Lytix Biopharma

Arctic mini seminar, March 2nd 2015

Lytix Biopharma – cancer immunotherapy focused

Lead Product

- **LTX-315**, currently in Ph I/IIa - cancer immunotherapy with a **unique and differentiated mode of action**

Evidence

- Compelling pre-clinical data and promising clinical Phase I data - Indicating **high potential first-in-class cancer immunotherapy**

Market

- **”Pan-tumor” potential** for transdermally accessible cancers: Melanoma, Breast Cancer, Soft Tissue Sarcoma, Head & Neck

Strategy

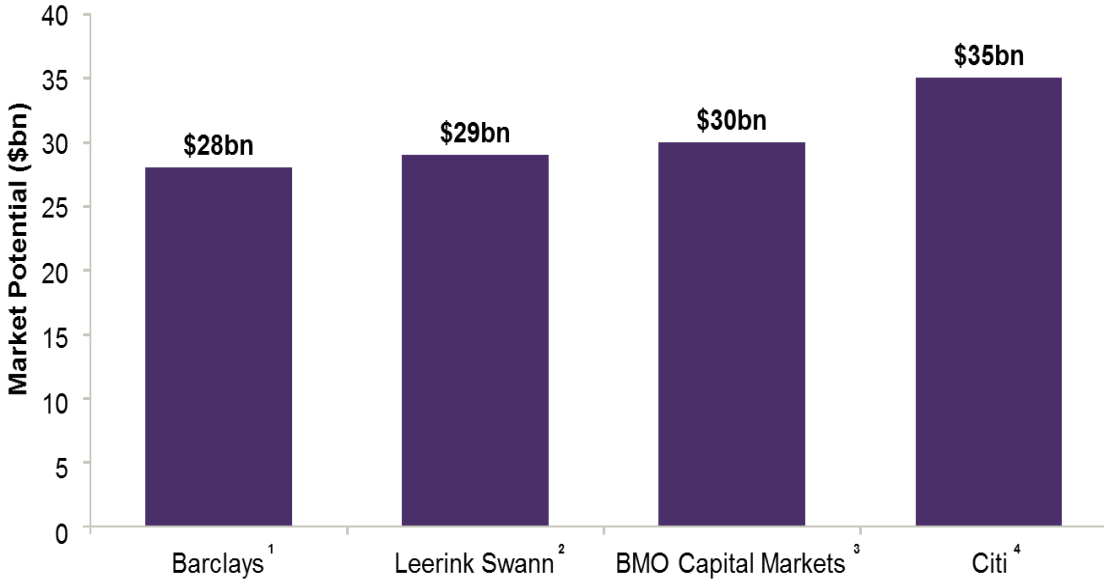
- Identify and develop new innovative cancer immunotherapies Partnership for late stage development and commercialization

Team

- Extensive experience from drug and business development and commercialization of cancer products

Cancer immunotherapy market
– 35bn USD potential in 2022

- **<3% of treatments today**, estimated to reach up to **60% by 2022**
- **Immune checkpoint inhibitors** first to market
- Premium pricing
- Future treatment regimes will consist of various **combinations of and with checkpoint inhibitors**



Source: Citigroup research

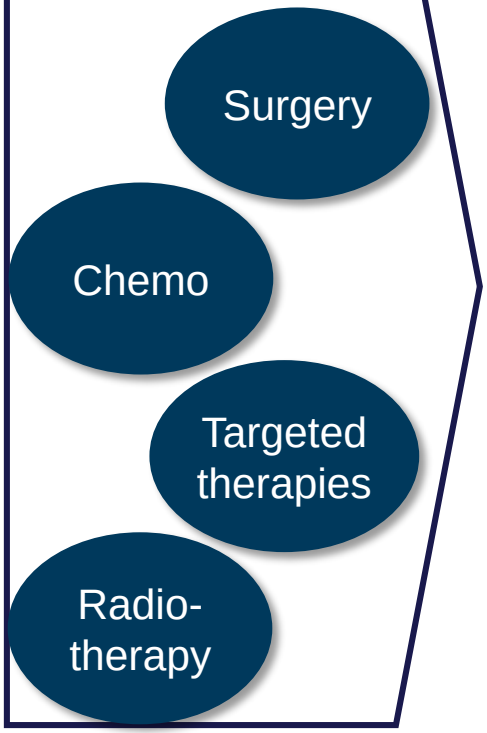
[1] Barclays Capital Inc., Butler, 22 Jan, 2014
[2] Leerink Swann LLC Equity Research, "Immuno-Oncology: The Future of Cancer Treatment is Now", S Fernandez et al, 5 Nov, 2013; reconfirmed on 16 Dec, 2013
[3] BMO Capital Markets Corp., Arfaei, 9 Feb, 2014
[4] Citi Research, a division of Citigroup Global Markets Inc., "Immunotherapy - The Beginning of the End for Cancer", A Baum, 22 May 2013; reconfirmed on 21 Nov, 2013

Cancer immunotherapy treatment

- Turning cancer into a controllable disease

Conventional cancer treatment

Targeting cancer cells directly:



New approach, Cancer Immunotherapy

Stimulates the immune system to fight cancer:

Checkpoint inhibitors/stimulants
Yervoy (BMS) 2011
Keytruda (MSD) 2014
Opdivo (BMS), 2014
medi-4735 (AZ)
RG7446 (Roche)
Pidilizumab (CureTech)
AMP-224 (GSK)
AMP-514 (AZ)
BMS-936559 (BMS)
Anti-OX40 (AZ)
TIM3 Ab (Cellerant)
BMS-986016 (BMS)
IMP701 (Immutune)

Intratumoral immune therapy

LTX-315, peptide (Lytix)

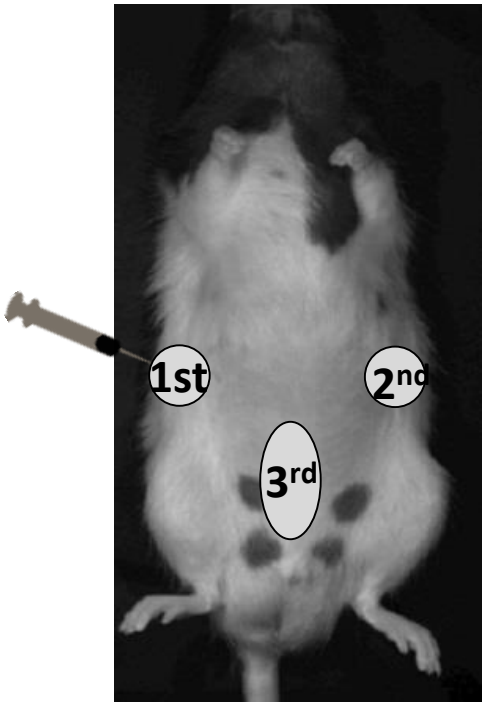
T-VEC, virus (Amgen)
Oncos-102, virus (Oncos Therapeutics)
PV-10, dye (Provectus)

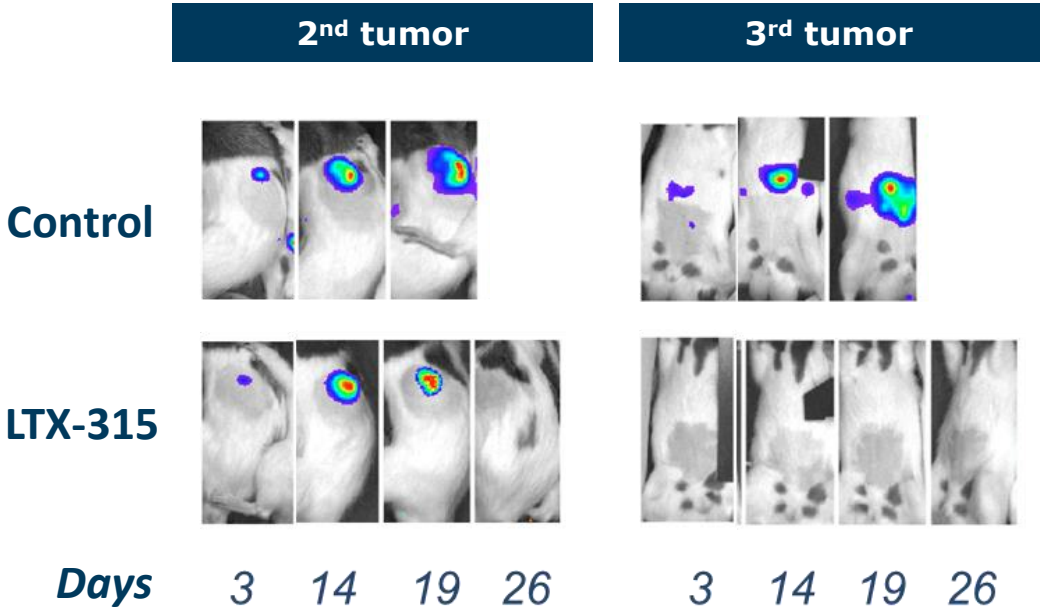
Cancer vaccines
Provenge **(**Dendreon / Valeant)
Targovax, Ultimovacs, Vaccibody etc.

The unique mechanism of action of LTX-315

- *Video not available online*

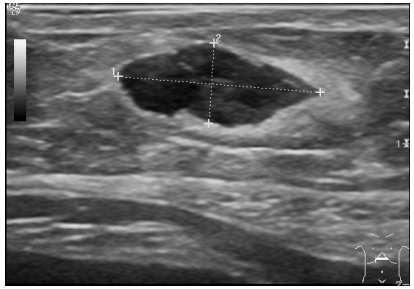
Effect on injected and non-injected lesions



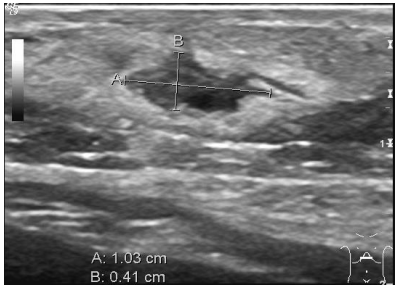


LTX-315 induces systemic tumor specific immune responses

LTX-315 induces tumor specific immune response in cancer patients

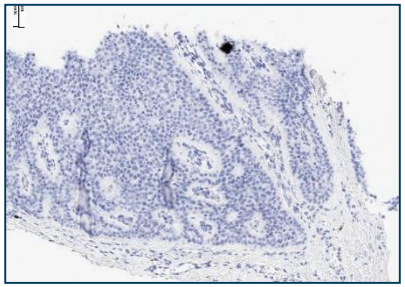


Baseline

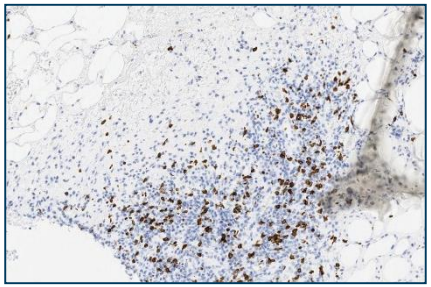


After treatment

Complete or partial regression of injected lesions



Before:
Few CD8⁺ T-cells



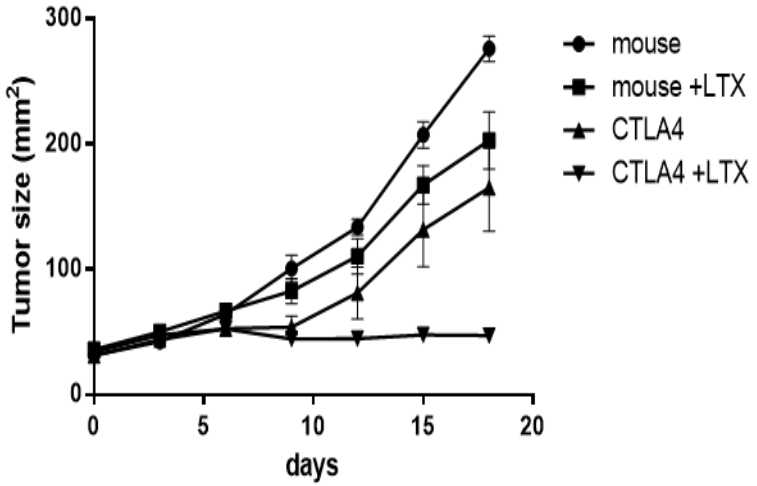
After treatment:
Increase of CD8⁺ T-cells

Infiltration of Cytotoxic $CD8^+$ T-cells in injected lesions

LTX-315 has a predictable and mild safety profile

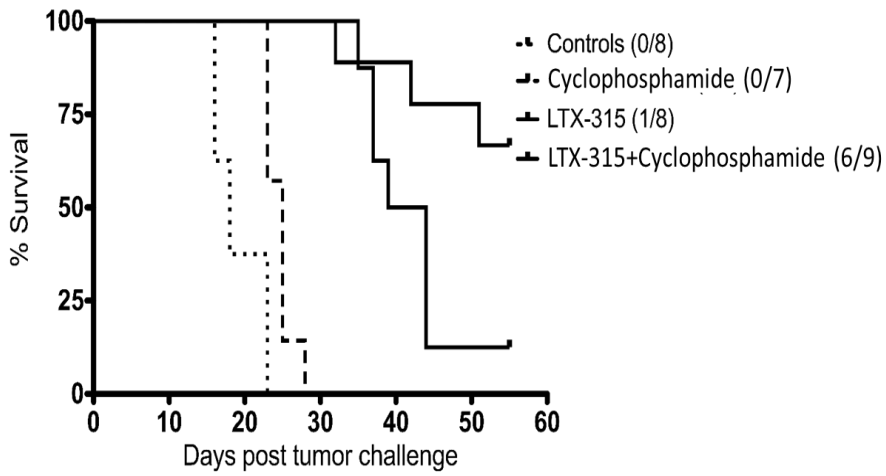
LTX-315 demonstrate strong synergy in combination therapy

Checkpoint inhibitors and LTX-315



Synergy with anti-CTLA4

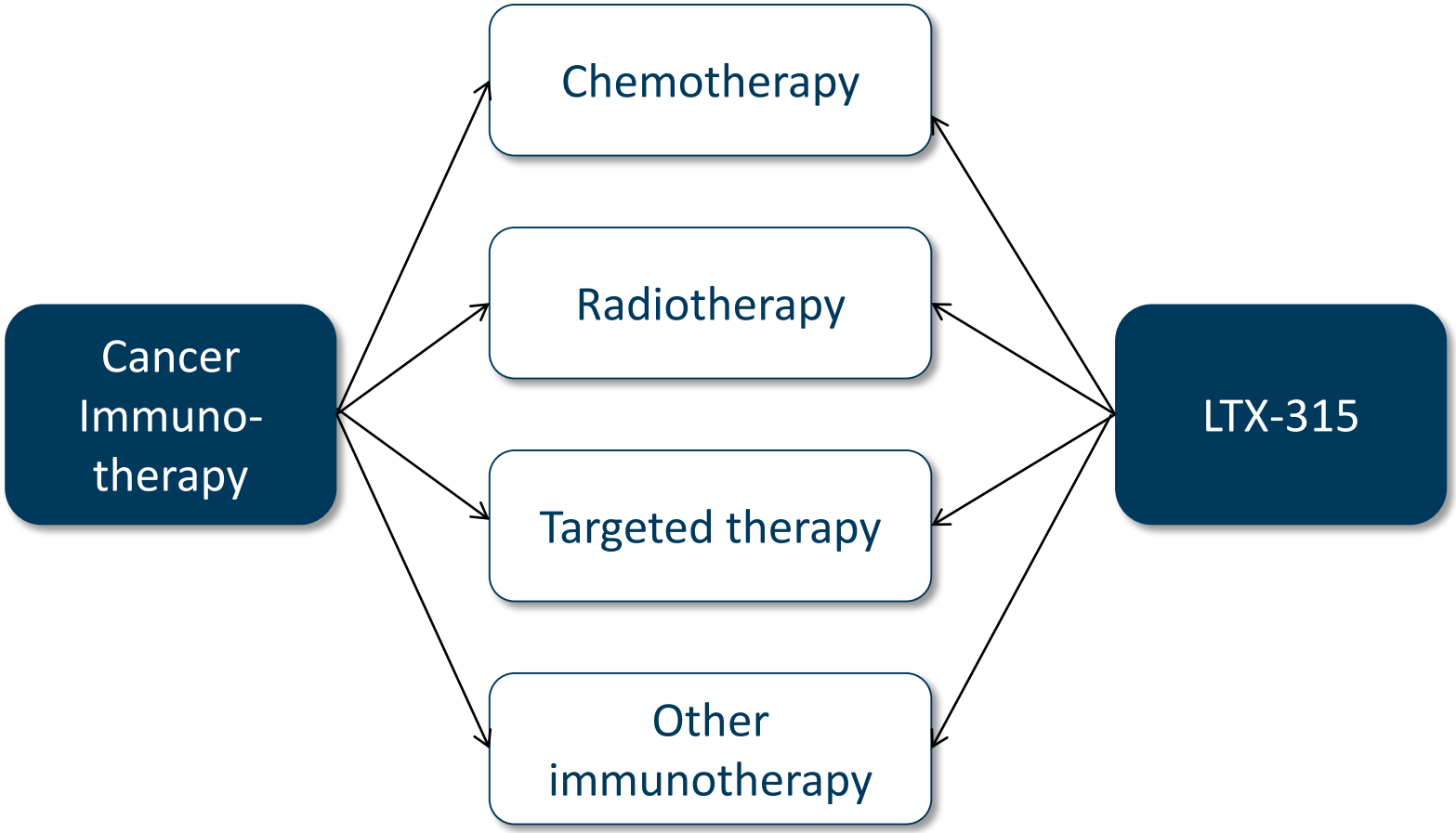
Chemotherapy and LTX-315



Synergy with Cyclophosphamide

Source: Laurence Zitvogel, Institut de cancerologie Gustave Roussy, and University of Tromsø data on file

Cancer immunotherapy combinations – future standard practice

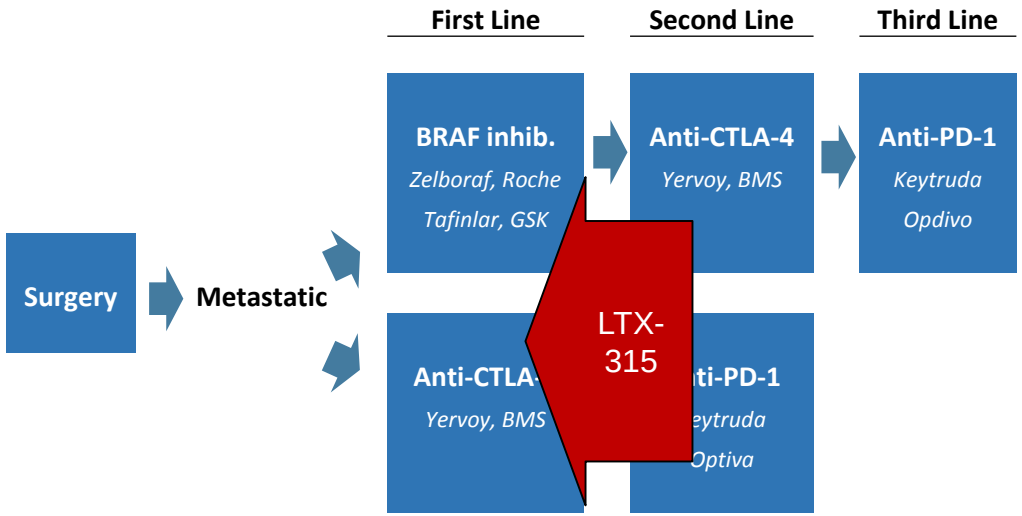


First LTX-315 indication: melanoma

Melanoma

- The first indication for most approved immunotherapies
- Incidence expected to double next 10-20 years

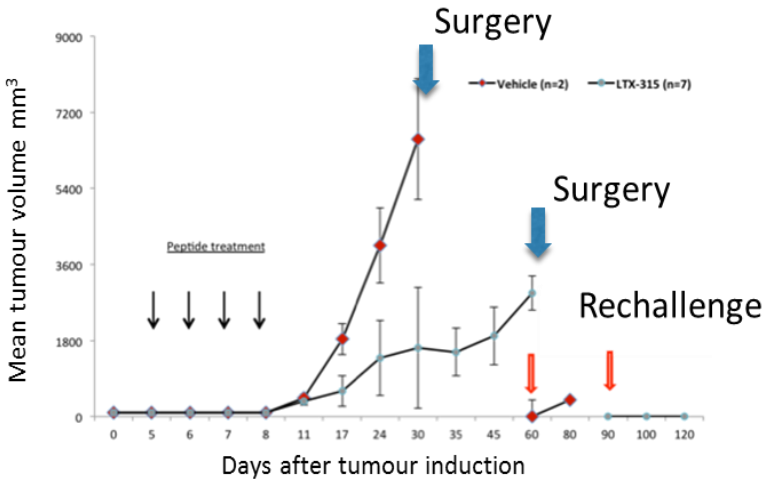
LTX-315 in first or second line combinations



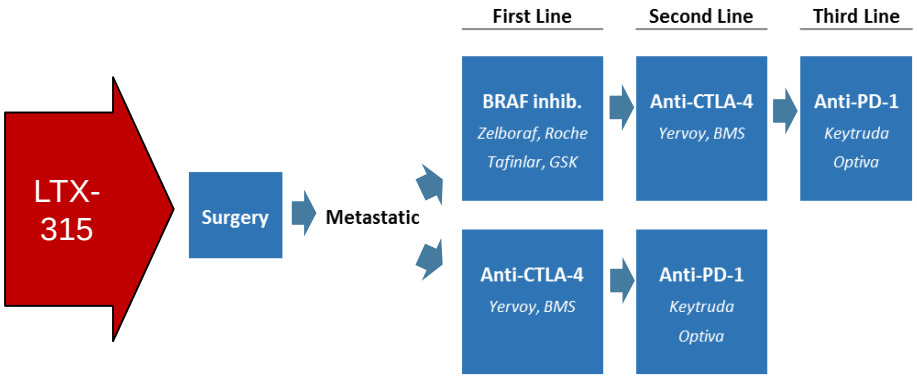
- Global Data, 2012
- Total cancer incidence mio 14

LTX-315 in neo-adjuvant therapy

Intralesional treatment with LTX-315 before surgery



- No tumor growth in animals when tumors were removed by surgery after LTX-315 treatment



- Neo-adjuvant is an opportunity:
  - Reduced risk of metastasis after surgery
  - Large market potential
- Potential tumor types:
  - Melanoma, Breast cancer, Sarcoma, Head & Neck

Source: Dag Pål Line, Rikshospitalet, oral presentation AASLD 2013

LTX-315 – summary

Cancer Immunotherapy

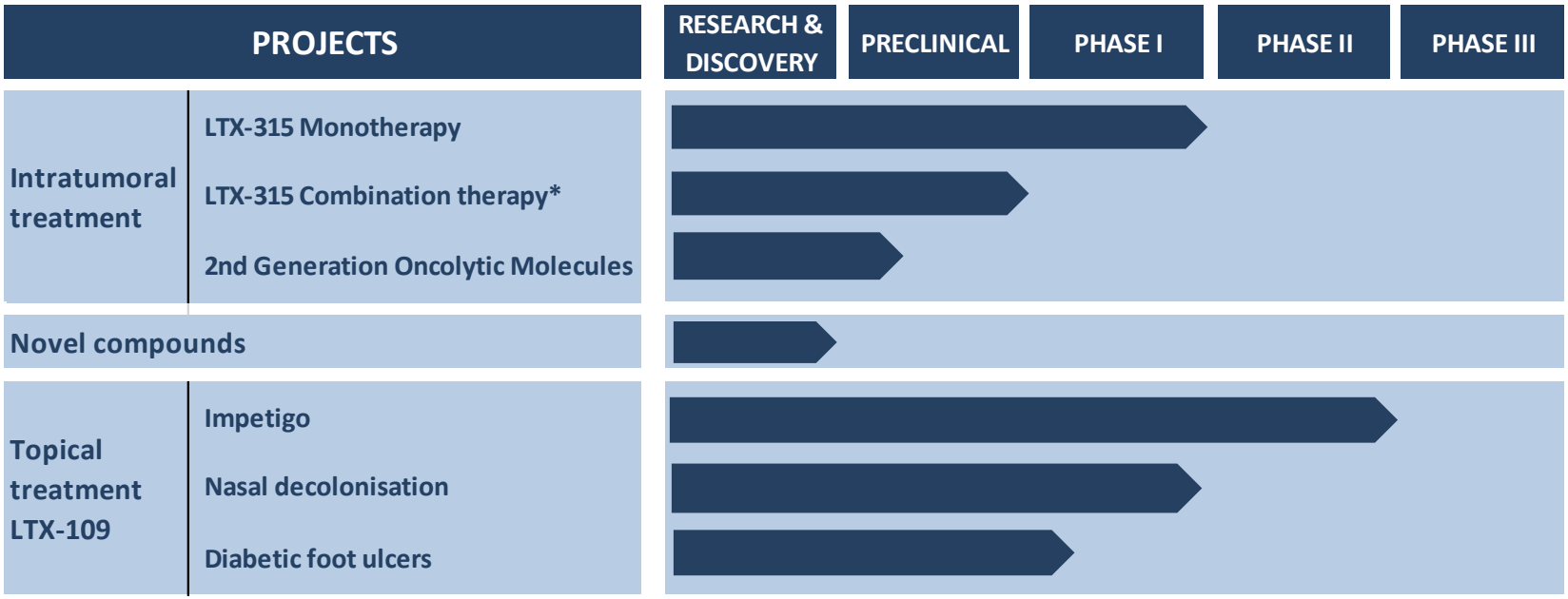
- **Fight cancer** by activating the patients` own immune system
- Potential to transform many cancers to a **chronic treatable disease**
- Postulated to revolutionize cancer treatment over the next years[1)]

LTX-315

- **Cancer immunotherapy with a unique and differentiated mode of action**
- Potential for **combination** with other cancer therapies
- Currently in **Phase I/IIa**
- Targeting **malignant melanoma** as first indication

1) Source: Citigroup Research

Product candidates and pipeline



* with Checkpoint Inhibitors and chemotherapy

LTX-109

Key features

- Topical antimicrobial
  - Novel mode of action
  - Broad spectrum of activity
  - Low propensity for resistance
  - Safety advantages vs systemic antibiotics
- Efficacy demonstrated in Impetigo and Nasal Decolonisation

Commercial opportunity

- Mildly infected Diabetic Foot Ulcer
  - High clinical unmet need
  - No topical antibiotic approved
  - Growing concern for antibiotic resistance
- 1.5 million cases DFI annually in US/EU
- 250-500m USD market potential
- Phase I/II Eurostar supported study, first patient in 2Q 2015

LTX-109 is a promising asset that will be out-licensed or divested

Intellectual property rights

- Strong patent strategy
  - ✓ 12 patent families
  - ✓ 31 patents approved
  - ✓ ~80 patents pending
- Patent coverage
  - ✓ Technology platform
  - ✓ Methode
  - ✓ Active ingredients priority date 2007-2009
  - ✓ Additional functions
- The patent base allows new product candidates
- Major markets covered

Management

Unni Hjelmaas – CEO

- Extensive pharma industry senior leadership experience, national and international oncology strategy, marketing and life cycle management experience - **former General Manager for Roche Norwa**y
- Member of the Board of the Norwegian Pharma Industry Association and member of the board of Oslo Cancer Cluster

John S. Svendsen, PhD – Co-founder and Head of Exploratory Research

- Extensive research experience, and **professor of organic chemistry at the University of Tromsø**
- Visiting scientist at several distinguished international institutions, including the laboratory of Professor K.B. Sharpless (Nobel Laureate, Chemistry, 2000) at MIT

Øystein Rekdal, PhD – Co-founder and CSO Oncology

- Former CEO of Lytix Biopharma (from establishment in 2003)
- Extensive research background, and **professor in the Medical Biochemistry Department in the Faculty of Medicine at the University of Tromsø**

Wenche Marie Olsen, DrPhilos – COO

- Extensive senior leadership experience within research, development and management of new drug products in pharmaceutical and biotech industry
- **Former CEO of Lauras**, various positions in **Nycomed/GE Healthcare**

Håkan Wickholm – Head of Business Development and Commercialisation

- **Extensive senior management and leadership experience from AstraZeneca**
- Experience from both sell- and buy-side, from search, through assessments, evaluations, due diligence and negotiations to closure of deals

Andrew Saunders – CMO

- Extensive experience in all aspects and phases of heamato-oncology drug development – from both clinical practice and industry
- Prior to Lytix – **extensive clinical development experience from Lilly, Roche and Bioenvision**. Founder of **Linden Oncology**, consultancy providing strategic and clinical development oncology expertise to biotech and pharmaceutical companies globally

Advisors, collaborators and clinical investigators

Scientific advisors

- Gustav Gaudernack
- Sjoerd H. van der Burg
- Robert Andtbacka
- Benjamin Lipsky
- Jan Apelqvist

Clinical Investigators

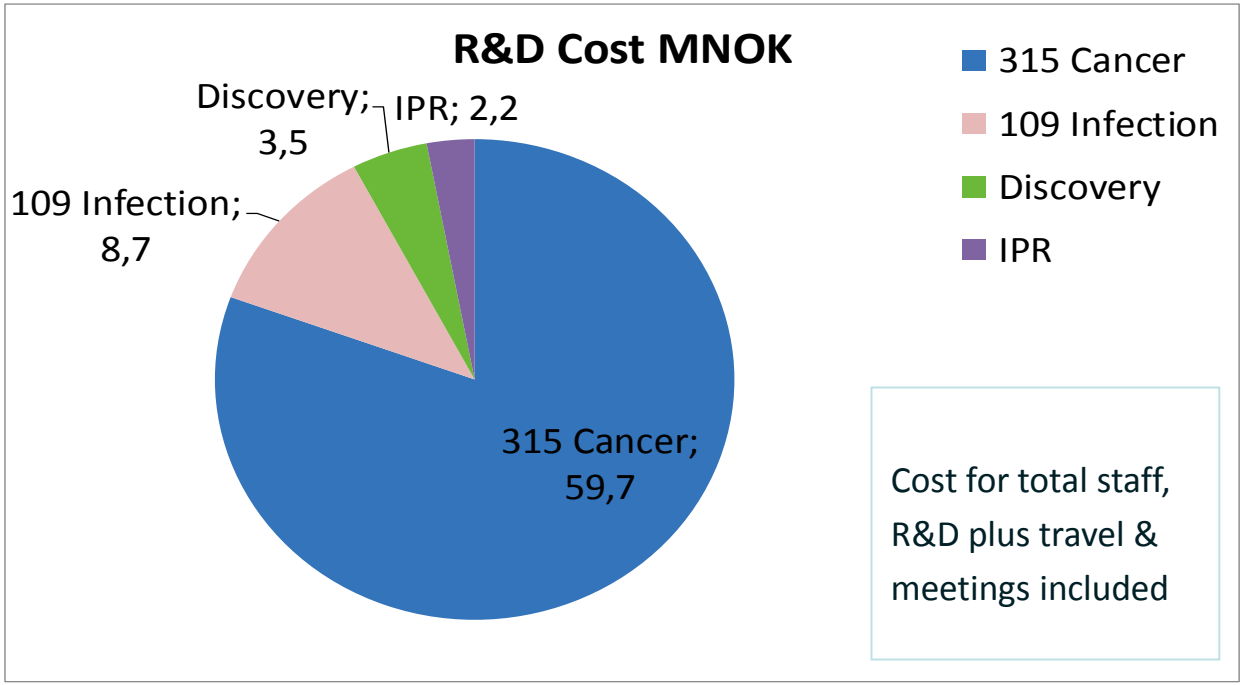
- Ahmad Awada
- Jean-F. Baurain
- James Spicer
- Paal Brunsvig

R&D Collaborators

- Laurence Zitvogel og Guido Kroemer
- Joost Oppenheim
- Pål Dag Line og Gunnar Kvalheim
- Baldur Sveinbjørnsson
- Louis D. Saravolatz

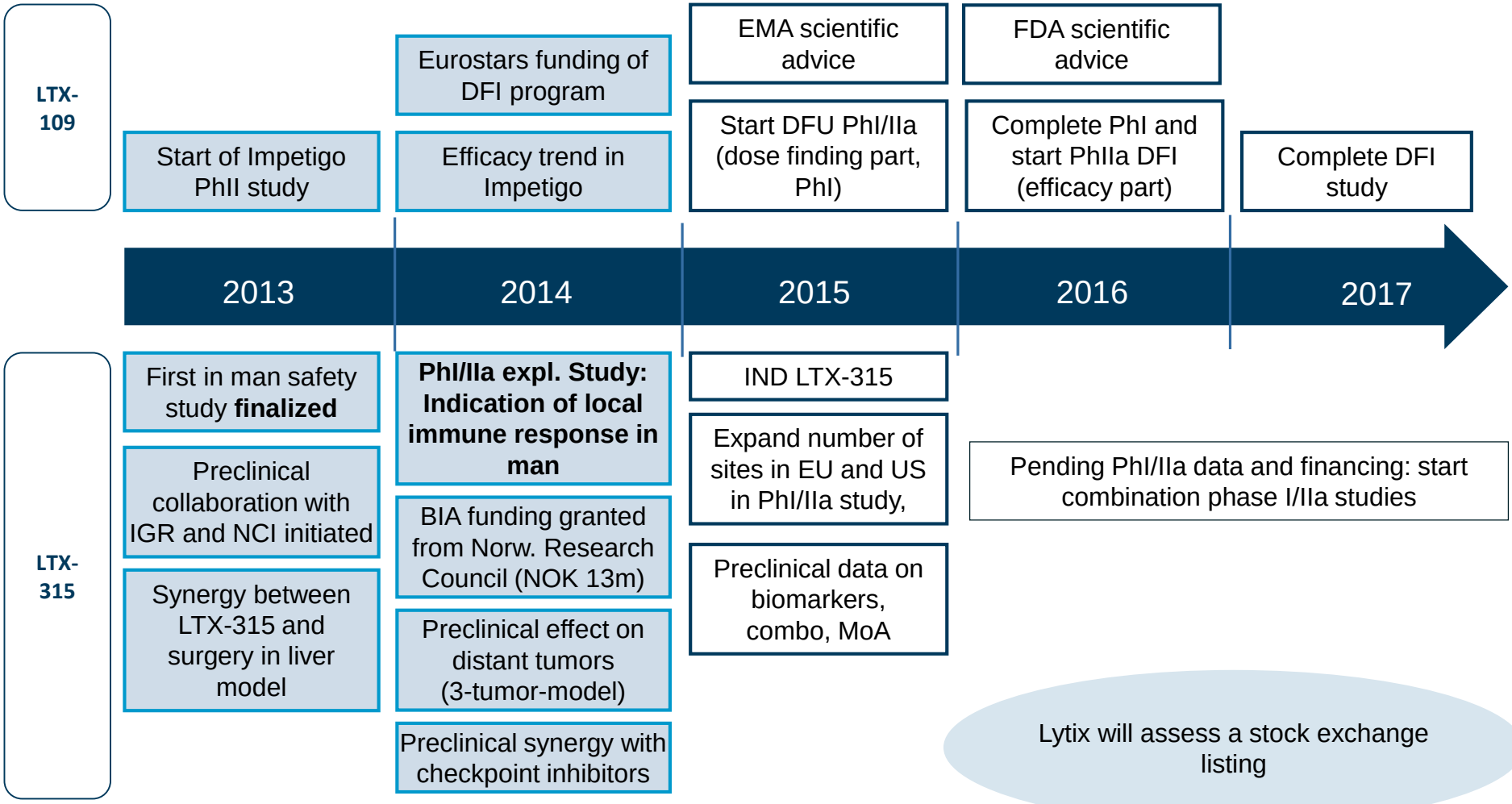
2015 Financials

– LTX-315 focused



Expected net burn rate (after cash impact of public grants) in 2015: 5,5m NOK per month.

Past and future milestones



Note: future timelines are best case scenarios

Summary

Cancer immunotherapy

- **Paradigm shift** in cancer treatment
- **35bn USD potential in 2022**

LTX-315

- **Cancer immunotherapy with a unique and differentiated MoA**
- Potential to **improve efficacy** of checkpoint inhibitors and other cancer treatments
- **«Pan-tumor» potential** for transdermally accessible tumors
- Compelling pre-clinical data and **promising Phase I data**

Experienced and strong management team

Lytix is well positioned to make a difference for cancer patients through its unique and novel approach to cancer immunotherapy

Lytix Biopharma AS - www.lytixbiopharma.com