

# LIDDS Pharma

Addresses huge unmet medical needs in early-stage cancer treatment

---

Monica Wallter, CEO

LIDDS<sup>TM</sup>

# LIDDS is Addressing Key Healthcare Challenges



**Short-acting drugs often require more frequent injections and hospital visits**



**Systemic administration routes often leads to toxicity and side effects**

## LIDDS approach with NanoZolid technology

### BENEFITS PATIENT & HEALTHCARE PROVIDER

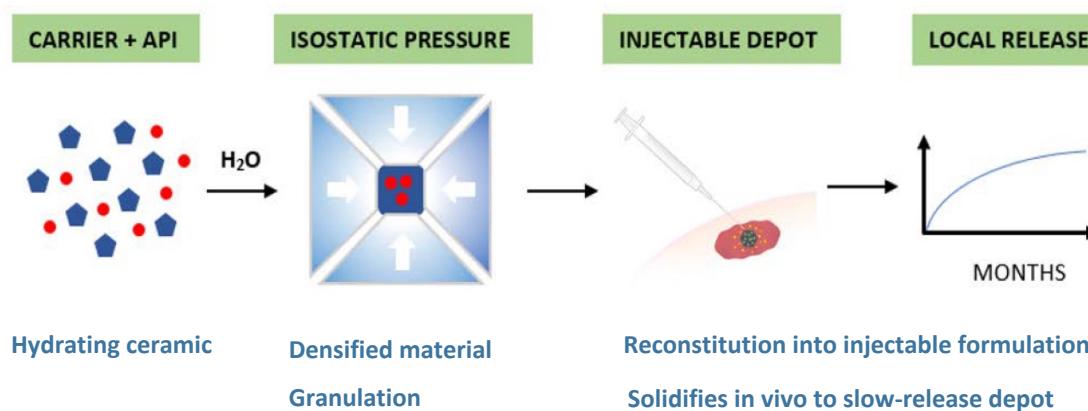
- Higher efficacy could be reached
- Much less side-effects
- Fewer injections
- Less frequent hospital visits
- Improved Quality of Life

### BENEFITS PHARMA PARTNERS

- Prolonged patent protection to 2037
- Improved compliance and patient satisfaction
- Re-vitalizing challenging projects using clinically validated technology

# The NanoZolid® Injectable Drug Delivery Platform Solves Challenges with Systemic Toxicity and Fast Acting Molecules

- NanoZolid® provides tailor-made and controlled releases of drugs up to 6 months or more. Side effects are avoided or significantly reduced
- The depot is injected in diseased tissue, intra-tumorally or given subcutaneously
- NanoZolid is fully biocompatible and is safely absorbed into the body - allowing repeated injections
- NanoZolid® technology is clinically validated in several Phase II studies
- Provides long-term exclusivity and Life Cycle Management for drugs with expired or limited remaining patent protection
- NanoZolid® technology provides patent protection until 2037 in all major markets



# Strong Patent Protection Until 2037

In total, more than 130 patents have been obtained for the NanoZolid® platform

PATENT	PATENT	US	EU	REST OF THE WORLD
1 / 2004	Bioceramic compositions	Approved	Approved	Not filed
2 / 2006	Method to treat prostate cancer	Approved	Approved	Aus, Can, Chi, Jap, Mex, Russ, S Kor, Nor, Afr, Isr, Ind,
3 / 2007	Slow local drug release	Approved	Approved	Aus, Can, Chi, HK, Jap, Mex, Russ, S Kor, Isr, S. Afr, Ind,
4 / 2009	Mixing tool suspensions	Approved	Approved	Aus, Can, Chi, Russ, Isr, Jap, Mex, S Korea, Ind, S. Afr
5 / 2009	Steering of curing	Approved	Approved	Aus, Can, Russ, Jap, HK, Mex, S.Kor, Ind, Isr, S. Afr
6 / 2016	Manufacturing process	Approved	Approved	Aus, Bra, Can, China, Ind, Isr, Jap, Russ, S Afr, S Kor, Mex, Singapore
7 / 2020	NanoZolid pharmaceutical formulations	Approved	Filed	-

# Overview of Current Development Pipeline

PROJECT	TARGET	FEASIBILITY	PRECLINICAL	PHASE I / II	PHASE IIb
NZ-2-HOF	Prostate cancer	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>
NZ-DTX	Malignant tumors	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>
NZ-IO-TLR9	Malignant tumors	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>
NZ-IO-STING	Malignant tumors	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>
NZ-J&J	Malignant tumors	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>
NZ-IO-003-004	Malignant tumors	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>
NZ-CHEMO	Malignant tumors	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>	<div style="width: 100%;"></div>

# LIDDS Main Projects

	Liproca® Depot	Docetaxel/Chemo	NZ-TLR9	J&J Innovation
Indications	Prostate cancer	Lung cancer and other solid tumors	Head and neck cancer, prostate cancer, melanomas, lymphomas, and sarcomas	Oncology, indications undisclosed
Development phase	Phase IIb completed	Phase I ongoing	Preclinical program reported- planning Phase I study	Preclinical
Market size	Addressable market >\$3bn	Global lung cancer market worth \$37bn	More than 2 million patients diagnosed each year	Undisclosed
Partnering strategy	Out-licensed in China. Other markets partnering activities ongoing	Out-licensing after Phase I	Out-licensing after Phase I	Product license option

# Breakthrough R&D Agreement with Johnson & Johnson Enterprise Innovation Inc

- LIDDS will develop an oncology product for an undisclosed indication based on LIDDS drug delivery platform NanoZolid®
- The agreement includes an exclusive option for global product license
- This marks a breakthrough for LIDDS in terms of license the NanoZolid® technology to pharmaceutical companies

**Johnson & Johnson**  
INNOVATION



*"I am pleased that we have signed this exciting collaboration. LIDDS favorable and clinically validated results using the NanoZolid® platform with different types of pharmaceutical substances, forms a bedrock for new and innovative oncology products."*

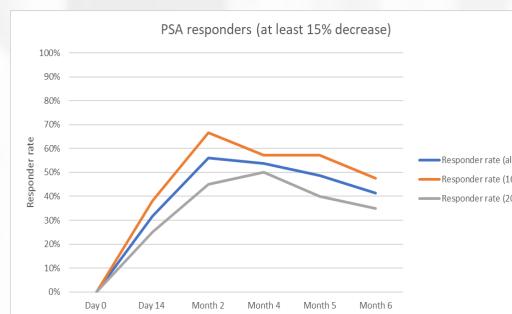
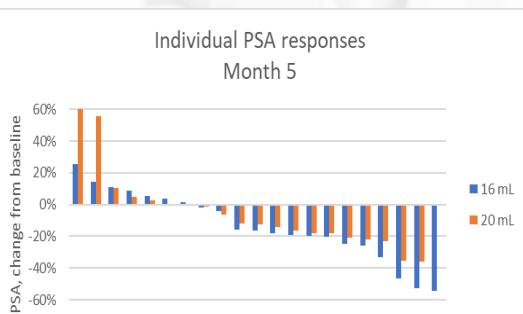
Monica Wallter, CEO of LIDDS

LIDDS™

# Liproca Depot Phase IIb Study Indicates Prostate Cancer Control

## Active Surveillance Patients with Low or Intermediate Risk Profile; 61 patients

- Primary objectives are successfully met and was well-tolerated and *no hormonal side effects were noted*:
  - Dose finding study objectives was achieved
  - Strong PSA response with 16 ml Liproca® Depot:
    - 90 % of patients had a PSA decrease
    - NanoZolid with 2-HOF delivers PSA efficacy for six months
    - 67 % of patients were responders, having more than 15% PSA decrease
- MRI analysis show that PI-RADS was unchanged or improved in all patients. In part II of the study, *7 out of 41 patients got lower PI-RADS score which indicates disease control*
- Prostate volume decreased despite injection of 16-20 ml into prostate gland
- Open Label Study (OLE) indicates PSA effects for 10 months +, approx. one injection a year



# The NZ-DTX Phase I Study

- **Background**

- Preclinical study shows that NZ-DTX is as efficient as systemic docetaxel in reducing tumor growth but with far less side effects
- Docetaxel is a commonly used chemotherapy: breast, head and neck, gastric, prostate and non small cell lung cancer (NSCLC)
- Severe side effects of docetaxel including anaphylaxis and systemic cytotoxicity

- **How can NZ-DTX be used?**

- Monotherapy or in combination with different drugs to optimize effects
- Neoadjuvant NZ-DTX before surgery/radiation
- Treatment at diagnosis of tumor
- Combination with systemic drugs, e.g. cytostatic / I-O
- Palliative therapy

- **Phase I study is ongoing**

- An open label dose-escalation and dose-expansion study - well tolerated
- Clinics include Karolinska University Hospital in Sweden, Herlev Hospital in Denmark, Kaunas University Hospital and Vilnius National Cancer Institute in Lithuania

# NZ-TRL9 Project – Planning for Phase I Study

- NanoZolid® formulated local acting TLR agonists offers greater treatment options, potentially *higher efficacy and fewer injections and hospital visits while minimizing side-effects*
- Also enables treatment of deep-lying cancer tumors and metastasizing tumors , e.g. head and neck cancer, prostate cancer, melanomas, lymphomas, and sarcomas
- Major commercial opportunity as NanoZolid is solving the problem with a fast-acting TLR9 molecule - more than 2 million cancer patients are diagnosed each year
- Scientific Review article by a leading research group in US describes LIDDS as the only company developing an intra-tumoral TLR9 product
- Promising preclinical results using a TLR9 agonist formulated with NanoZolid®
  - Reduction of tumor growth
  - Increased survival
  - Prominent antitumoral immune response
  - At least six weeks efficacy
- LIDDS is planning a Phase I clinical trial using NanoZolid® combined with a TLR9- agonist to start in 2021, possibly together with a checkpoint inhibitor

# The Drug Delivery Market is growing

- Sweden is on the frontline of the drug delivery market
- One of the fastest growing subsegments within the life sciences industry globally
- Market driven by an increased prevalence of chronic diseases, increased demand for advanced drug administration and increased demand for immuno-oncology drugs

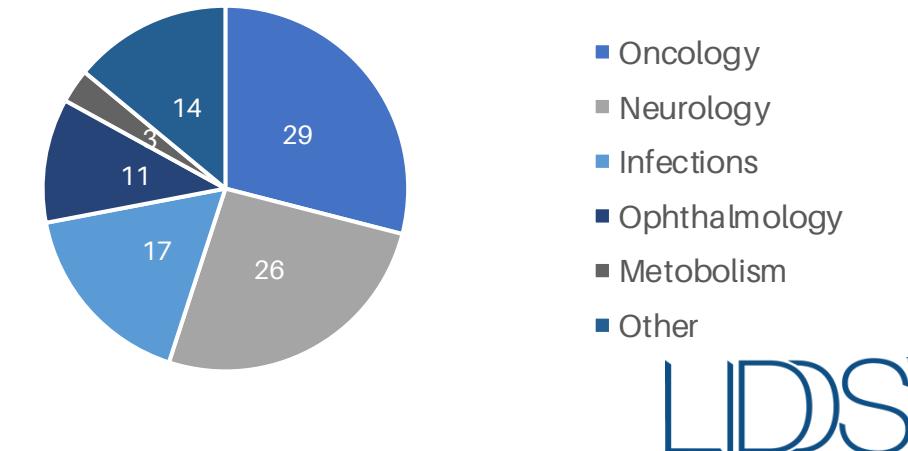


## Swedish licensing deals in the drug delivery market

2019-2021\*:

- Upfront and milestone payments: 30-680 MUSD (average: 179 MUSD and median: 72 MUSD)
- Royalty payments: 5-20%

\*) Including licensors; Lipidor, Oasmia, Affibody, Calliditas, Camurus, Klaria, and Moberg Pharma



# LIDDS Addressable Markets

## Late-stage clinical development

Prostate cancer

New cases per year: 1 414 300  
Deaths per year: 375 300

Market value 2023: USD 8.3bn  
Addressable market: 420 000 patients annually

## Early-stage clinical development

Lung cancer and solid tumours\*

New cases per year: 2 206 800  
Deaths per year: 1 796 100

Market value 2025: USD 37bn  
Addressable market: 200 000 patients annually

## Preclinical development

Head and neck cancer, prostate cancer, lymphomas, and sarcomas

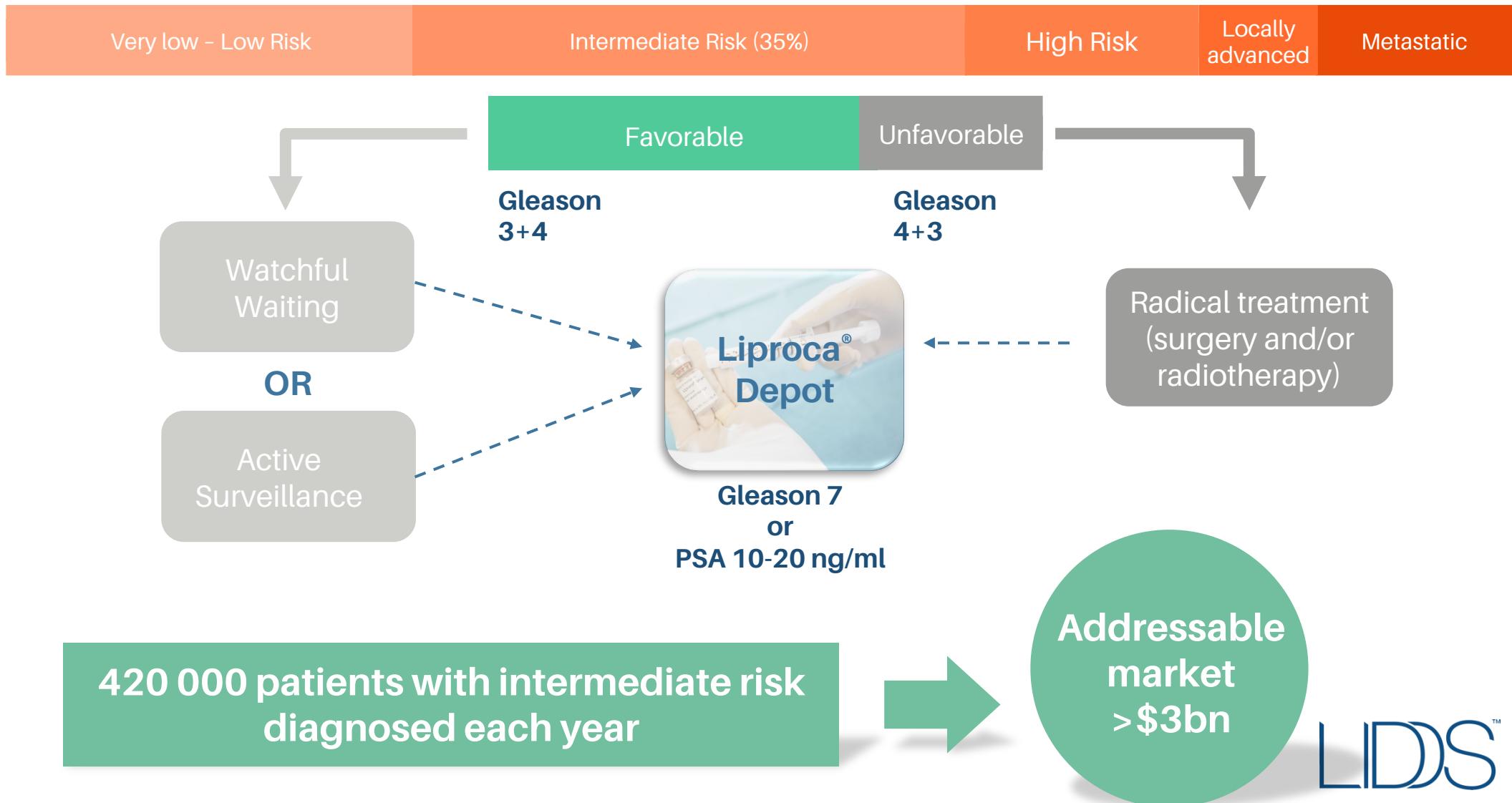
Head and neck cancer  
New cases per year: 790 000  
Deaths per year: 400 000

Breast cancer  
New cases per year: 2 261 419  
Deaths per year: 684 996

Lymphomas and sarcomas  
New cases per year: 293 761  
Deaths per year: 155 539

\*) Head & neck, breast and prostate cancer

# Liproca® Depot Targets Intermediate Risk Group



# LIDDS Has Proved its Licensing Strategy

- LIDDS out licenses the company's proprietary projects after the preclinical phase or after completing initial clinical trials
- Out-licensing after preclinical or phase I/II minimizes the own investments for LIDDS and provides a positive cash flow significantly faster than if the company on its own would take the project all the way to the market
- Pharmaceutical companies can also license the NanoZolid® technology for its own drugs

## Breakthrough R&D agreement with Johnson & Johnson Enterprise Innovation Inc.

- LIDDS will develop an oncology product based on the NanoZolid® technology. R&D agreement includes an option for an exclusive licensing agreement

## License agreement with Puheng Pharma for Liproca® Depot

- Exclusive license for Mainland China signed in 2018
- Puheng Pharma's sales network covers more than 5 700 hospitals in China
- LIDDS is together with Puheng Pharma currently preparing documentation for an international Phase III multicenter study
- Licensing of Liproca® Depot for other markets continues

# LIDDS Is in a Growth & Expansion Momentum

## Significant Value Inflection Points Ahead

- NZ-DTX-001 study update
- Preparations for Phase III international multicenter study
- Out-licensing of Liproca® Depot in other major markets; US, Europe, and Asia
- Main Market listing
- Initiation of Phase I study for the NZ-TLR9 project
- Update on non-disclosed NZ-IO feasibility projects
- Organization expansion



**EXPECTED MILESTONES**

# LIDDS Summary

**Proprietary platform technology with broad product portfolio**

The NanoZolid® technology constitutes a bedrock for building a broad portfolio of pharmaceutical projects, which diversifies risk and provides good prospects for future revenue

**Lead candidate in late stage in prostate cancer**

Phase IIb study in prostate cancer finalized in 2019 – the primary endpoints were successfully met. Licensing agreement for Liproca Depot in place with Chinese license partner, Puheng Pharma. Out-licensing to other major markets ongoing

**Chemo & immunotherapy projects**

LIDDS intratumoral formulations can be combined with several cytotoxic drugs and immunotherapies offering greater treatment options, potentially higher efficacy, fewer injections and less hospital visits while minimizing side-effects

**Robust patent protection**

More than 130 national patents have so far been granted within seven patent families with comprehensive patent protection for the NanoZolid® platform in all major markets until 2037



# Thank you!

**Monica Wallter, CEO**  
**LIDDS AB**  
*[monica.wallter@liddspharma.com](mailto:monica.wallter@liddspharma.com)*

LIDDS™