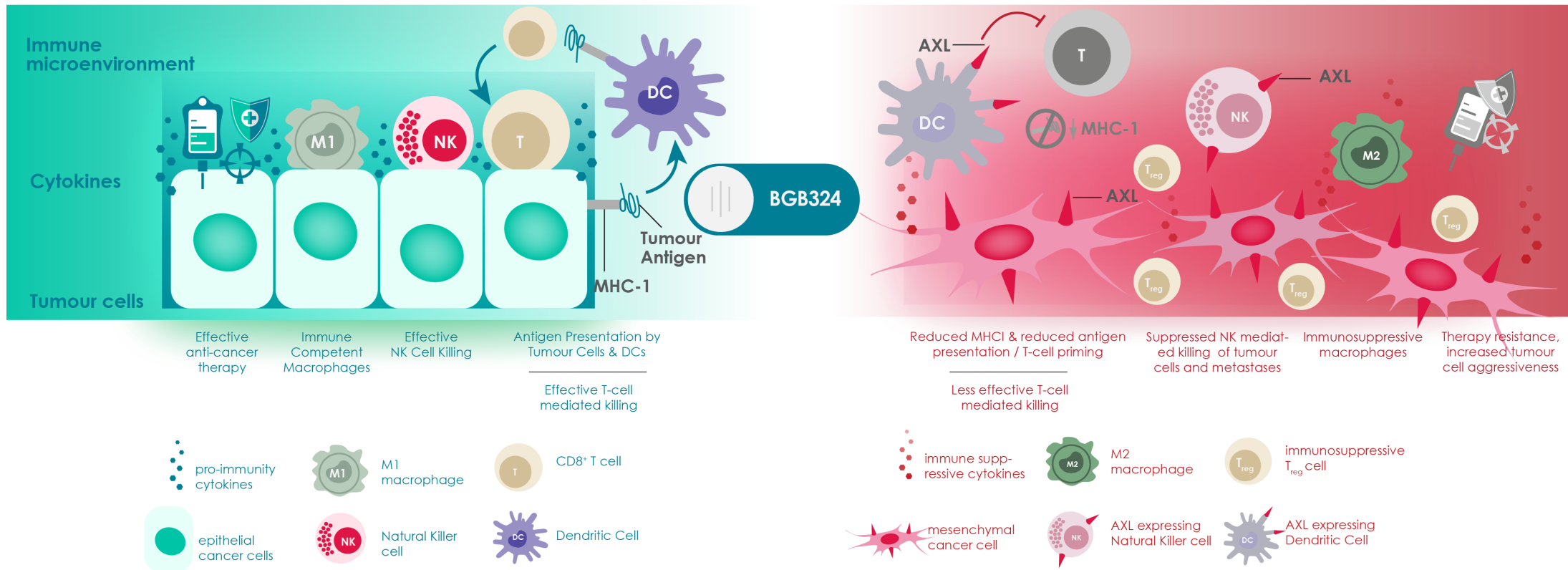
Urological

- Bladder cancer

- Prostate cancer

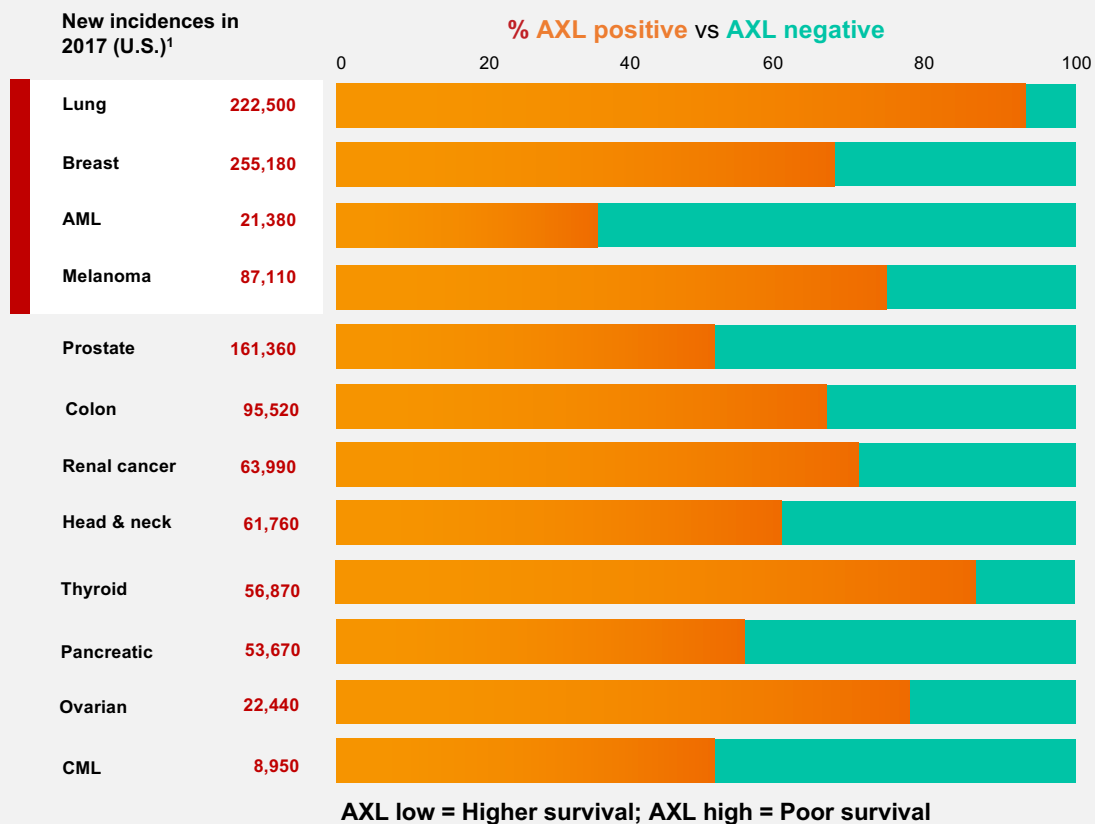
- RCC

# BGB324 restores sensitivity to immune cell attack, therapy, and prevents spread

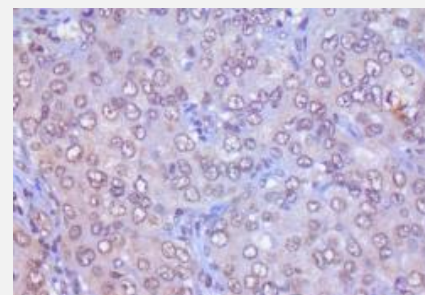


# Which cancers are we targeting

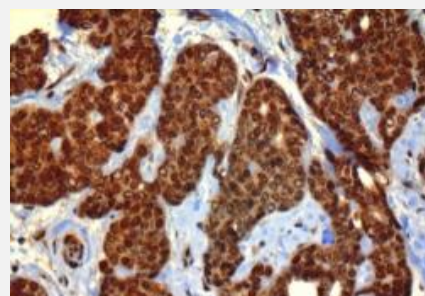
## Most common tumours express high AXL levels



Low Axl expression<sup>2</sup>



High Axl expression<sup>2</sup>



Companion diagnostic in development to identify AXL positive patients

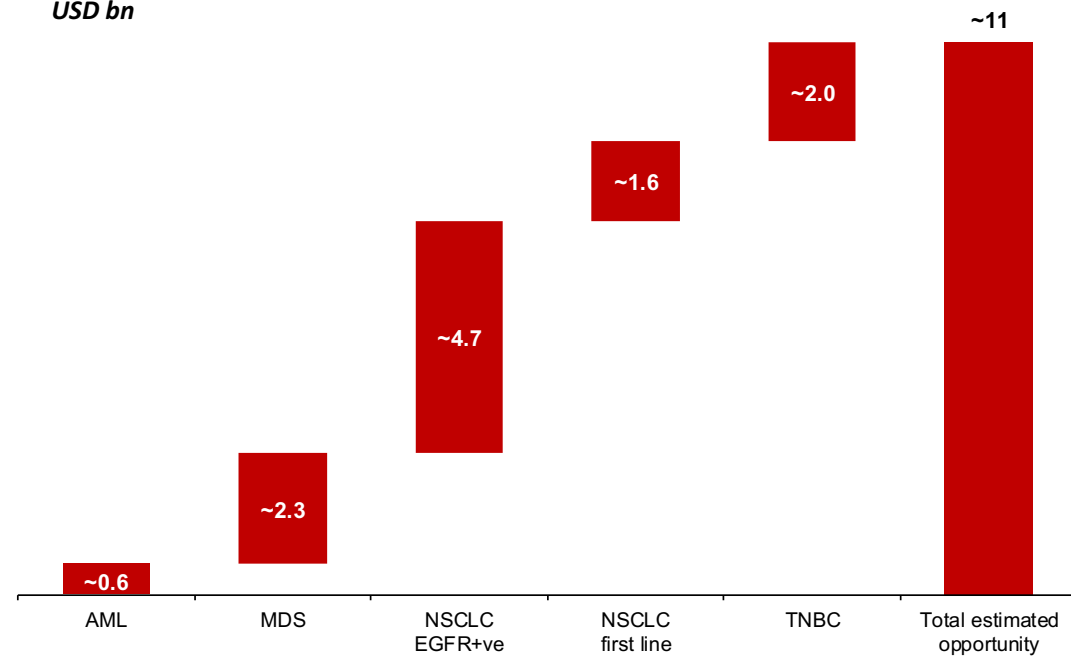
# Targeting cancers with an addressable market of USD 11bn

## Most common tumours express high AXL levels

New incidences in 2017 (U.S.)<sup>1</sup>

Lung	222,500
Breast	255,180
AML	21,380
Melanoma	87,110
Prostate	161,360
Colon	95,520
Renal cancer	63,990
Head & neck	61,760
Thyroid	56,870
Pancreatic	53,670
Ovarian	22,440
CML	8,950

USD bn



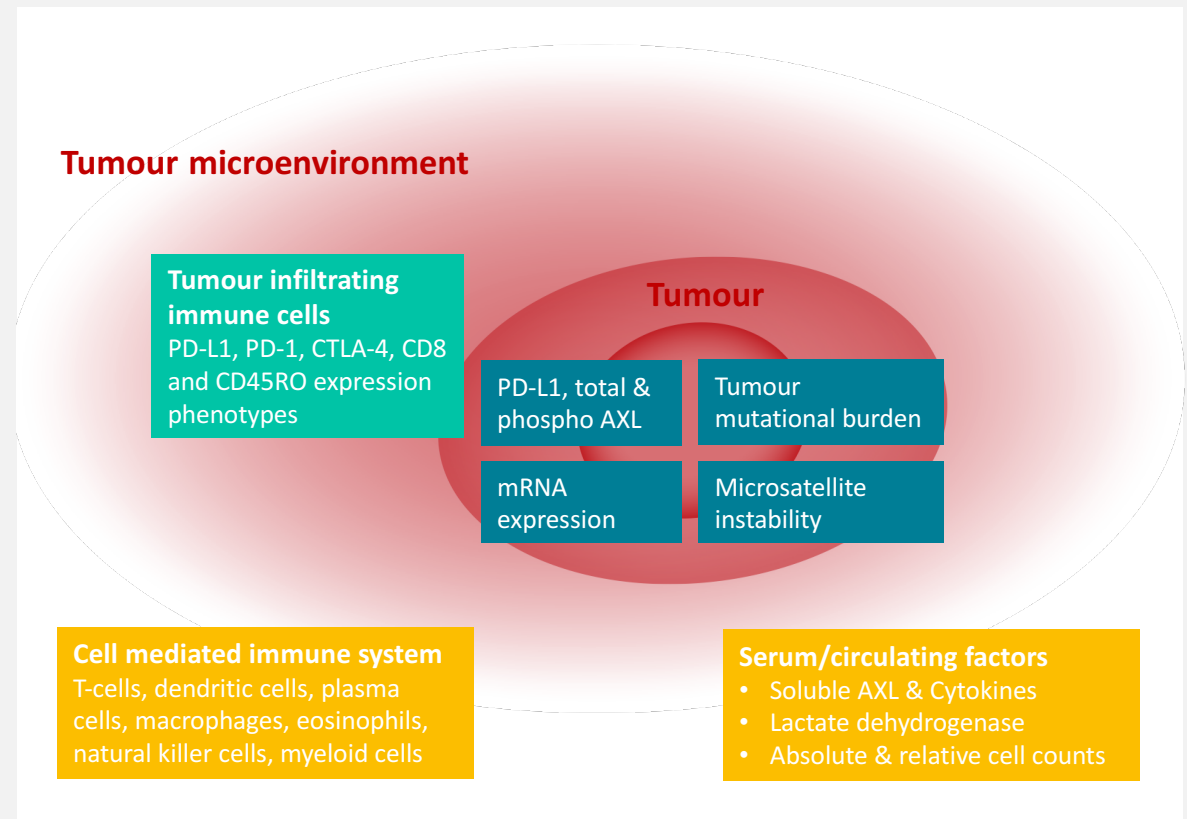
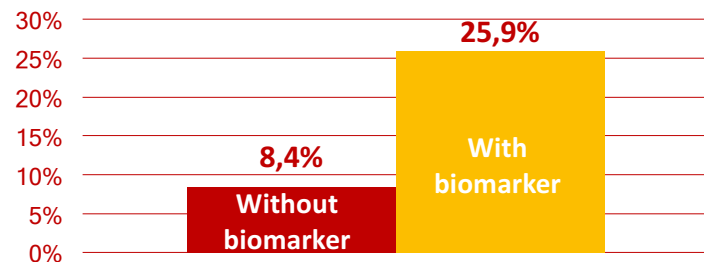
### Strategy

- Major unmet need
- Strong scientific basis
- Blockbuster potential

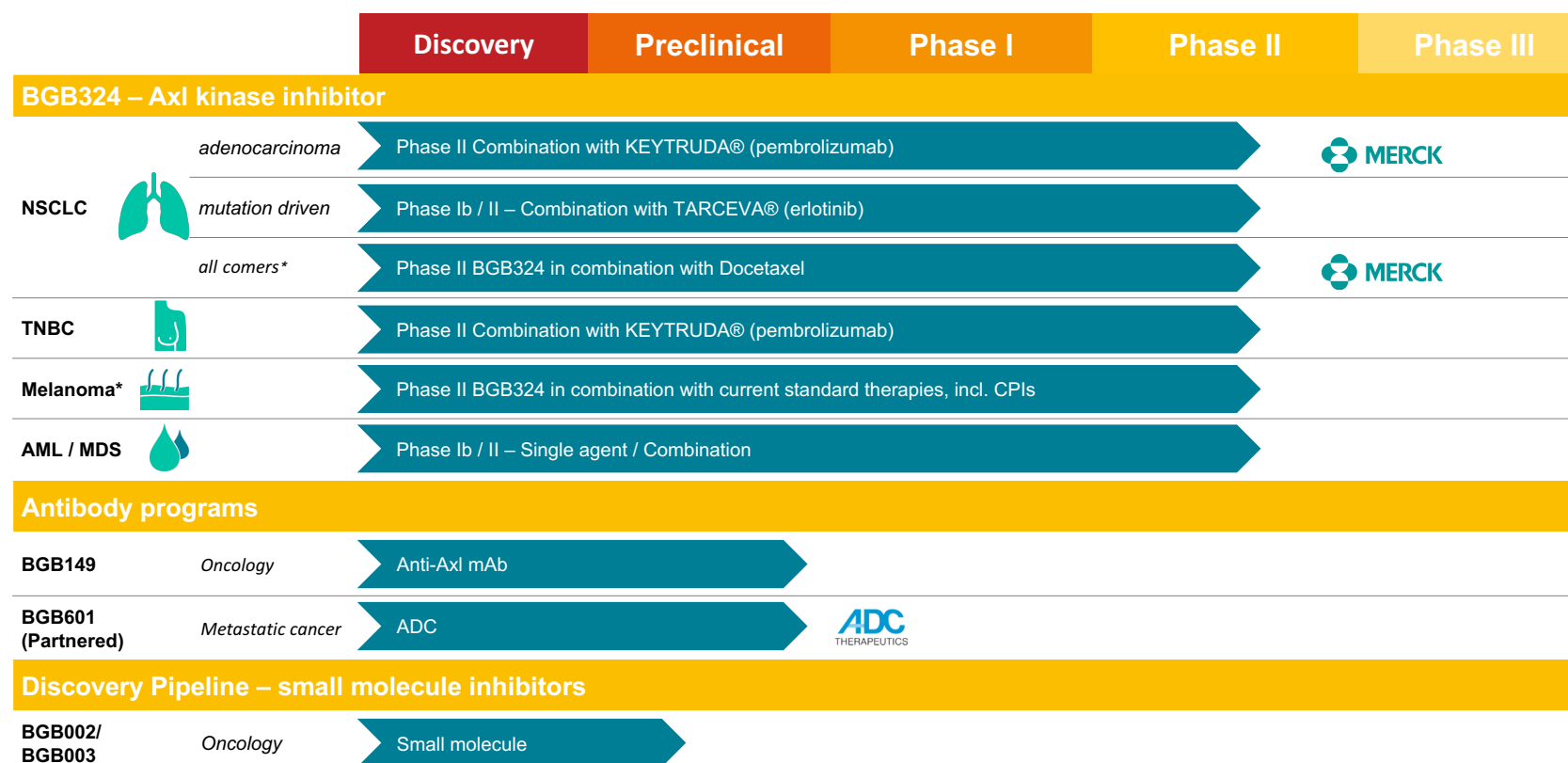
# Companion diagnostic for personalised medicine

- Selecting patients most likely to benefit from treatment
- Improving probability of approval
- Increase reimbursement rate

**Likelihood of success (phase I to approval)**



# Broad development pipeline



Patients:

>350

Key read-outs:

2018

50

sites in Europe  
and North  
America.

\*Investigator-sponsored trials

BGB324 is a selective,  
first-in-class orally bioavailable  
inhibitor of AXL

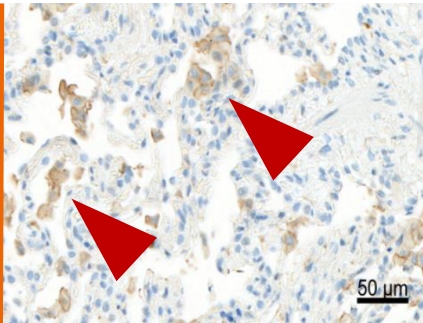
Targeting aggressive cancer cells &  
immunosuppressive tumour microenvironment



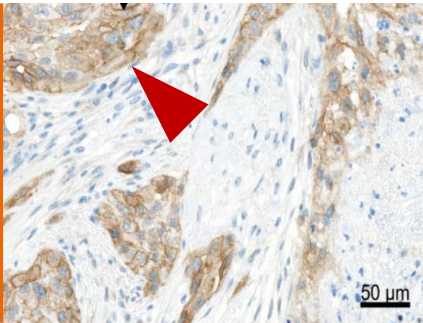
# BGB324 targets immunosuppression and therapy resistance

Lung cancer patient samples

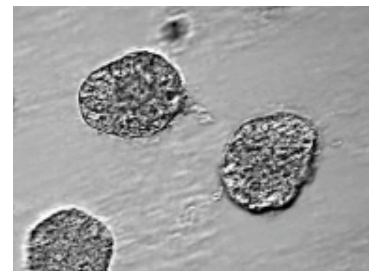
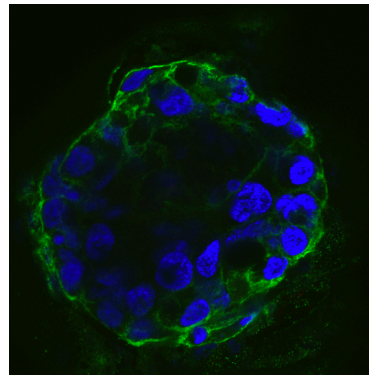
Axl is expressed on immune cells in the tumour\*



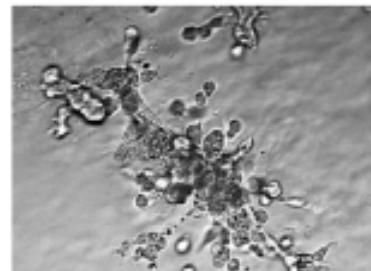
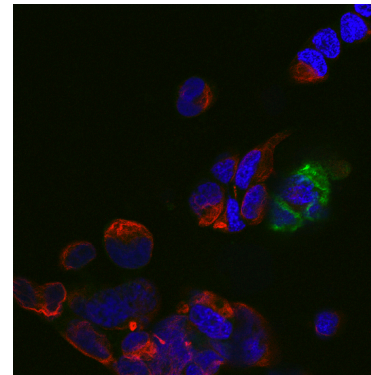
Axl is expressed on tumour cells\*



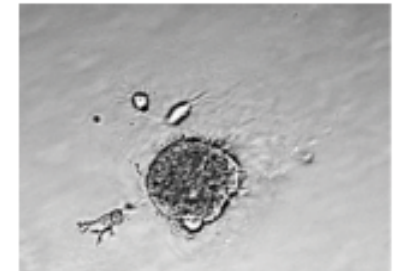
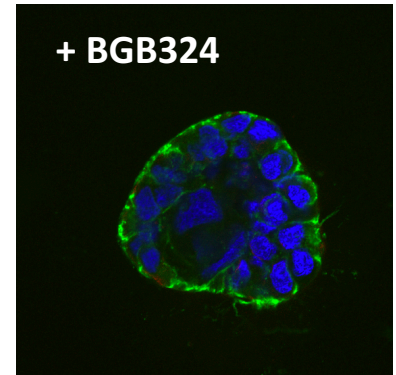
Non aggressive



AXL programme induced



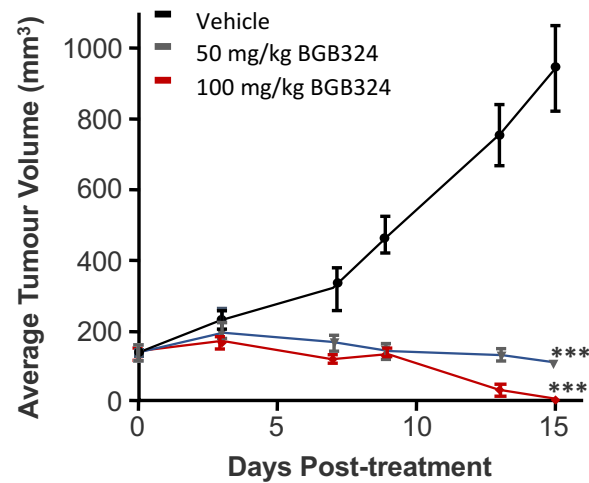
+ BGB324



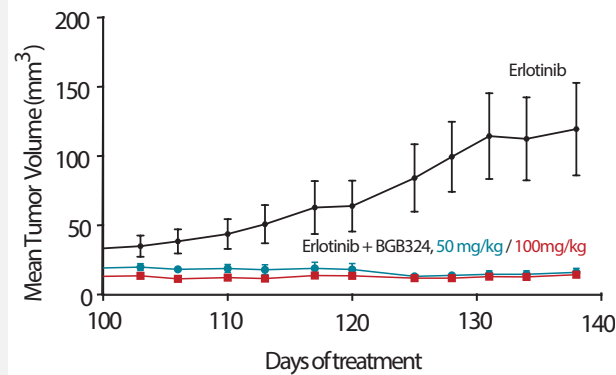
E-cadherin vimentin Cell nuclei

# Compelling pre-clinical data highlights BGB324's broad clinical utility

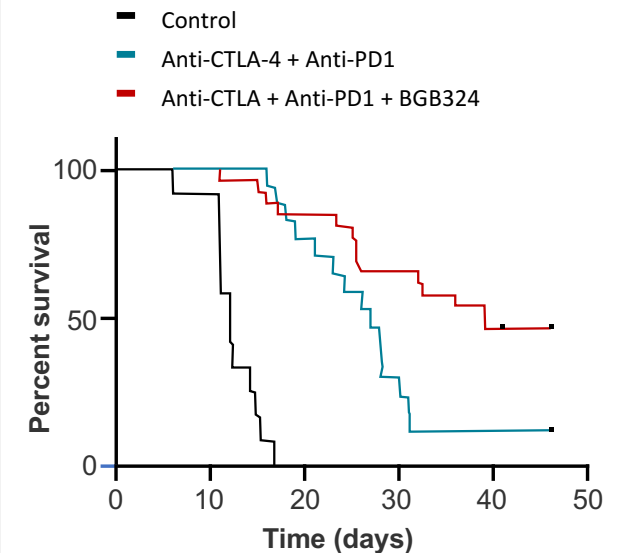
## Single agent activity in AML



## Combination w/ targeted therapy

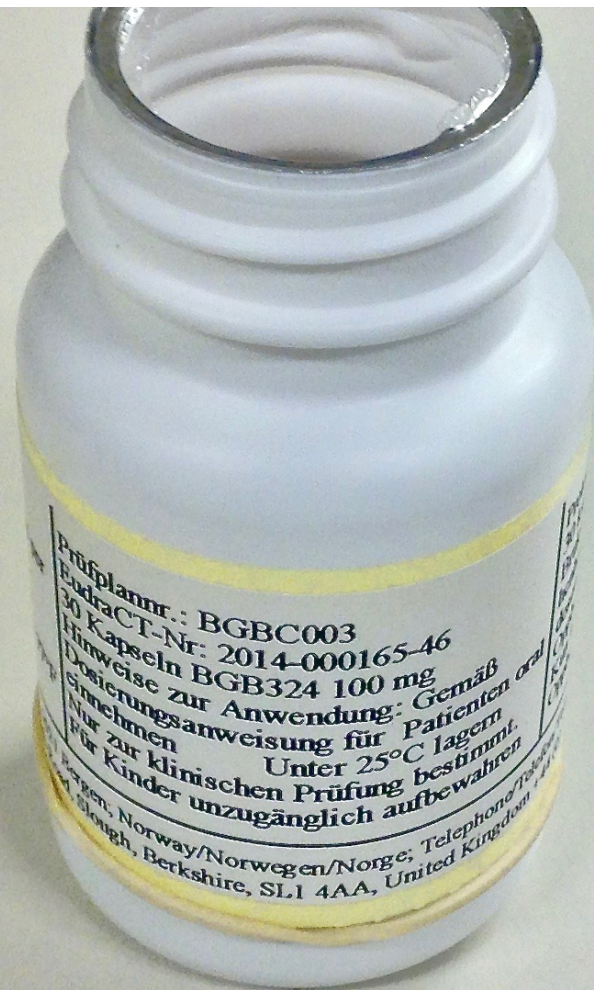


## Combination w/ CPIs
















**And...it's a simple pill  
taken once a day**



# BGB324 clinical development: AXL inhibition as cornerstone for cancer therapy

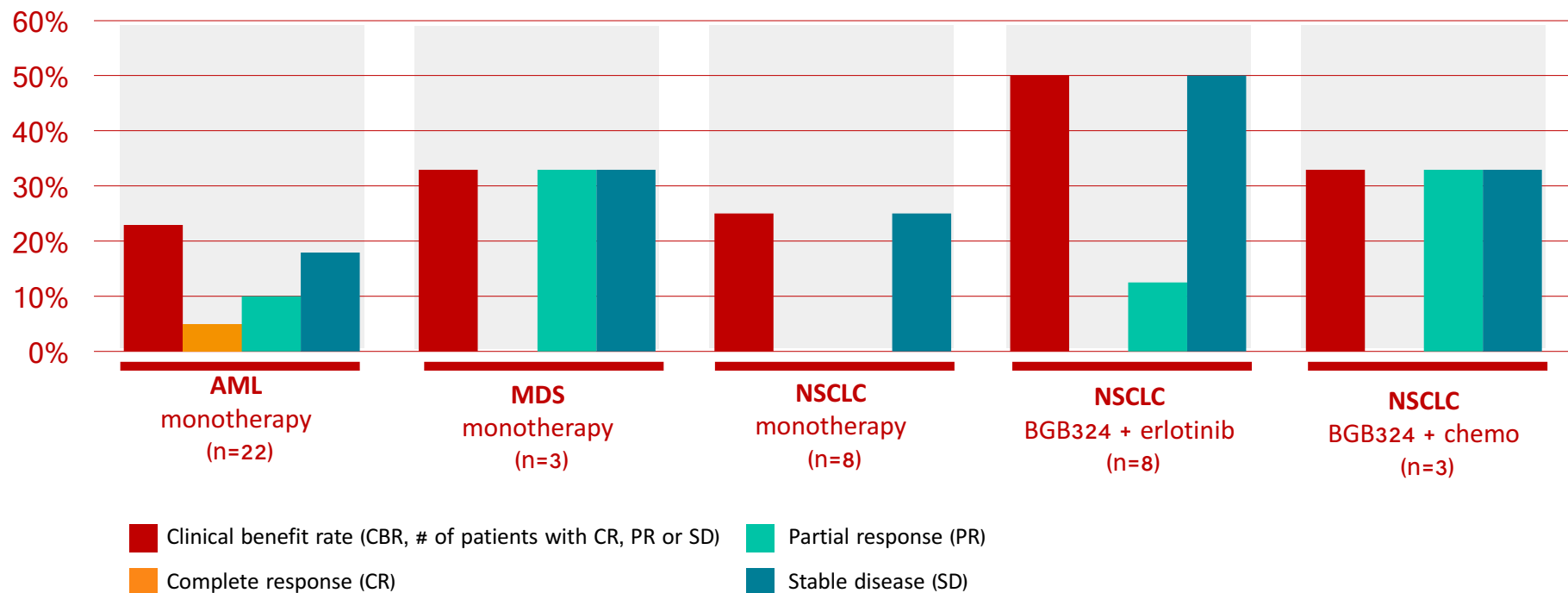
Aiming at patient selection based on  
proprietary biomarkers

## Broad clinical development for BGB324 – 6 trials in phII

Indication	Patient population	Combination	Collaboration	Trial details
NSCLC	<i>adenocarcinoma</i>			up to 48 pts
	<i>mutation driven</i>			up to 66 pts
	<i>all comers*</i>	docetaxel		up to 30 pts
TNBC				up to 56 pts
Melanoma*		  + 		up to 92 pts
AML / MDS		 single agent, cytarabine		up to 75 pts

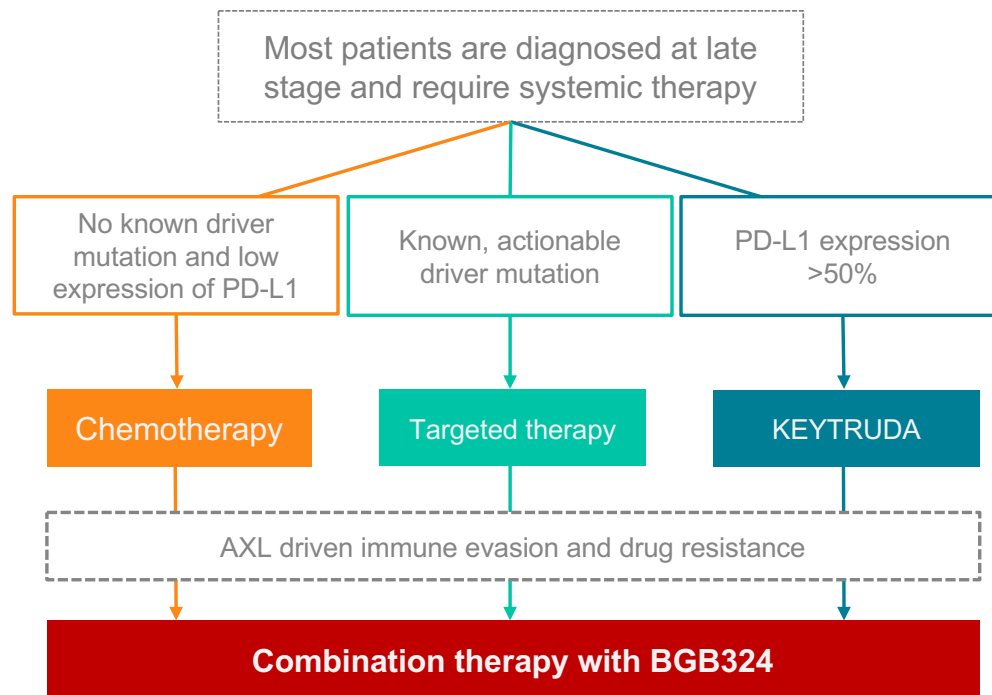
\*Investigator-sponsored trials

## Summary of responses reported in phase Ib Heavily pre-treated relapsed and refractory patients





# Potential for BGB324 to become a cornerstone therapy for NSCLC



- Lung cancer is the most frequent cause of cancer-related death in developed countries
- Strategy to position BGB324 as the cornerstone of treatment for NSCLC by combining with standard of care therapies



# Phase I/II trial in NSCLC of BGB324 with docetaxel

BGBIL005 Phase I/II – NSCLC (2<sup>nd</sup> line – progressed/treatment-refractory disease) – *Investigator-sponsored study*

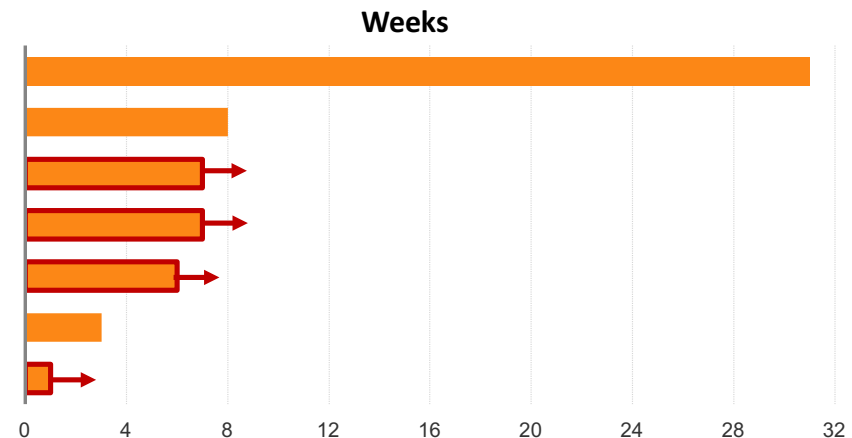
Vast majority of NSCLC patients will receive chemotherapy in 1<sup>st</sup> or 2<sup>nd</sup> line settings

BGB324 enhances the effect of chemotherapy in animal models

Trial involves patients with previously treated advanced NSCLC who have exhausted all treatment options

One patient on treatment for 10 months

One partial response (Recist 1.1) with tumour shrinkage



**Sponsor Investigator: Dr David Gerber, UTSW Dallas**

“The vast majority of my lung cancer patients progress onto chemotherapy, combining this with BGB324 may significantly improve the performance of the chemo and could lead to meaningful disease modification in some patients.”





# Phase II trial in NSCLC of BGB324 with TARCEVA (erlotinib) - Resistance reversal

## BGBC004 Phase II – NSCLC EGFR-mutation driven

Phase Ib/II trial in up to 66 patients with advanced NSCLC patients in 1<sup>st</sup> and 2<sup>nd</sup> line settings (to prevent and reverse erlotinib resistance, respectively)

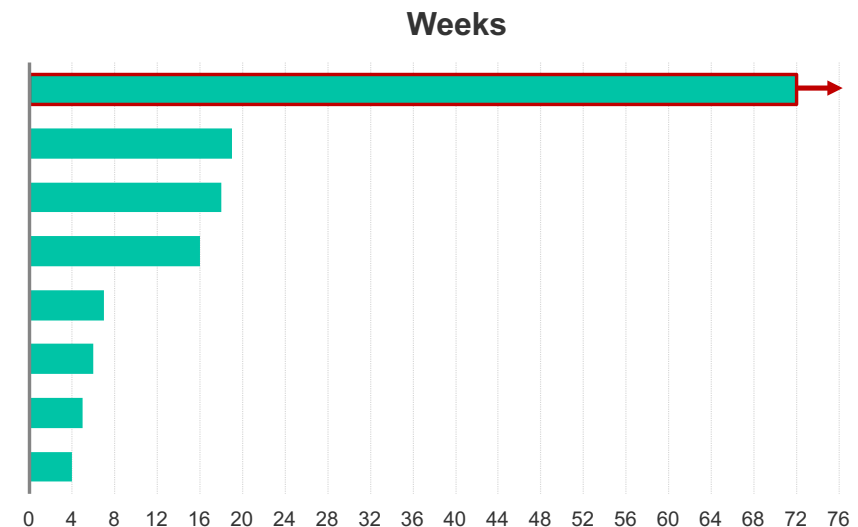
Patients classed as Stage IIIb or IV disease driven EGFR mutation (accounts for approx. 18% of NSCLC patients)

AXL-mediated resistance to erlotinib is common

Biomarker studies underway in parallel

### 50% CBR:

3 SD > 4 months + 1 stable disease with partial response



Status October 2017

# Phase II trial in NSCLC of BGB324 in combination with KEYTRUDA



## BGBC008 Phase 2 – NSCLC Adenocarcinoma of the lung

Up to 48 patients with previously treated unresectable adenocarcinoma of the lung

Biomarker studies (tissue sample and blood based) ongoing in parallel; PD-L1 assay to be performed by Merck

Patient recruitment ongoing in Norway, UK, Spain, US

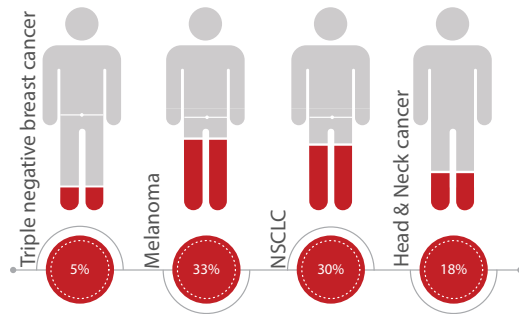
**Primary endpoint:** Objective response rate

**Others endpoints:** Safety, duration of response, time to progression, survival at 12 months, response by biomarker expression

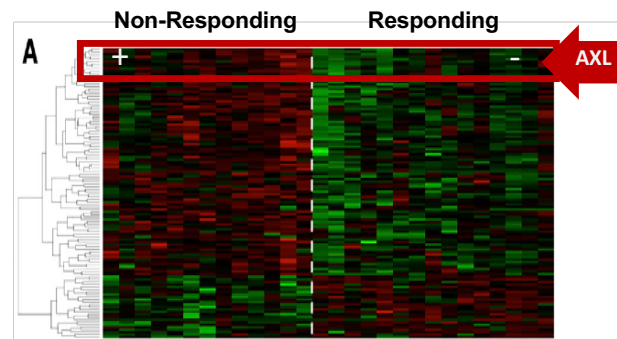
**Initial read-out expected  
2H 2018**

# Strong rationale for combining BGB324 with checkpoint inhibitors

Checkpoint inhibitors do not work for all patients in all cancers



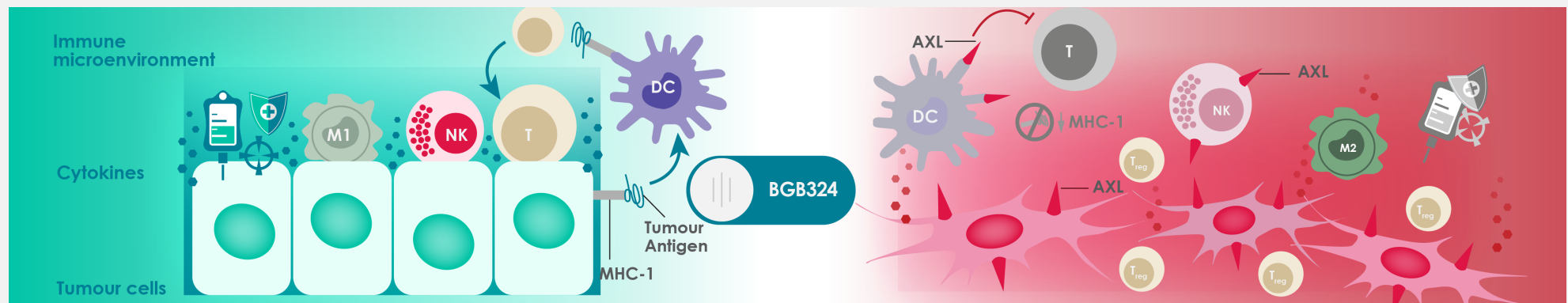
AXL up-regulation is the greatest change in non-responders



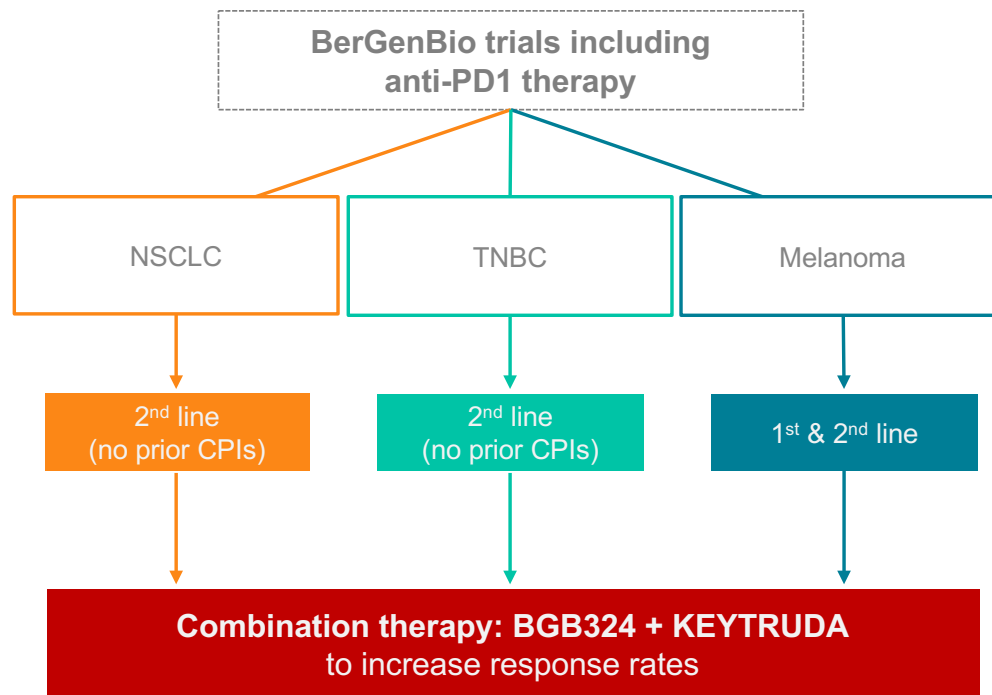
Combine BGB324 + CPI to increase response rate

BGB324  
+  
KEYTRUDA®  
=

ONLY combination study addressing the fundamental mechanism of tumour resistance to CPIs



# Combination with BGB324 to increase efficacy of anti-PD1 therapy



- A significant proportion of patients do not respond to checkpoint inhibitor therapy
- Non-responders to checkpoint therapy have been shown to express AXL at higher rates
- Inhibiting AXL may increase the number of patients responding to checkpoint therapy
- Comprehensive biomarker programme analysing AXL, PD-L1 and immune signature

# Phase II trial in TNBC of BGB324 in combination with KEYTRUDA



## BGBC007 Phase 2 – Triple negative breast cancer (TNBC)

Up to 56 patients with previously treated, unresectable or metastatic TNBC

Biomarker studies (tissue sample and blood based) ongoing in parallel; PD-L1 assay to be performed by Merck

Patient recruitment ongoing in Norway, UK, Spain, US

**Primary endpoint:** Objective response rate

**Others endpoints:** Safety, duration of response, time to progression, survival at 12 months, response by biomarker expression

**Initial read-out expected  
2H 2018**



# Randomised Phase II trial of BGB324 in combination with targeted and I/O therapies in Melanoma

## BGBIL006 Phase II – Melanoma – *Investigator-sponsored trial*

‘Real world study’ Randomised Phase II – first line

Arm 1: BGB324 + pembrolizumab

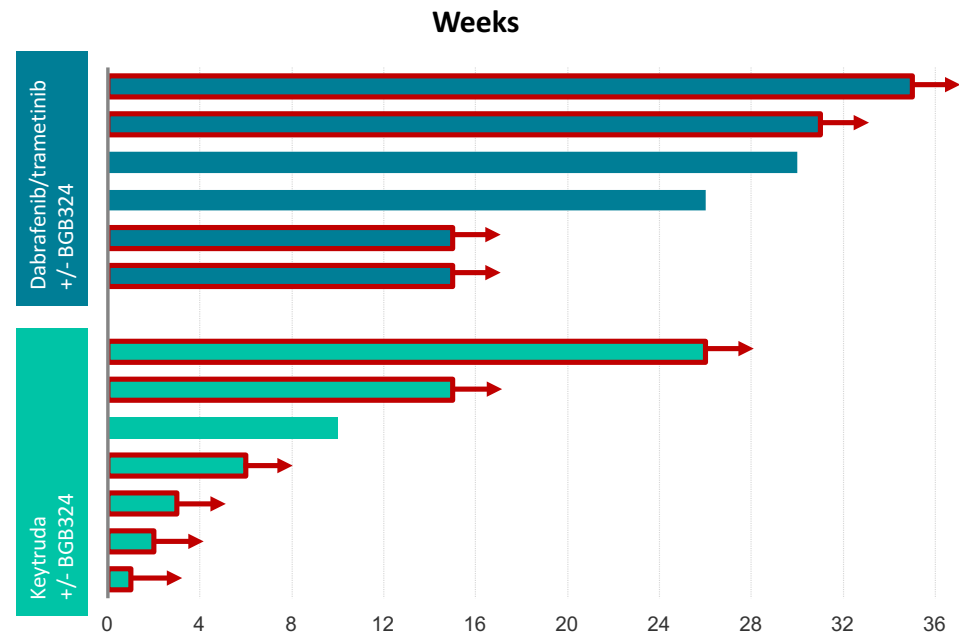
Arm 2: BGB324 + dabrafenib and trametinib

Primary outcomes: Safety, objective response rate

Secondary outcomes: PFS, DoR, overall survival

Biomarker programme ongoing in parallel with collaborators at Massachusetts Institute of Technology (MIT) and Harvard Medical School

Sponsor Investigator: Dr Oddbjørn Straume, Haukeland University Hospital and University of Bergen Center for Cancer Biomarkers



# Our strategy – re-thinking cancer treatment



## **AXL mediates aggressive cancers by driving**

- Immune evasion
- Drug resistance
- Metastasis



## **Patient selection**

- Proprietary biomarkers
- Companion diagnostics development

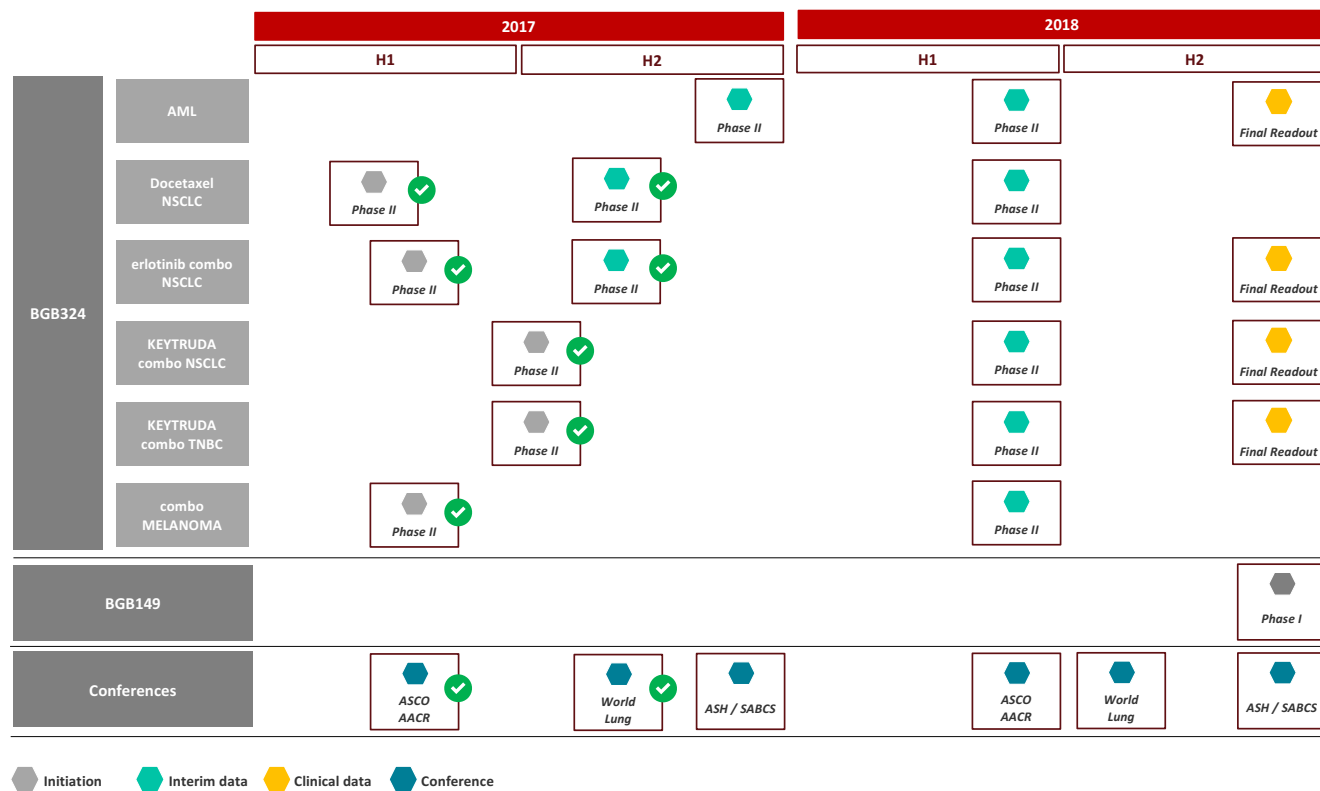


## **Clinical position:**

### **BGB324 in combination with:**

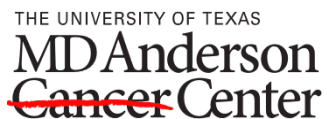
- SoC chemotherapy
- SoC immunotherapy
- SoC targeted therapy

# Milestones 2017 & 2018





## Key partners and collaborators



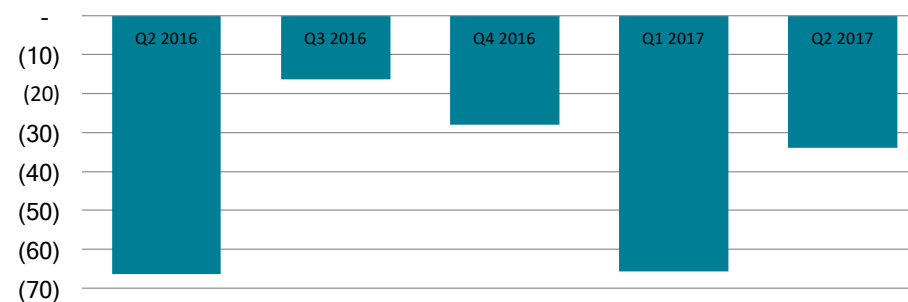
### Sponsor Investigator: Dr David Gerber, UTSW Dallas

“The vast majority of my lung cancer patients progress onto chemotherapy, combining this with BGB324 may significantly improve the performance of the chemo and could lead to meaningful disease modification in some patients.”

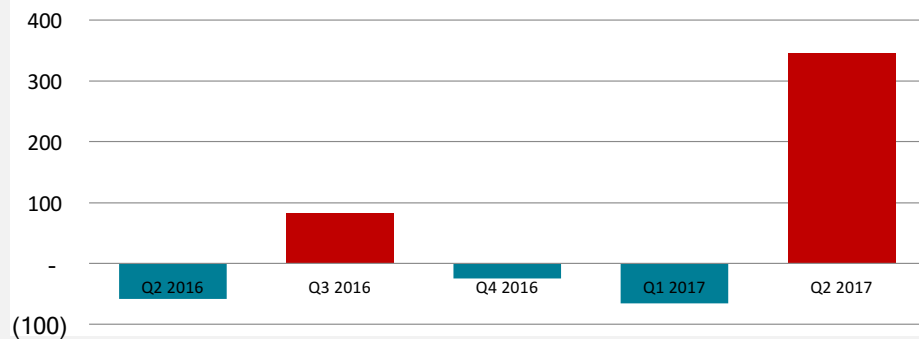
## Key financials (NOK million)

Key Figures (NOK million)	Q2 '17	Q2 '16	YTD '17	YTD '16	FY '16
Operating revenues	-	-	-	-	-
Operating expenses	33.8	66.5	99.6	87.2	131.6
Operating profit (loss)	(33.8)	(66.5)	(99.6)	(87.2)	(131.6)
Profit (loss) after tax	<b>(34.1)</b>	<b>(66.2)</b>	<b>(99.1)</b>	<b>(86.5)</b>	<b>(129.8)</b>
Basic and diluted earnings (loss) per share (NOK)	(0.70)	(225.83)	(2.41)	(307.27)	(419.68)
Cash position end of period	440.3	105.2	440.3	105.2	161.8

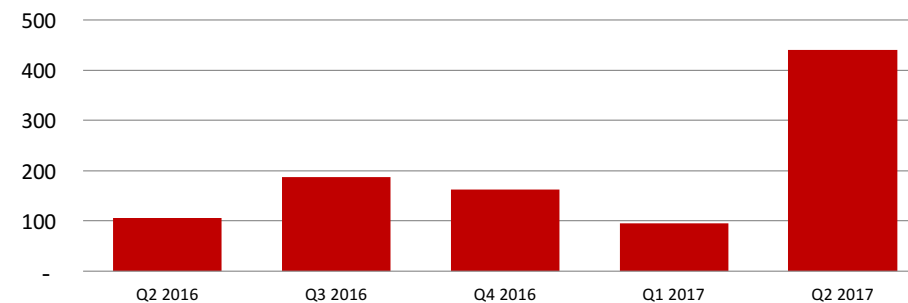
### Operating Loss



### Cash Flow



### Cash Position



Ref: BerGenBio 2Q 2017 report

## Summary and outlook / Investment case

First-in-class AXL inhibitors for aggressive cancers with addressable market in excess of \$11bn

BGB324 in multiple Phase II programmes with interim data readout @ ASCO 2018

Well resourced & experienced organisation to deliver pipeline and milestones

Clear strategy to develop and commercialise assets

# Thank you.

For further information please visit  
**[www.bergenbio.com](http://www.bergenbio.com)**

Developing first-in-class Axl inhibitors to treat  
aggressive cancer

