

BI-1206 in NHL Clinical Update January 28<sup>th</sup>, 2021



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### **AGENDA**

•	11:30 AM	Martin Welschof, CEO BioInvent	Welcome and introduction to today's speakers
•	11:35 AM	Andres McAllister, CMO BioInvent	BI-1206 update
•	11:50 AM	Mats Jerkeman, KOL	The treatment landscape: FL and MCL
•	12.05 PM	Wei-Wu He, Chair and CEO CASI	BI-1206 selection and potential in China
•	12.20 PM	Martin Welschof, CEO BioInvent	Next steps and Q&A



### **TODAY'S PRESENTERS**



Mats Jerkeman, MD

- Professor in Clinical Oncology at Lund University, Sweden
- Coordinator of several ongoing clinical trials in diffuse large B-cell lymphoma and mantle cell lymphoma.
- Chairman of the Nordic Lymphoma Group
- Editor of ESMO Guidelines/ Lymphoma



**Andres McAllister, CMO BINV** 

- CMO BioInvent since 2017
- Previously CSO at Debiopharm; senior roles at IDM and BioMerieux/Pierre Fabre
- Ph.D from Pasteur Institut, Paris



Wei-Wu He, Chair & CEO CASI

- Chair and CEO since 2018
- Executive Chair Human Longevity Inc.
- Founder Genentron Health
- Venture Partner IDG/Accel
- Ph.D in molecular biology, Baylor; MBA Wharton



#### **Martin Welschof, CEO BINV**

- CEO since 2018
- Previously Director Technology Axaron Bioscience; CEO Affitech, CEO Opsona Therapeutics
- Board member: APIM Therapeutics, Nextera AS and Uni Targeting Research
- Ph.D in recombinant antibody technology



### PIPELINE – MULTIPLE VALUE DRIVERS

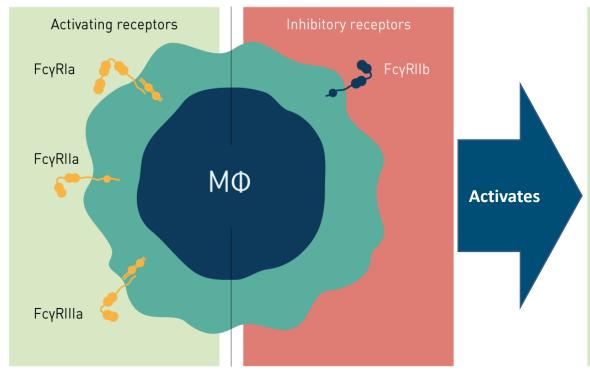
Indication	Program	Discovery	Preclinical	Phase I	Phase II	Partner
Target: FcγRIIB						
iNHL (MCL, MZL, iFL)	BI-1206/Rituximab					<b>CASI</b> Pharmaceuticals
Solid tumors	BI-1206/Pembrolizumab				•	MSD WCASI
Solid tumors	BI-1607			H2 2021		
Target: Tumor associated regulatory T cells (Tregs)						
Solid tumors	BT-001 -α-CTLA4 Mab-VV					transgene
Solid tumors	BI-1808 -α-TNFR2 MAb					
Solid tumors	BI-1910 - α-TNFR2 MAb					
Solid tumors	F.I.R.S.T.™ αTreg					
Target: Tumor associated myeloid cells (TAMs)						
Solid tumors	F.I.R.S.T. ™ αTAMs					Pfizer

### PIPELINE – MULTIPLE VALUE DRIVERS

Indication	Program	Discovery	Preclinical	Phase I	Phase II	Partner
Target: FcγRIIB						
iNHL (MCL, MZL, FL)	BI-1206/Rituximab					<b>CASI</b> Pharmacouticals
Solid tumors	BI-1206/Pembrolizumab				•	MSD 《CASI
Solid tumors	BI-1607			H2 2021		
Target: Tumor associated regulatory T cells (Tregs)						
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Solid tumors	BI-1808 -α-TNFR2 MAb					
Solid tumors	BI-1910 - α-TNFR2 MAb					
Solid tumors	F.I.R.S.T.™ αTreg					
Target: Tumor associated myeloid cells (TAMs)						
Solid tumors	F.I.R.S.T. ™ αTAMs					Pfizer

### FcγRIIB – A SINGLE INHIBITORY ANTIBODY CHECKPOINT TO UNLOCK ANTI-CANCER IMMUNITY IN **BOTH LIQUID AND SOLID TUMORS**

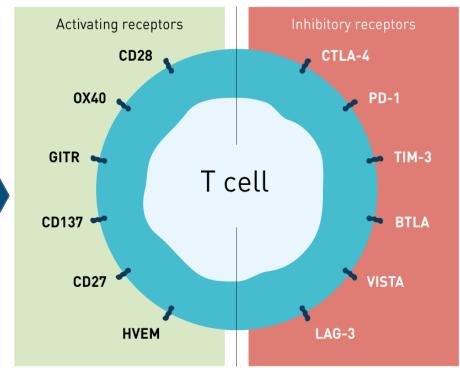
### **Antibody Checkpoints**



### **Innate Immune System**

Part of the immune system that kills tumor cells, but also activates and shapes the adaptive immune system.

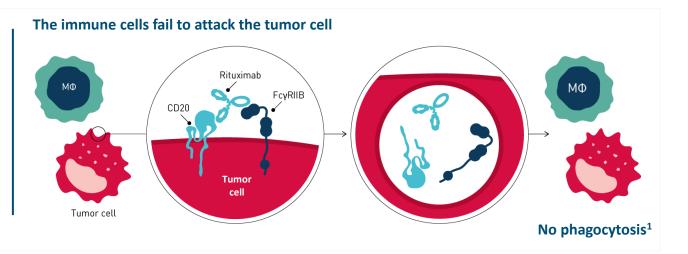
### **T-Cell Checkpoints**



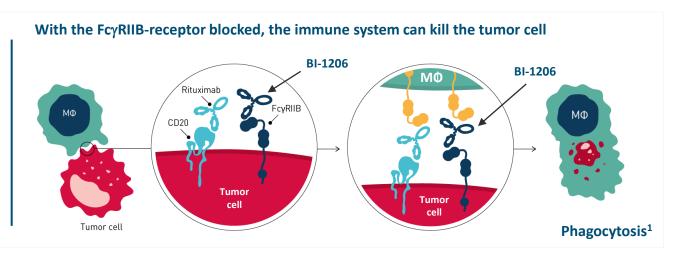
### **Adaptive immune System**

Part of the immune system that eliminates the pathogens and/or prevents their growth.

- Rituximab (Roche's Rituxan® or Mabthera®) is a monoclonal antibody that kills malignant B cells by binding to CD20 on the cell surface
- The FcγRIIB-receptor functions to remove rituximab from CD20, thus hampering its efficacy and protecting cancer cells from the immune system
- FcγRIIB overexpression is associated with a worse prognosis for the patient



- BioInvent's BI-1206 blocks the FcγRIIB receptor, suppressing the tumor's protection. Its activity helps restore and enhance rituximab's effect
- With the FcyRIIB-receptor blocked, a better anti-tumor activity is engaged allowing the immune system to find and kill the tumor cell



### BI-1206 IN NON-HODGKIN LYMPHOMA: VALUE PROPOSTION – KEY SEGMENTS & VALUE DRIVERS

#### BI-1206 value drivers

- Compelling scientific rationale in  $\alpha$ -CD20 refractory B-cell lymphoma
- Chemo-free regimen
- Favorable safety profile
- Scalability of total addressable market

#### **BI-1206** highlights

- First-in-class in hematology no direct competitors
- High unmet need for chemotherapy-free, safer options in 2<sup>nd</sup> and 3<sup>rd</sup> lines
- Granted FDA Orphan Drug Designation for BI-1206 for MCL in January 2019

Possible label extension to all therapeutic areas where anti-CD20 mAbs are used (incl. autoimmune diseases)

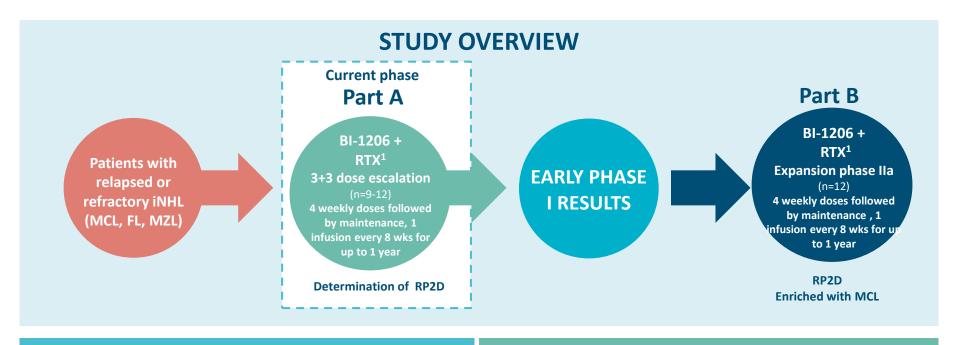
# KEY SUB-SEGMENTS OF NON-HODGKIN LYMPHOMA (NHL)



- Mantle Cell Lymphoma (MCL¹) may be slow growing (indolent) but can also be fast-growing (aggressive). Usually diagnosed in people in their early 60s. Resistance to ibrutinib results in a very aggressive disease with few treatment options
- **Follicular Lymphoma (FL¹)** is the most common form of slow-growing non-Hodgkin lymphoma
- Marginal Zone Lymphoma (MZL¹) is a slow growing type of B cell lymphoma with a median age of diagnosis of 65 years



### BI-1206 IN COMBINATION WITH RITUXIMAB: OPEN LABEL PHASE I/IIA STUDY



#### **STUDY OBJECTIVES**

- Explore safety & tolerability of the combination
- Select recommended phase 2 dose (RP2D)
- Determine pharmacokinetic and pharmacodynamic profile
- Observe early signs of efficacy
- Biomarker exploration (B cell depletion, depletion of circulating tumoral cells, analysis of biomarkers predictive of response)

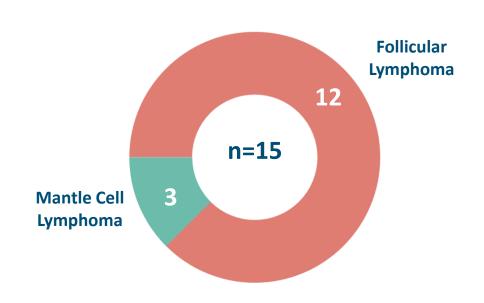
#### **INCLUSION CRITERIA**

- Patients must have relapsed disease or disease that is refractory (R/R) to conventional treatment or for which no standard therapy exists.
- Investigator judges available standard therapy as not being appropriate for the subject
- Occurrence of progressive disease after completion of a regimen of rituximab-containing therapy.



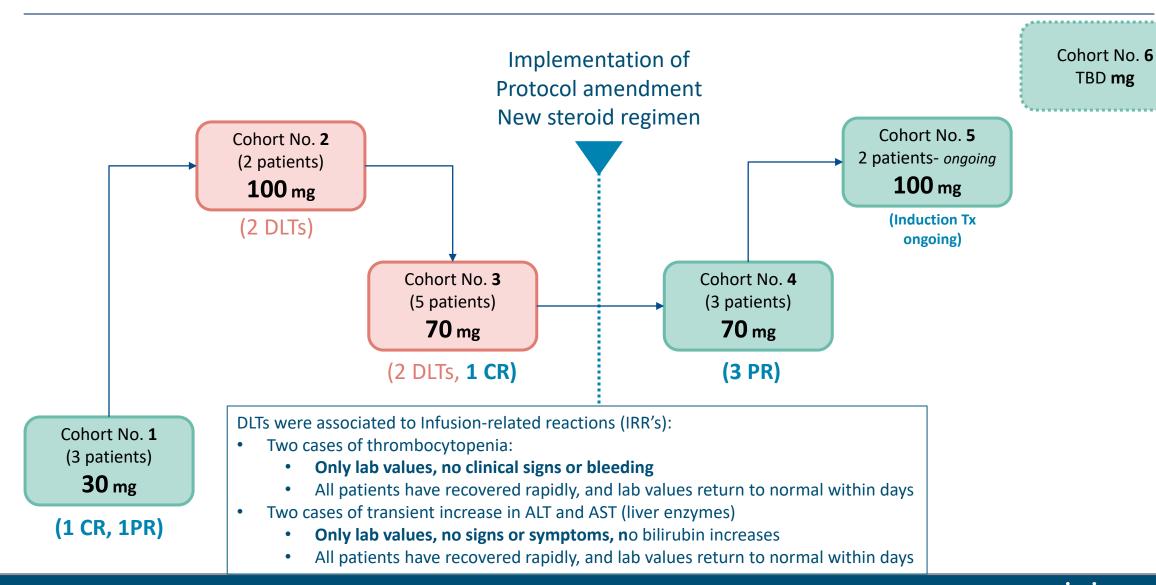
### **PATIENT DEMOGRAPHICS**

### **PATIENTS RECRUITED IN PART A**



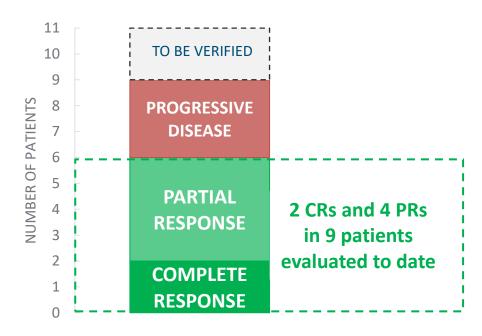
PATIENT DEMOGRAPHICS	TOTAL=15 PATIENTS			
Gender	Male, n=9 (60%)	Female, n=6 (40%)		
Age	Range 53-80, Mea	Лean 70		
Disease type	FL, n=12 (80%)	MCL, n=3 (20%)		
No. of prior lines of therapy	Range 1– 11, Mean 3.7			

#### GOOD SAFETY PROFILE AND MANAGEABLE IRRS



# ENCOURAGING RESPONSES FROM PATIENTS COMPLETING INDUCTION CYCLE INCLUDING TWO ENDURING COMPLETE RESPONSES

### RESPONSES FROM SIX OF NINE PATIENTS COMPLETING INDUCTION CYCLE



Complete Responses

Still enduring after 12-24 months

- To date, 15 patients enrolled in Part A
- 9 patients have been evaluated for response, 2 still on treatment
  - Two complete responses (one at 30mg, one at 70mg)
  - Both complete responses continue today, 12-24 months out
  - One MCL patient with blastoid histology who achieved complete depletion of peripheral tumor cells, and achieved a PR
  - Four partial responses (one at 30mg, three at 70mg)
  - Two patients (100 mg) not evaluated for response yet
- Next steps:
  - Read-out from 2 patients at 100mg in coming weeks, including one
     MCL patient with blastoid histology
  - 3<sup>rd</sup> patient being recruited
  - Determine RP2D and start Part B

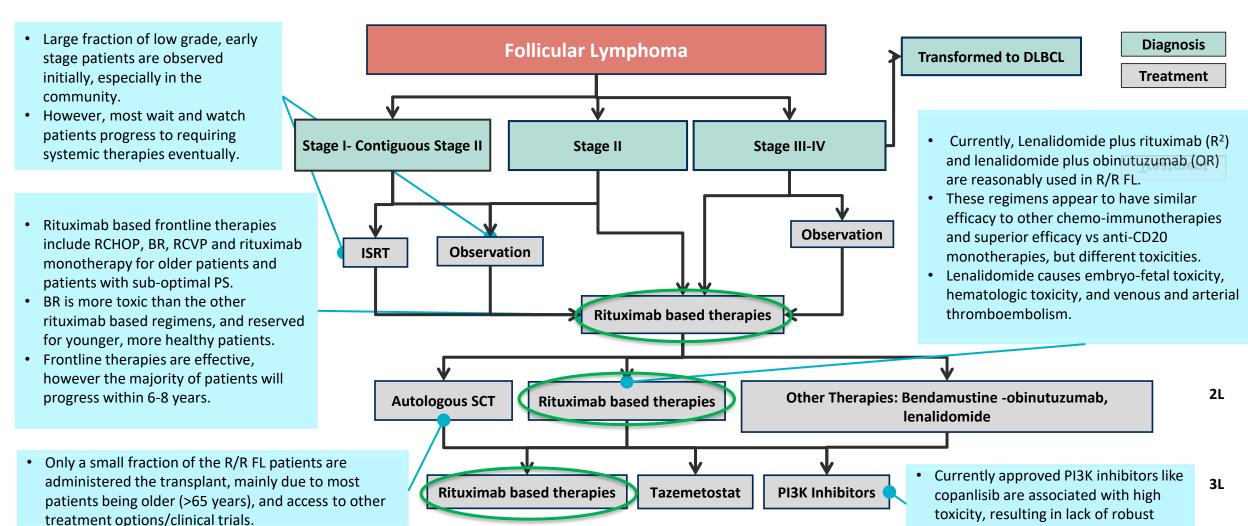


### **UPCOMING KEY MILESTONES**

- Select RP2D, and move to expansion phase (Part B) of the study (same patient population)
- Include China in global clinical development strategy: implement part B of the study
- EoP1 meeting with FDA planned for Q3/2021
  - Discuss RP2D and new phase 2 study design (potentially pivotal study)
- Start implementation of new phase 2 study in US, Europe and China
- Determine quickest path to registration
  - Orphan drug designation in MCL obtained
  - Fast track designation
  - Breakthrough therapy designation



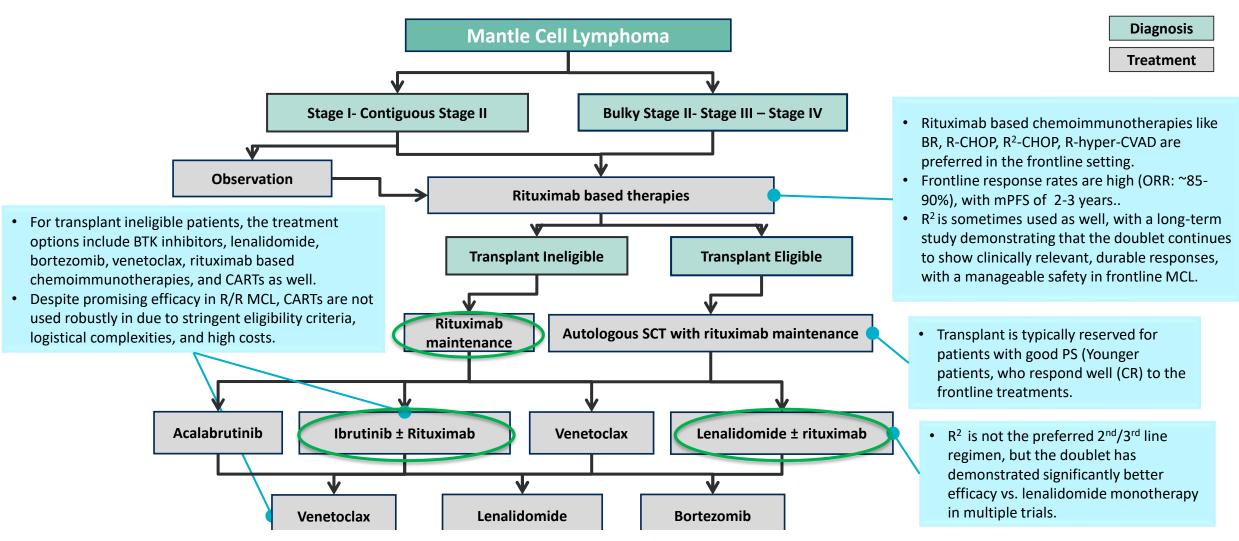
# RITUXIMAB-CHEMOTHERAPY BASED REGIMENS ARE ADMINISTERED EXTENSIVELY ACROSS ALL STAGES OF FL, HOWEVER THERE IS A LACK OF PREFERRED SOC TREATMENTS IN R/R FL





usage.

# WHILE RITUXIMAB BASED REGIMENS CONTINUE TO BE PREFERRED TO TREAT FRONTLINE ADVANCED DISEASE, TARGETED THERAPIES LIKE BTKI AND BCL-2I ARE OFTEN ADMINISTERED IN THE R/R SETTINGS

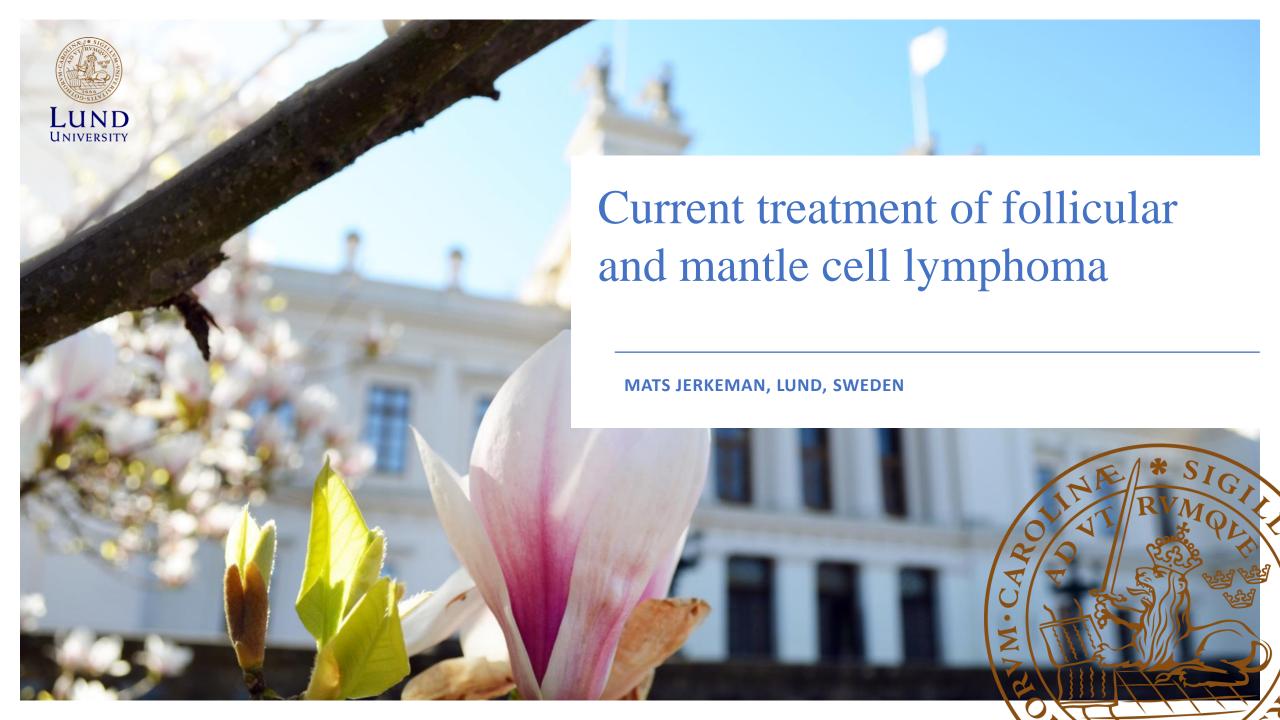




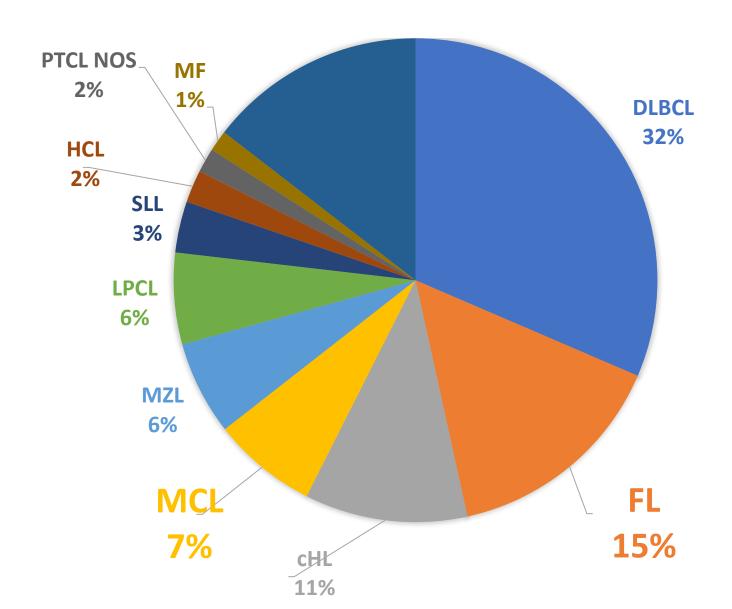


Thanks!





# Swedish Lymphoma Register



# Common features and differences FL/MCL

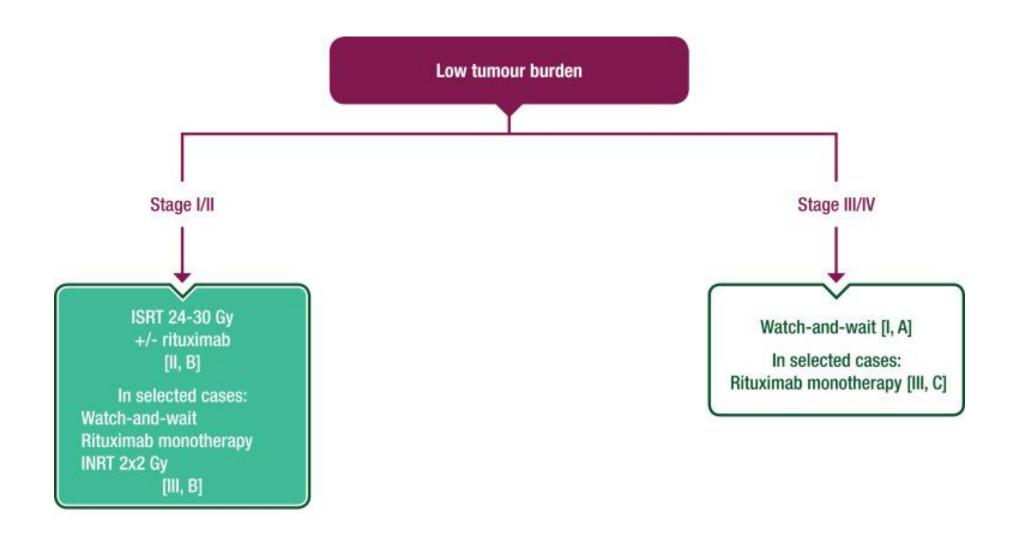
### Common

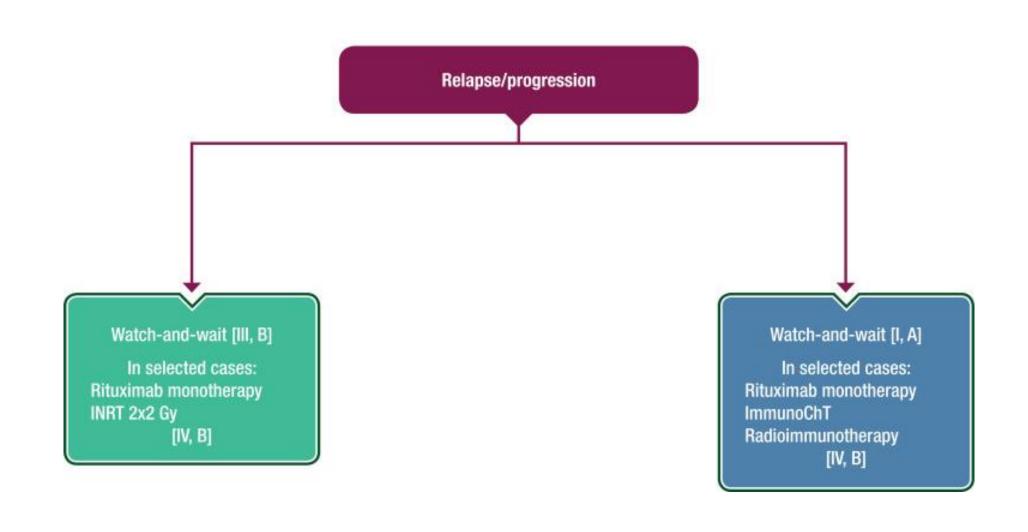
- Highly sensitive to anti-CD20 immunotherapies
- Highly radiosensitive
- Mostly nodal and bone marrow involvement
- Not curable

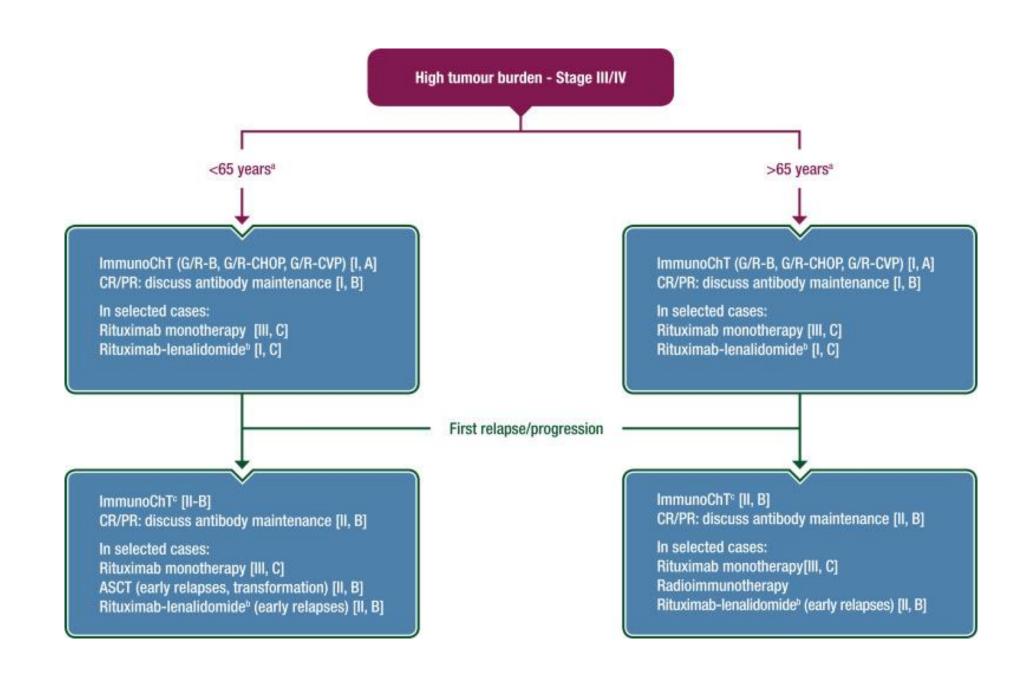
### **Differences**

- MCL more often clinically aggressive
- Active novel agents in MCL
  - BTK inhibitors
  - BCL2 inhibitors
- Active novel agents in FL
  - PI3K inhibitors

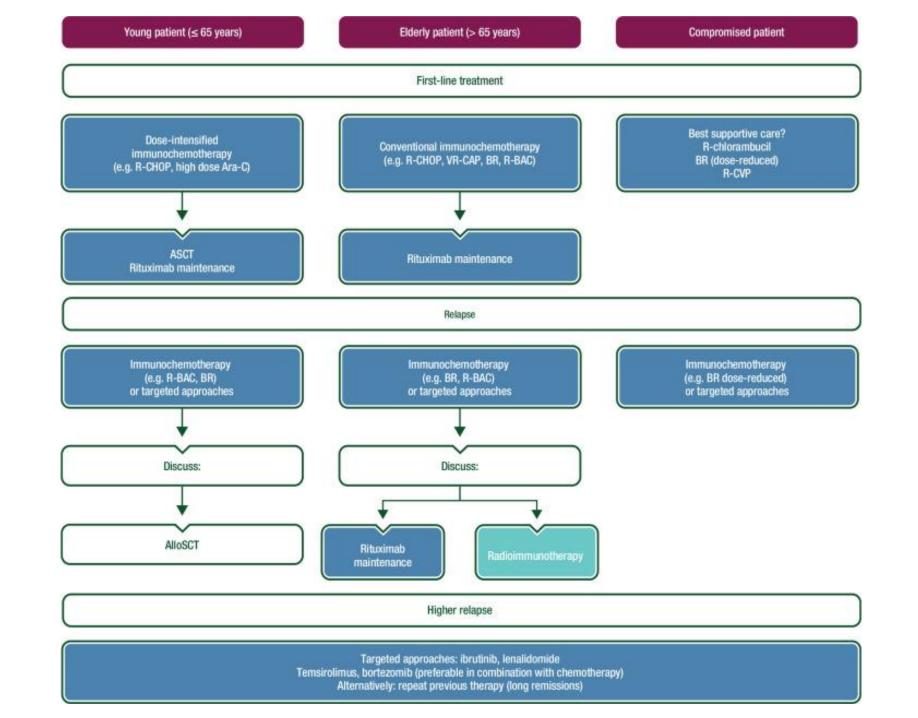
## ESMO Guidelines FL 2020







# ESMO Guidelines MCL 2017



### Potential role of BI-1206

- Sensitizer of rituximab, more specific than lenalidomide?
- Component in 'chemo free' regimens
  - Low tumor burden FL
  - Elderly patients with MCL
- In low tumor burden FL with rituximab as single agent?
- In MCL combination with rituximab as maintenance?





# BioInvent – CASI Strategic Partnership BI-1206 for China

Jan 28, 2021

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# BI-1206: Targeting FcγRIIB, the First Checkpoint Inhibitor Directed Towards Monoclonal Antibody Receptor Interaction

- BI-1206 is a first-in-class monoclonal antibody that targets FcγRIIB the only inhibitory Fcγ receptor that acts as a "brake" on the innate immune system
- BI-1206 acts like a Checkpoint Inhibitor, blocking the mAb-checkpoint FcγRIIB interaction to unleash antibody-mediated reactivation of the immune response against cancer
- By removing the checkpoint FcγRIIB, BI-1206 allows better and prolonged mAb anti-tumor activity
- BI-1206 has broad clinical potential, much like the PD-1 checkpoint's, in many relapsed/refractory and first-line settings by blocking FcγRIIB interaction



## **CASI – BioInvent Partnership**

# Strategic partners for developing and commercializing BI-1206 using a China development model

- Leverage CASI's expertise and resources to accelerate development and commercialization of BI-1206 in China
- Generate clinical data on BI-1206 rapidly in China to support the global development program and reach value inflection points quickly
- Complements CASI's clinical/medical teams and our established relationships with hematology KOLs, hospitals, medical centers and pharmacies
- CASI has exclusive China development and commercialization rights



# BI-1206: Multiple Opportunities for Clinical Development and Commercialization in China

- Lead Indication: NHL
  - BI-1206 in Combination with Rituximab (or biosimilar) in Relapsed/Refractory Subjects With Indolent B-Cell Non-Hodgkin Lymphoma
- Other Potential Indications (selection will be data driven):

### **Combination with PD-1**

- Lung Cancer NSCLC
- Hepatocellular Cancer

### **Combination with Anti-CD38 (CID-103)**

Multiple Myeloma



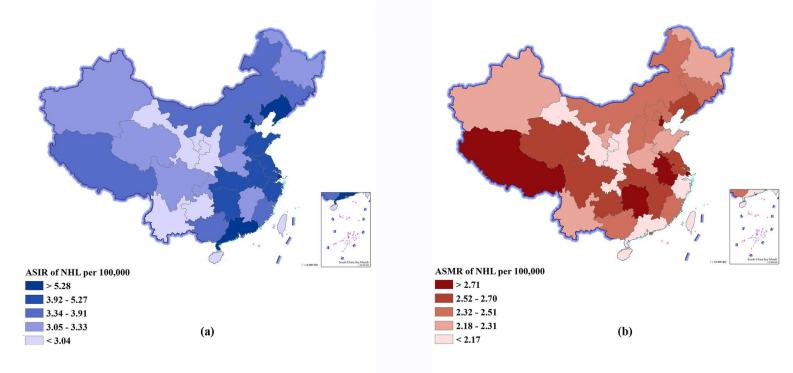
### **BI-1206 for NHL – Complements CASI's Hem-Onc Focus**

- Synergistic with CASI's clinical expertise and commercial/medical teams
- Leverage our established relationships with hematology-oncology Opinion Leaders and top cancer hospitals/medical centers
- CASI China can contribute up to 50% of the patients to accelerate the recruitment of the global pivotal study
- For an Innovative Product BLA filing in China, a local phase I (PK/PD) study plus the global pivotal trial are required for approval



### Non-Hodgkin's Lymphoma – A Large Pool of Patients in China

- The disease burden of lymphoid neoplasms has been rising in China over the last decade
- Estimated 88,000 new cases/year and a 5 year prevalence of 227,600
- 48,000 deaths from NHL annually



Age-standardized incidence rates (ASIRs) and age-standardized mortality rates (ASMRs) of non-Hodgkin's lymphoma (NHL) by province of China, 2016. a ASIR of NHL b ASMR of NHL

Sources: Liu et al. Journal of Hematology & Oncology (2019) 12:115; Globocan 2018; CA CANCER J CLIN 2020;70:7–30.

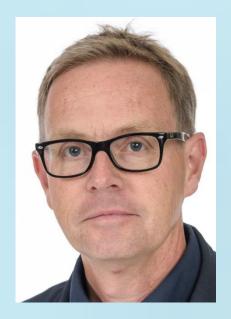


# Exciting Clinical Data from BioInvent's Phase I/IIA Study of BI-1206 in Non-Hodgkin's Lymphoma: 2 CRs and 4 PRs in 9 Patients Evaluated

- Of the 11 patients who have completed induction cycle
  - Two complete responses (one at 30mg, one at 70mg)
    - Both complete responses continue today, 12-24 months out
  - Four partial responses (one at 30mg, three at 70mg)
  - One MCL patient with blastic form who achieved complete depletion of peripheral tumor cells, and achieved a PR
  - Two patients (100 mg) not evaluated for response yet







**Mats Jerkeman, MD** 



**Andres McAllister, CMO BINV** 



Wei-Wu He, Chair & CEO CASI



Martin Welschof, CEO BINV

**Q&A SESSION** 





# BACKUP SLIDES



# CASI Pharmaceuticals, Inc. (NASDAQ: CASI) - Highlights

- Driving sales growth for EVOMELA®, our first commercial product in China
- Growing pipeline of innovative therapeutics with focus on hematological malignancies
- Active BD to pursue further pipeline expansion, including solid tumor therapeutics
- Over 100 employees led by global management team with deep knowledge of US and China global drug development, regulatory, tech transfer, & commercial
- State-of-the-art GMP manufacturing facility currently in design stage
- Strong cash position first quarter at \$53.8 million
- US NASDAQ-listed company backed by long-term fundamental investors



### **CASI's Business Model**

# A strategic partner for developing and commercializing innovative products in China, the U.S. and globally

- Leverage CASI Pharmaceutical's expertise and resources to accelerate development and commercialization of innovative products into the China and U.S./global markets
- Reach value inflection points quickly to support global development programs
- Dedicated clinical and commercial team of experienced pharmaceutical professionals
- Bringing innovative medicines to 1.4 billion people in Greater China while addressing the U.S. and global markets efficiently



### **EVOMELA®** for Multiple Myeloma

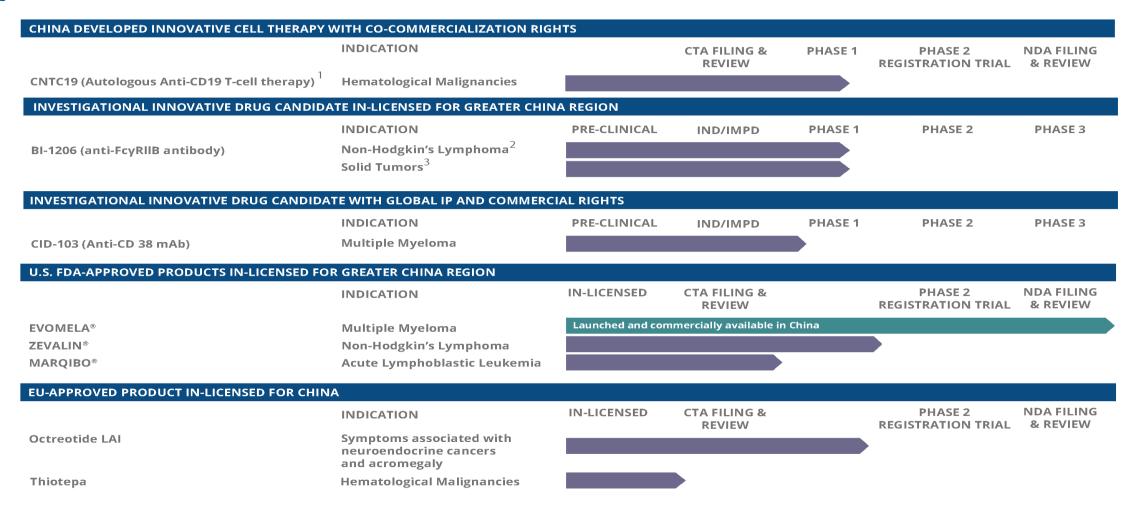


- Successfully launched in China mid-August 2019
- HDT + ASCT is 1<sup>st</sup> line treatment for multiple myeloma
- Provides best choice of preparative regimen:
  - Lack of propylene glycol solvent (related to certain adverse events)
  - Captisol® enabled formulation is stable when reconstituted and substantially improves handling for pharmacists/nurses/physicians for patient administration
- The only form of melphalan commercially available in China
  - Despite COVID-19, EVOMELA has proven to be an essential drug with strong orders and demand
- Post-marketing study will complete accrual started in 2020

**CASI**Pharmaceuticals

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### **Pipeline**



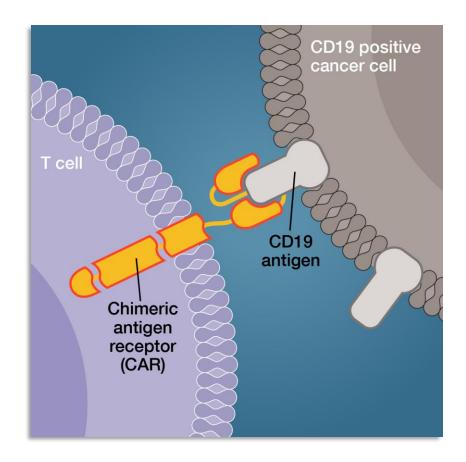
<sup>(1)</sup> Clinical development is the responsibility of Juventas Cell Therapy Ltd.



<sup>(2)</sup> In combination with rituximab. Trial conducted by BioInvent.

<sup>(3)</sup> In combination with pembrolizumab. Trial conducted by BioInvent.

### **CNCT-19: CD19 CAR-T Cell Therapy – A Validated Target**

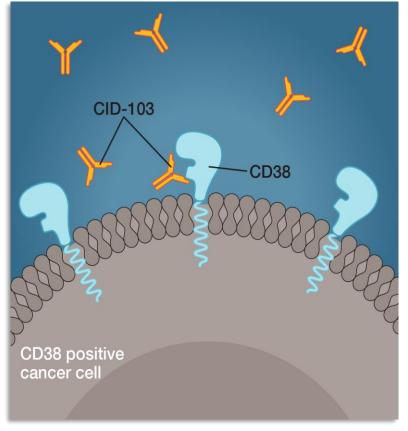


- Targets CD19, a B-cell surface protein widely expressed during all phases of B-cell development and validated target for B-cell derived hematological malignancies
- CD19-targeted CAR have demonstrated consistently high antitumor efficacy in children and adults with relapsed B-cell acute lymphoblastic leukemia (B-ALL), chronic lymphocytic leukemia (CLL), and B-cell non-Hodgkin lymphoma (B-NHL)
- Interim Phase 1 data presented at ASH: total CR/CRi rate in 20 r/r B-ALL patients was 90% on day 28, in which MRD negative CR/CRi rate was 70%
- CASI has exclusive China and worldwide commercial rights
- Synergistic with current EVOMELA commercial team already trained and established with hematology KOLs, hospitals, medical centers and pharmacies

Confidential



### CID-103: Potential Best in Class Anti-CD38 mAb for Multiple Myeloma



- Exclusive global rights
- Phase I study targeted for 1Q2021
- Fully human IgG1 anti-CD38 monoclonal antibody recognizing a unique epitope; selected to have strong ADCC activity against CD38 malignant cells and to reduce CDC activity with a potential reduction of infusion reactions with observed with existing anti-CD38 treatments
- Encouraging preclinical efficacy & safety profile compared to other anti-CD38 mAbs
- Demonstrates greater ADCC activity over Daratumumab and other anti-CD38 mAbs
- In vivo activity outperforms Daratumumab and other anti-CD38 mAbs
- Survival improvement observed in Daudi, Ramos and Raji Xenograft models

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### **Other Assets**

### **Octreotide Long Acting Injectable (LAI)**

- Exclusive China rights
- Octreotide LAI formulations considered a standard of care for the treatment of acromegaly and the control of symptoms associated with certain neuroendocrine tumors
- Approved in various European countries

#### **ZEVALIN®**

- Exclusive greater China rights
- CD20-directed radiotherapeutic antibody for treatment of patients with R/R, low-grade or follicular B-cell non-Hodgkin's lymphoma (FNHL) and patients with previously untreated follicular non-Hodgkin's Lymphoma (FNHL)
- Approved and commercialized in the U.S.

### Thiotepa

- Exclusive China rights
- Conditioning treatment for allogeneic haemopoietic stem cell transplants (EMA)



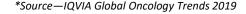
# **China Market Opportunity**

- In China, therapeutic oncology treatments grew by 23.6% to \$6.3 billion in 2018 and spending has more than doubled since 2013
- New medicines launched since 2013 generated \$218 million in spending in 2018
- Drugs are increasingly reaching the market faster in China as a result of expedited reviews and 35 approvals (~73%) following review and approval acceleration policies in 2018
- In 2018, Chinese Health Authority approved 14 new oncology drugs, on track with the US and other developed markets











# **CASI Corporate Offices**

- CASI Pharmaceuticals, Inc. (NASDAQ: CASI)
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