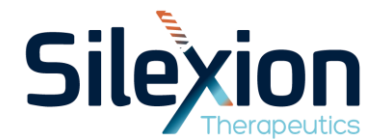




Silencing Oncogenes at the Level of Gene Expression

Company Presentation | February 2026

Nasdaq: SLXN



Forward-Looking Statement

The statements contained in this presentation that are not purely historical are forward-looking statements. Our forward-looking statements include, but are not limited to, statements regarding our or our management team's expectations, hopes, beliefs, intentions or strategies regarding the future. In addition, any statements that refer to projections, forecasts or other characterizations of future events or circumstances, including any underlying assumptions, are forward-looking statements. The words "anticipate," "believe," "continue," "could," "estimate," "expect," "intends," "may," "might," "plan," "possible," "potential," "predict," "project," "should," "would" and similar expressions may identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking. Forward-looking statements in this presentation may include, for example, statements about:

- the future performance of the Company, including Silexion's projected timeline for regulatory approvals of its product candidates; and
- the Company's future plans and opportunities.

The forward-looking statements contained in this presentation are based on our current expectations and beliefs concerning future developments and their potential effects on us. There can be no assurance that future developments affecting us will be those that we have anticipated. These forward-looking statements involve a number of risks, uncertainties (some of which are beyond our control) or other assumptions that may cause actual results or performance to be materially different from those expressed or implied by these forward-looking statements. These risks and uncertainties include, but are not limited to, the items in the following list:

- Silexion is a development-stage company and has a limited operating history on which to assess its business;
- Silexion has never generated any revenue from product sales and may never be profitable;
- The approach Silexion is taking to discover and develop novel RNAi therapeutics is unproven for oncology and may never lead to marketable products;
- Silexion does not have experience producing its product candidates at commercial levels, currently has no marketing and sales organization, has an uncertain market receptiveness to its product candidates, and is uncertain as to whether there will be insurance coverage and reimbursement for its potential products;
- Silexion may be unable to attract, develop and/or retain its key personnel or additional employees required for its development and future success;
- Additional factors relating to the business, operations and financial performance of Silexion.

Should one or more of these risks or uncertainties materialize, or should any of our assumptions prove incorrect, actual results may vary in material respects from those projected in these forward-looking statements. We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws.

Transforming treatment in historically “undruggable” cancers by tackling the driver of poor outcomes

- Lead product targets the most common oncogenic driver in human cancers, mutated KRAS gene
- Our technology, siRNA, isolates the oncogene, resulting in shutting down the cancer driving processes

First generation (Loder) showed trend for extending patients lives in one of the most deadly cancers, pancreatic cancer

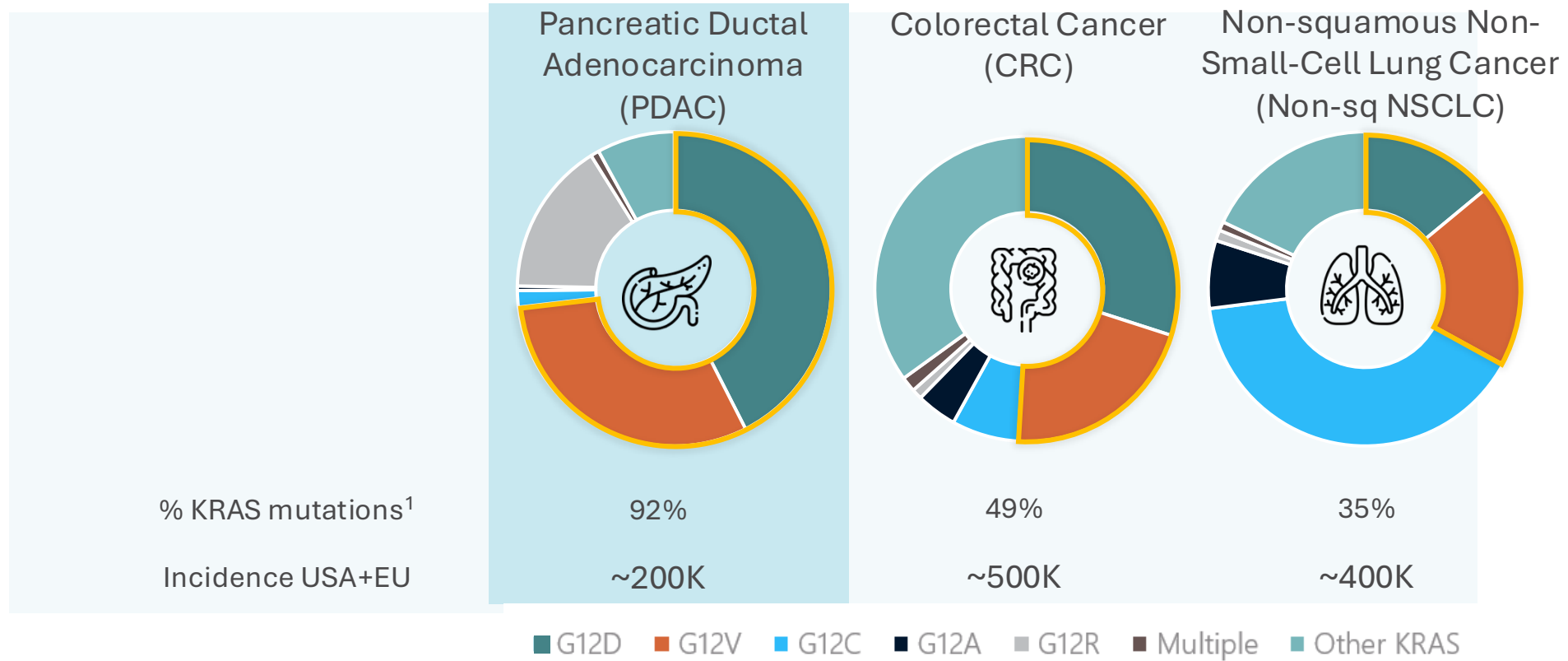
Second generation (SIL204) broadens activity to additional cancers, optimizes stability, and incorporates cancer targeting

Dual-delivery strategy maximizes the delivery to both important disease processes: primary tumor and metastases

Agenda

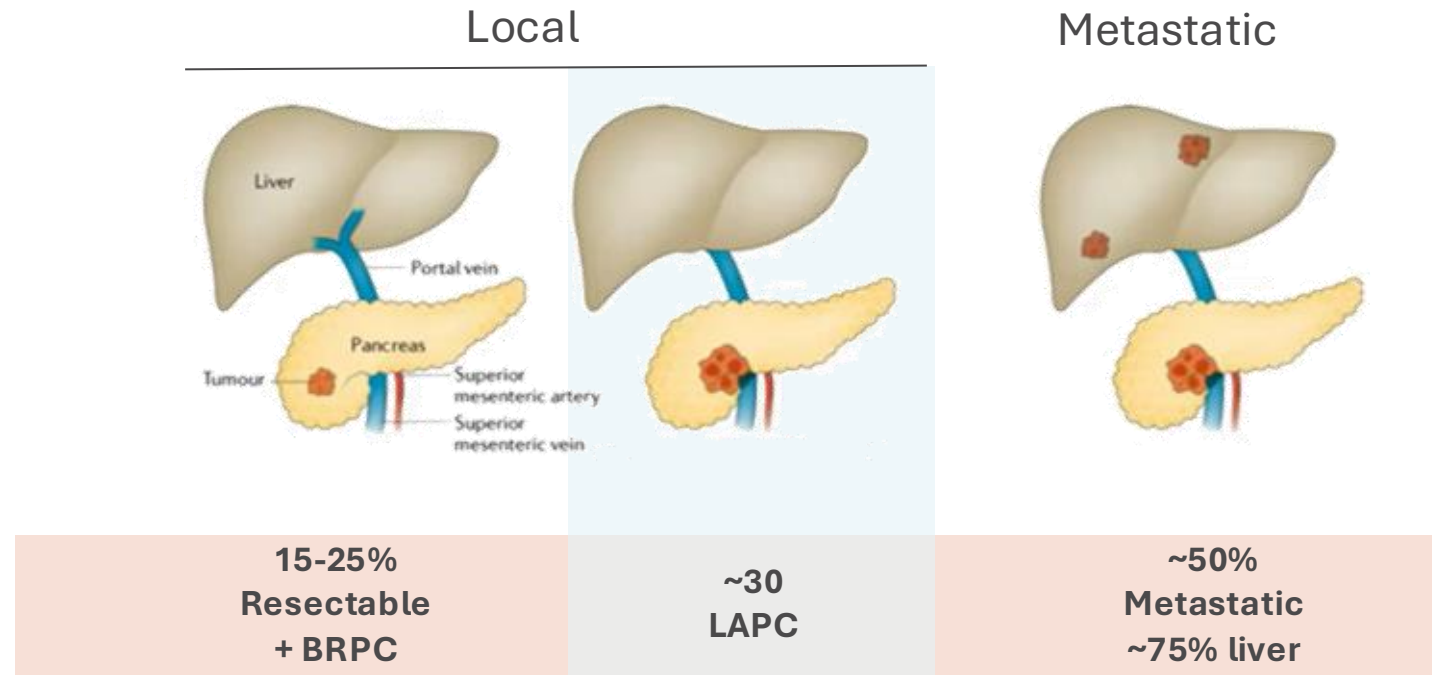
- Market and unmet need
- Our technology
- Advantages and differentiation of our technology / product
- First generation siRNA Phase 2 clinical results and preclinical results SIL204
- SIL204 Phase 2/3 design
- SIL204 development plan and milestones achieved
- Patent protection for SIL204

Prevalent Cancers with KRAS Mutation we Target



PDAC: 3rd leading cause cancer deaths today in the U.S.², 2nd leading cause by 2030²

Types and Relative Prevalence of Pancreatic Cancer



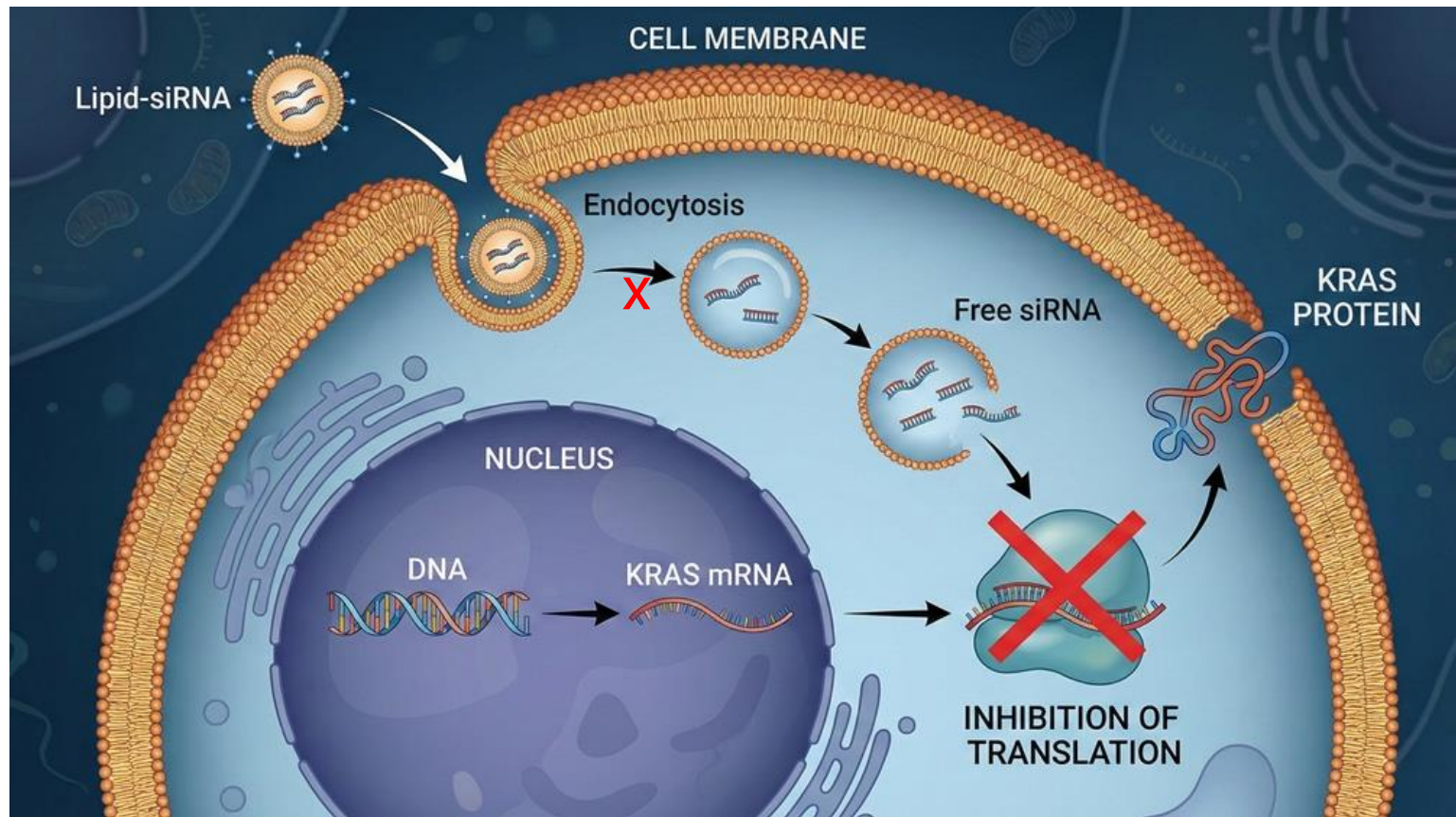
Unmet Needs in Pancreatic Cancer (PC)

- Overall 5-year survival one of poorest U.S 12.8%¹, KRAS G12D/V worst survival
- Resectable PC- Following surgery with perioperative chemotherapy, ~80% have metastases in 1 yr²
- Median survival LAPC 14-17mo.^{3,4}
- New small molecule RAS inhibitors efficacy promising and safety acceptable, but large gaps remain before the market is satisfied⁵
 - Severe or medically significant toxicities that typically requires active medical management and often hospitalization often include: Rash; fatigue; diarrhea; anemia; mucositis; neutrophils decrease

There are no effective treatment options for our first intended indication LAPC

Our Technology

- Lead Product: SIL204
- First-in-class, isoform selective, pan KRAS silencer, stable siRNA with targeted delivery system
- Targets both the active and inactive forms of KRAS



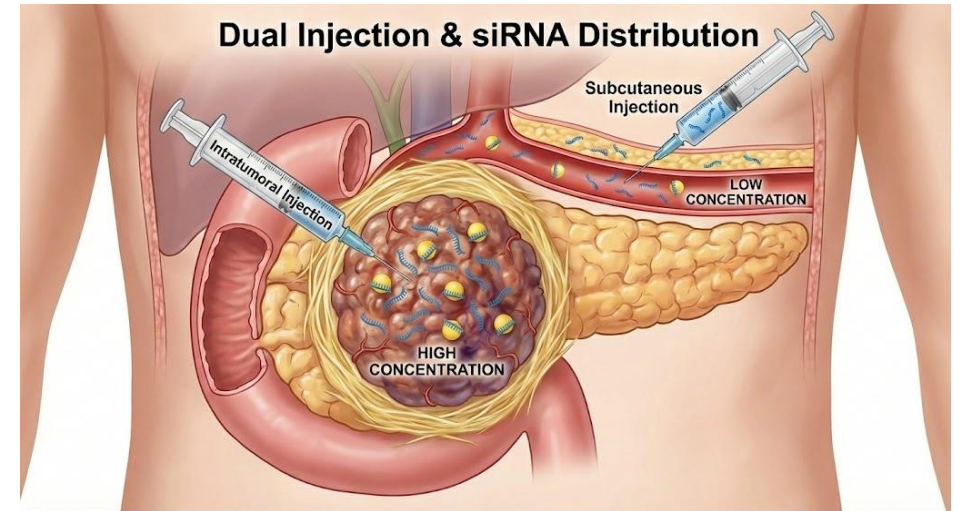
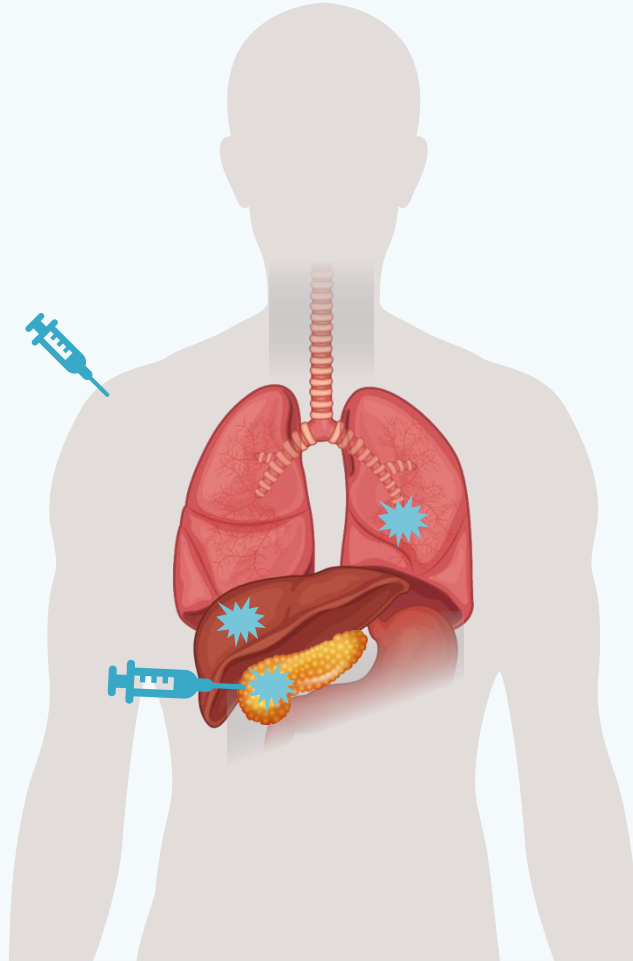
Dual Administration of SIL204 Designed to Effectively Treat the Two Distinct Processes of the Disease: Primary Tumor and Metastases

Systemic (s.c.) SIL204

Targets cancer cells shedding from primary tumor with **metastatic invasions** into liver, etc.

Intratumoral (endoscopic) SIL204

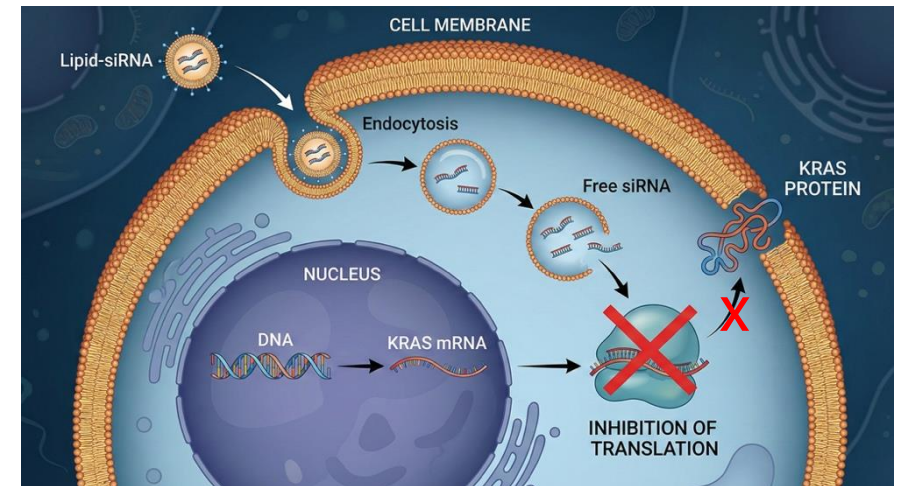
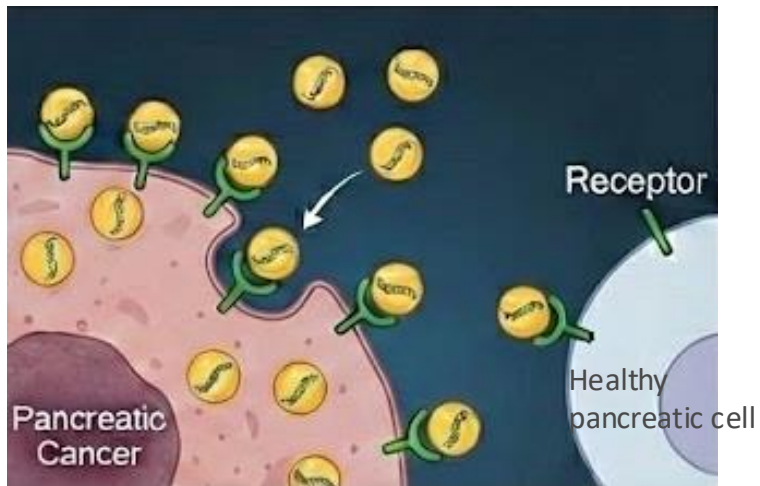
Targets Primary pancreatic tumor overcoming it's ECM barrier



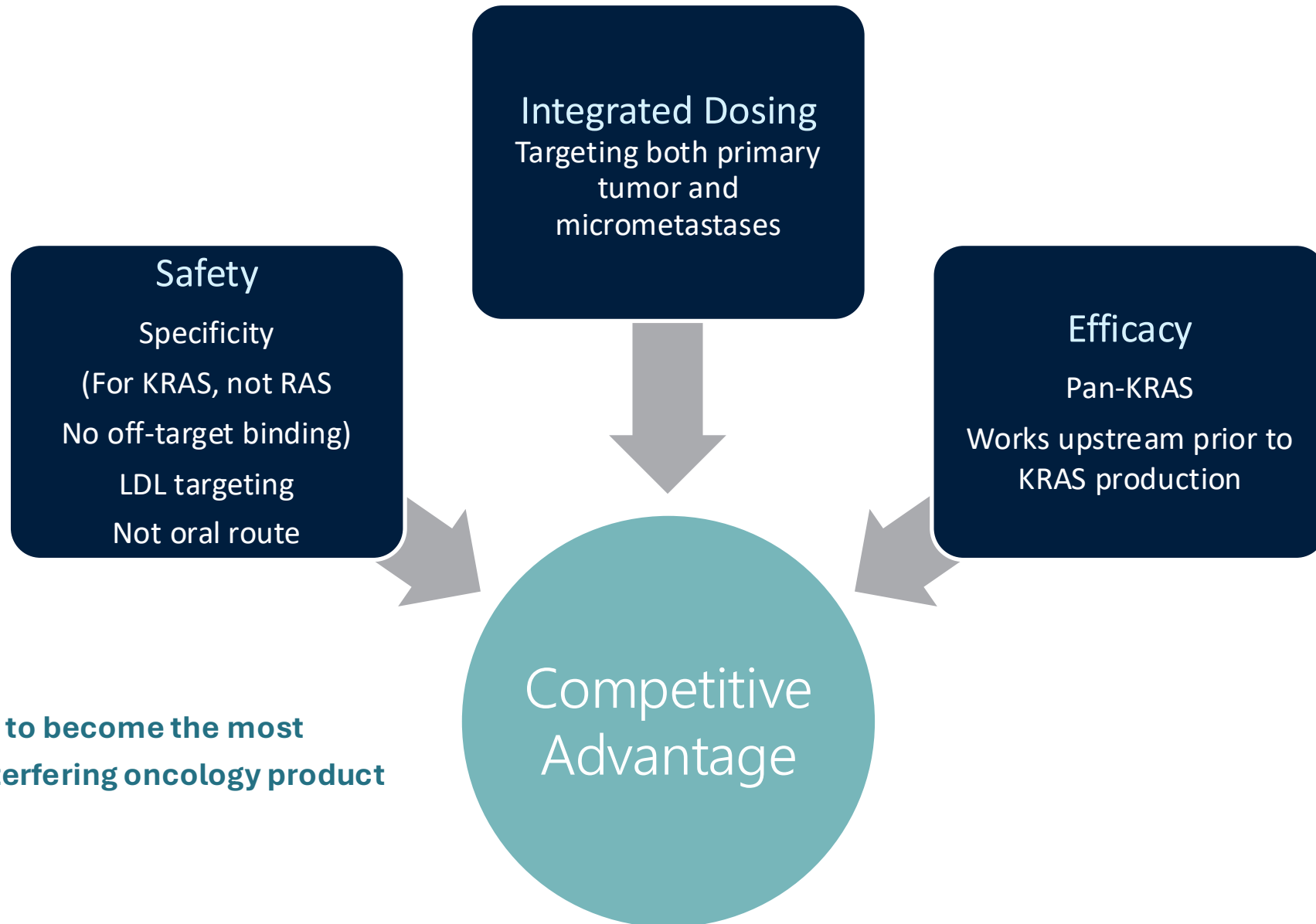
Our Technology

- SIL204 binds to LDLs to high extent and carries the SIL204 systemically
- Pancreatic cancer cells have significantly higher LDL receptors than health pancreatic cells
 - Enriched uptake by cancer cells compared to healthy
 - Difference even more significant in metastatic pancreatic cells
- LDL targeting mechanism enriches siRNA in pancreatic cancer cells in the primary tumor and liver metastases

siRNA	% bound
SIL204	95
siRNA-I	1.5
siRNA-V	5.1



Advantages and Differentiation

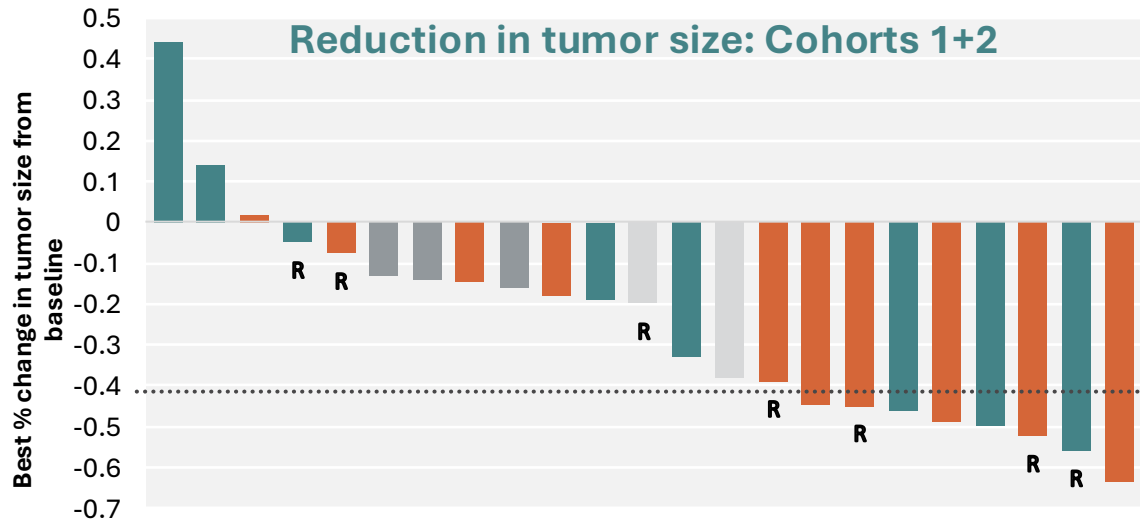


SIL204 positioned to become the most advanced RNA-interfering oncology product

Results

LODER (First generation siRNA) Phase 2 Clinical Trial Data

First-Generation Mutant KRAS RNA Silencer (Loder) Led to Robust RECIST* Antitumor Activity in mutant KRAS-Driven Locally Advanced Pancreatic Cancer



KRAS mutation subtype	G12D	G12V
Chemo		
Loder		

R = Non-resectable tumor becomes resectable

Safety From First Generation Loder Trial

siG12D-LODER was generally well tolerated (includes intratumoral Loder rod administrations)

- Independent Drug Safety Monitoring Board (DSMB) had no safety concerns nor restrictions

LAPC=locally advanced pancreatic cancer.

*Response Evaluation Criteria in Solid Tumors. Overall response rate was confirmed by RECIST 1.1 of the target tumor, as analyzed by sites.

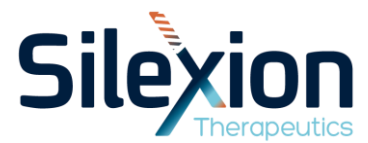
Bar curves below the solid black line starting at y-axis -0.3 indicates criteria for positive RECIST response.

Cohort 1: non-resectable LAPC, backbone chemo Gemcitabine Plus Nab-paclitaxel

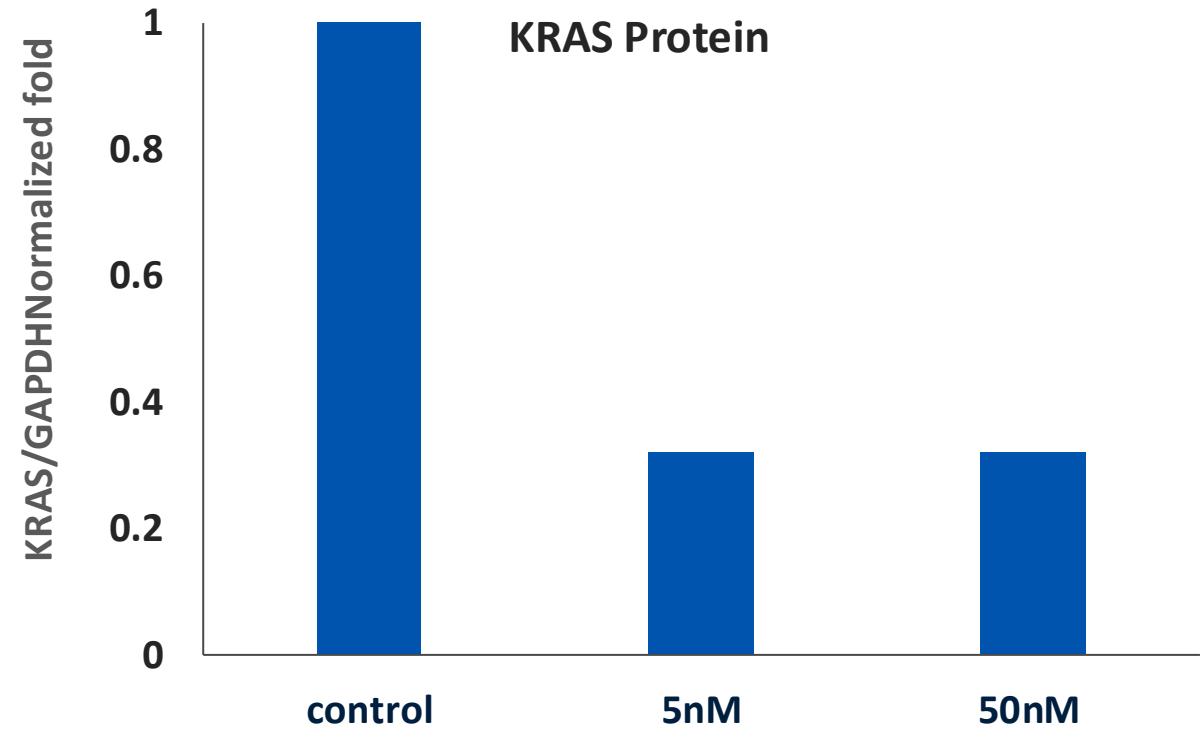
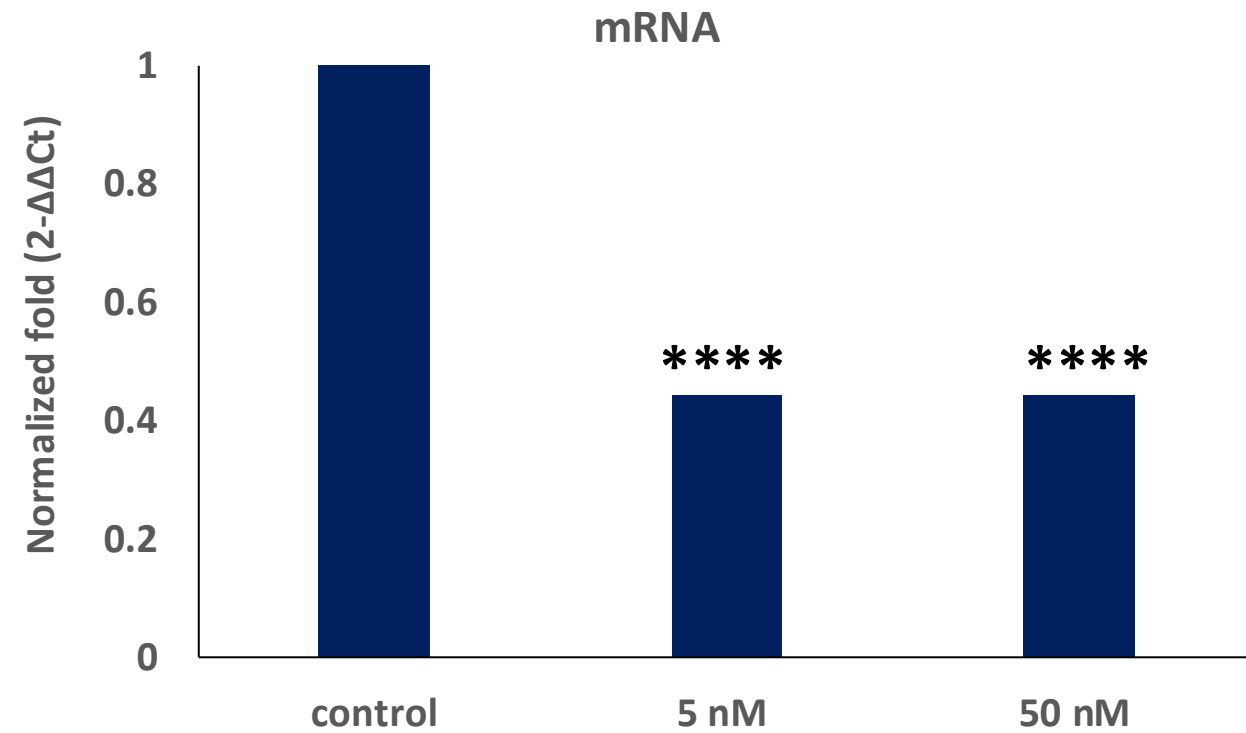
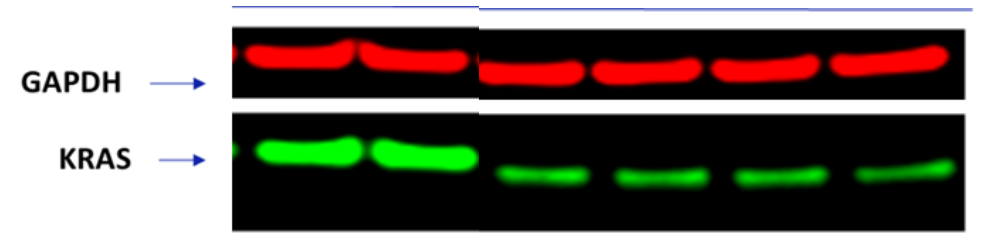
Cohort 2: LAPC or Borderline Resectable Pancreatic Cancer (BRPC), backbone chemo Gemcitabine Plus Nab-paclitaxel, Folfirinox or modified Folfirinox

Results

SIL204 Second Generation



SIL204 Knockdown of mRNA Transcript and Corresponding KRAS Protein



Transfection with lipofectamine
PK59 human tumor line G12D mutation
Analysis at 72 hrs for mRNA and protein
**** = p value < 0.0001

SIL204 (Second Generation siRNA)

SIL204 Highly Effective with Broad Inhibition Across Human KRAS Mutations at Sub-nanomolar Concentrations

SIL204 maintains and expands the silencing activity of first generation siG12DLoder

Model is a co-transfection setup where human KRAS is transfected in mouse Hepa1-6 cells with Dual-Glo reporter plasmids.

Mutation	Negative siRNA Control	WT KRAS	KRAS G12D	KRAS G12V	KRAS G12C	KRAS G12R	KRAS Q61H*	KRAS G13D*
IC ₅₀ (nM)		0.16	0.19	0.44	0.47	0.59	0.24	0.37
MAX Inhibition (%)	0-7	91	90	80	73	71	88	88

IC₅₀=half-maximal inhibitory concentration.

*G13D and Q61H tested in separate studies from the G12 mutations and wild type (non-mutated).

Negative siRNA control collected over various studies

SIL204 Inhibits Growth Human Tumor Cell Lines from Various Cancers with G12x and Q61x Mutations

Cell line KRAS mutation subtype	IC ₅₀ (ng/mL)	IC ₉₀ (nM)	IC ₉₀ (ng/mL)
A427 (Lung) G12D	537	70	1,079
PK59 (Panc) G12D	1,059	163	2,496
GP2D (Colon) G12D	445	56	852
HS766T (Panc) Q61H	476	124	1,907
AVG	613	103	1,583

- CellTiter-Glo (CTG) assay
- IC₉₀ is the concentration for 90% inhibition of tumor cell growth, IC₅₀ is the concentration to achieve 50% inhibition

In Silico Thermodynamic Stability of Potential Duplexes Shows High Specificity of SIL204 for (K)RAS and Not (H)RAS/(N)RAS and No Off-target Binding

- **SIL204 binding to KRAS^{G12V} strong (-31.8 kcal/mole)**
- **No Off-Target Active Anti-sense Binding indicating low risk for side effects.**
- **No effect on regulatory RNAs**

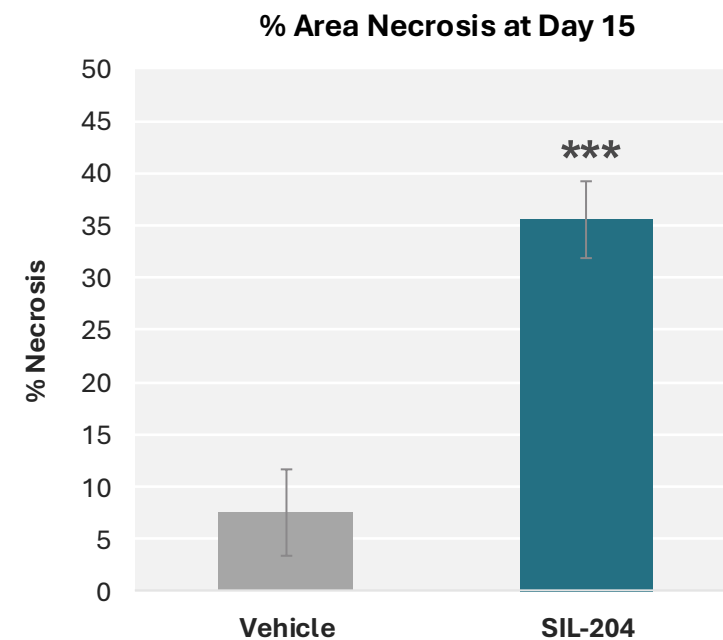
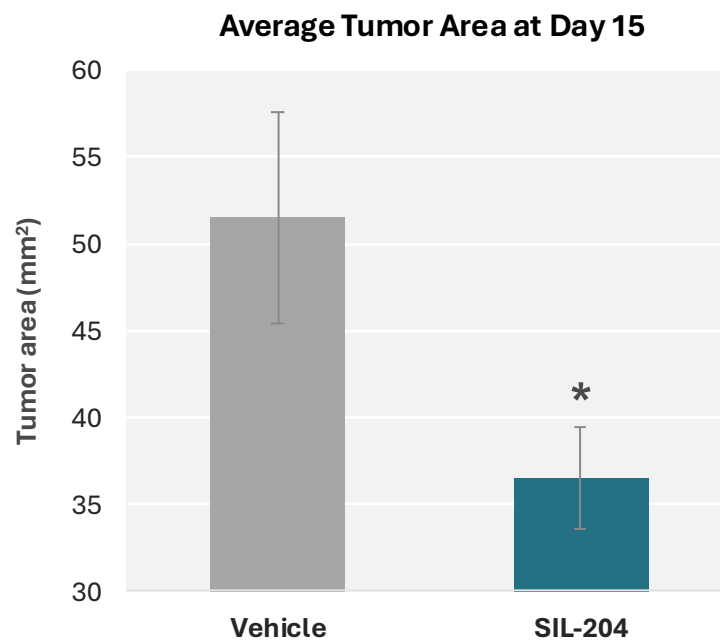
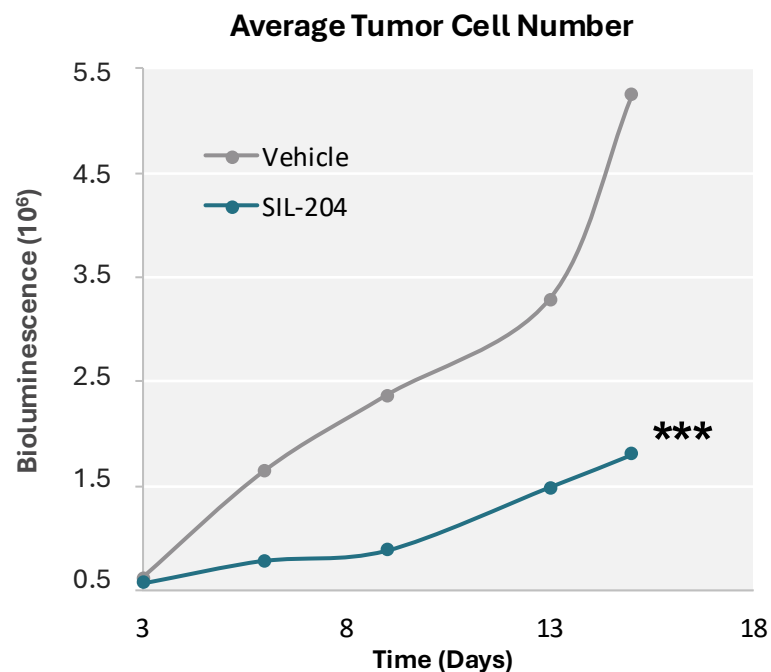
Conclusions

- SIL-204 will silence the intended target KRAS mutations, but low risk for any effect with other proteins besides KRAS, with implications for better safety
- HRAS and NRAS very unlikely affected, continuous endogenous RAS activity

Intratumor SIL204 Significantly Reduced Tumor Volume and Growth While Increasing Tumor Necrosis (cell death) in Human Pancreatic Cancer Xenograft

Day 1: Capan-1 (KRAS G12V) luciferase cells were xenografted to mice (s.c.) concurrently with SIL204 formulated in extended-release microparticles

Day 15: tumors were removed, area determined and analyzed by histology for % necrosis from tumor center slice

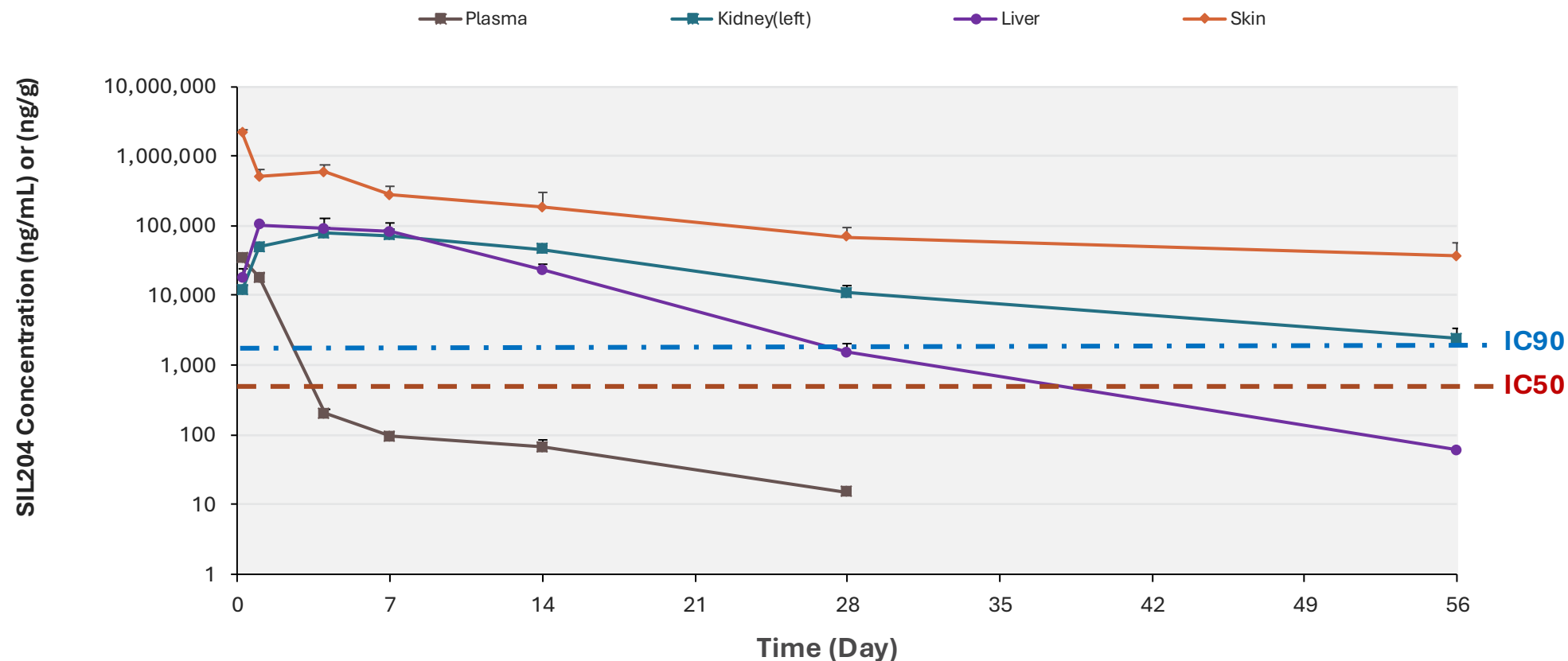


*p<0.05; ***p<0.0005

20 S.C. = sub cutaneous tumor, intratumor SIL204-SL administration.

SIL204 Remains at Substantial Levels for >56 Days in Target Tissues in Rats

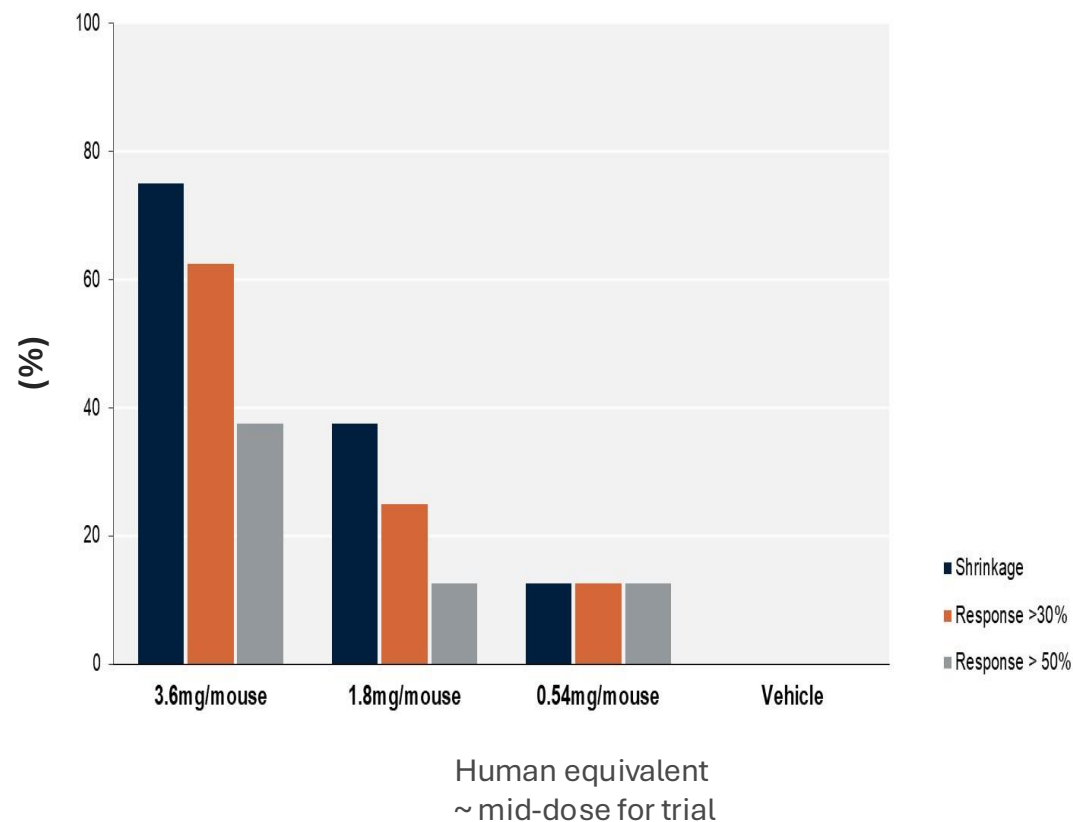
Potential for treating micrometastases with clinical s.c. dosing on monthly basis



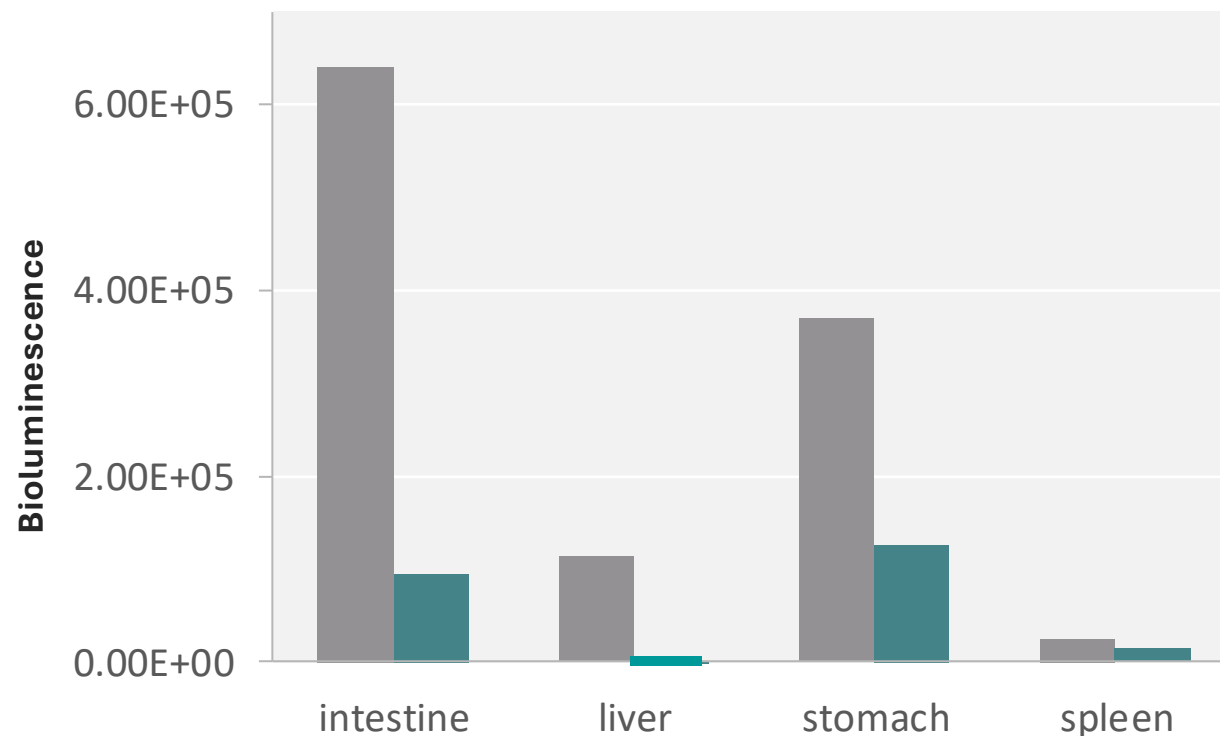
PK profiles of SIL204 after a single s.c. administration were determined in Sprague Dawley rats using a LC-MS/MS analytical method, in the plasma and after collection from kidney, liver, and skin. IC50/90 data from inhibition growth human PC tumor lines superimposed

Subcutaneous SIL204 in Orthotopic Metastatic Pancreatic Mouse Model

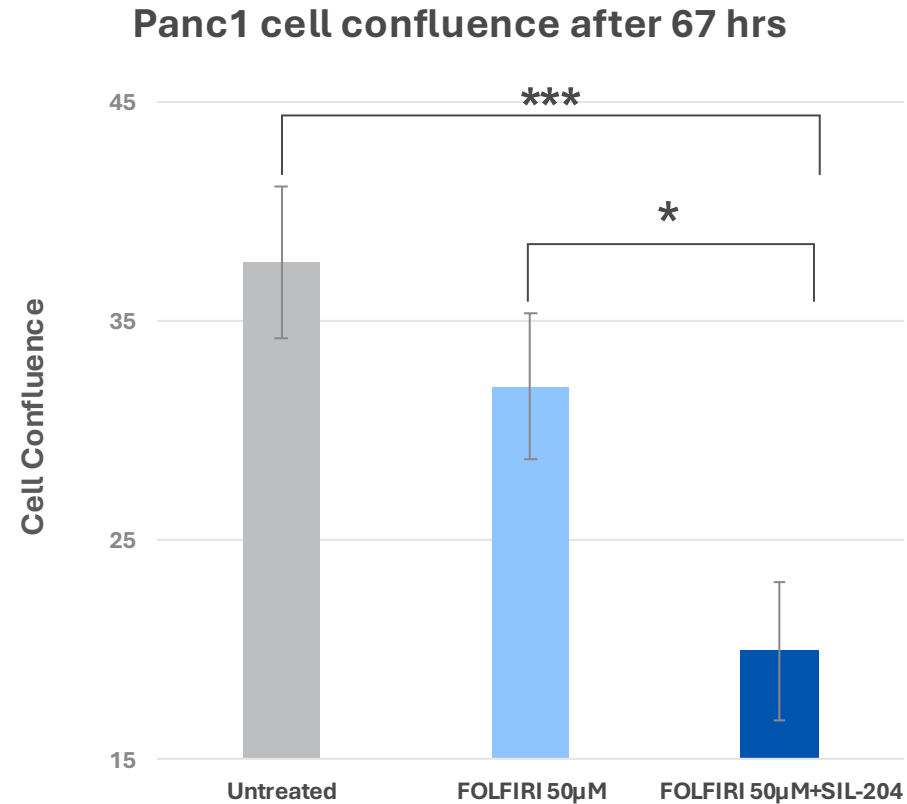
Responder analysis



Bioluminescent imaging of metastatic organs



SIL204's Anti-Tumor Activity Synergistic with Pancreatic Cancer Chemotherapy



Toxicology

Favorable Tolerability with No Systemic Toxicity or Organ Damage

- Extended single-dose GLP toxicity studies completed in 2 relevant species, aligned with ICH S9 guidance for oncology and confirmed by regulatory agency for initiation of Phase 2/3 clinical trial
 - Established safety margins of up to 11-fold over the clinical starting dose.
 - SIL204 was well-tolerated in both species with no test article-related organ toxicity or mortality observed.
 - Adverse findings limited to non-adverse changes at local injection site, fully resolved at 1 month.
 - No evidence of complement activation or immunotoxicity.
- Toxicology package for marketing approval planned for H2, 2026

SIL204 Phase 2/3 Clinical Trial

SIL204 administered intratumorally and systemically as an integrated treatment regimen (IR)

Primary endpoint: Overall survival (OS)

Secondary endpoints: Progression-free survival (PFS), overall response rate (ORR), QoL

Segment 1: Phase 2/3 safety run-in
Initiation Q2 2026

Expected completion Q4 2026

Segment 2: Phase 2 expansion
Initiation Q4 2026

Segment 3: Phase 3 confirmatory
Initiation Q1 2029

★
2028 Trial Interim results
Sample size adjustment

SIL204 Phase 2/3 Development Plan and Milestones Achieved

- GMP API for Segment 1 manufactured, Segment 2 GMP manufacturing ongoing
- GMP formulation selected, manufacturing in process
- Toxicology for Segment 1 completed, for Segment 2/3 later in 2026
- Scientific Advice from national European authority, with positive response
- Go ahead from ethics committee for Phase 2/3 from major oncology center
- Submitted to Israel MoH to initiate Phase 2/3 trial, waiting for response
- Submission to German MoH for Phase 2/3 trial planned 02/26
- IND and CTA for additional EU countries, submission planned Q4/2026
- Q1/2027 Start expanding trial to US, Canada, UK, additional EU countries, Australia

Strategic Collaboration for SIL204 GMP Clinical Supply with Leading European Manufacturers

Collaboration to leverage Catalent and Axolabs' experience in formulation development and manufacturing biologicals to further enhance SIL204's therapeutic potential through improved stability, bioavailability, and delivery precision.



Catalent Limoges Facility

A European Center of Excellence for clinical biologics formulation development and drug manufacture



Axolabs Facility

Leveraging expertise and large-scale nucleic acid production

Intellectual Property Protection

Submissions

Entered national Phase world wide, SIL-204 as a composition and for use in treatment of pancreatic and other cancers (following successful USPTO review of PCT)
U.S. Patent Application No. 19/443,507
CIP of U.S. Patent Application No. 19/138,670

Term

Expected protection until 2043 plus estimated extension to 2048

siRNA against KRAS G12x for regional perineural invasion or pain associated with a solid tumor
U.S. Patent Application No. 19/443,507

Pending US/EU, expected term till 2040 plus extension

Highly Experienced Leadership Team



Ilan Hadar, MBA Chairman and Chief Executive Officer

Over 25 years of multinational executive managerial and corporate experience with pharmaceutical and high-tech companies. CEO PainReform (“PRFX”), CFO Foamix Pharmaceuticals Inc. (Currently “VYNE”)



Mitchell Shirvan, PhD, MBA Chief Scientific and Development Officer

Over 30 years of experience in R&D, innovation and discovery in biotech companies. CEO MacroCure Ltd., Sr. V.P. R&D Foamix Pharmaceuticals Inc. (Currently “VYNE”), Sr. Director Strategic Business Planning Teva Pharmaceuticals Industries Inc.



Mirit Horenshtein Hadar, CPA Chief Financial Officer

Over 15 years of corporate finance experience in senior financial positions of public companies and privately held companies, in the pharmaceutical and high-tech industries. CFO Gouzy Israel (“GAUZ”). V.P. Finance Foamix Pharmaceuticals Inc. (Currently “VYNE”)



World-Renowned Expert Scientific Advisory Board



Eileen M. O'Reilly, MD

Memorial Sloan Kettering, NY, NY

Winthrop Rockefeller Endowed Chair of Medical Oncology; Co-Director, Medical Initiatives, David M. Rubenstein Center for Pancreatic Cancer Research; Section Head, Hepatopancreatobi



Thomas Seufferlein, MD

University Hospital Ulm, German

Director of Internal Medicine University Hospital Ulm, President German Cancer Society



Milind Javle, MD

The University of Texas & MD Anderson Cancer Center, Houston, TX

Professor, Department of Gastrointestinal (GI) Medical Oncology, Division of Cancer Medicine



Matthew Katz, MD

The University of Texas & MD Anderson Cancer Center, Houston, TX

Department Chair, Department of Surgical Oncology, Division of Surgery and Professor.



Philip A. Philip, MD

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Director, Gastrointestinal Oncology; Co-Director, Pancreatic Cancer Center; Medical Director, Research and Clinical Care Integration, Henry Ford Cancer Institute



Andrew M. Lowy, MD

UC San Diego, San Diego, CA

Chief, Division of Surgical Oncology; Professor of Surgery



Talia Golan, MD

Sheba Tel Hashomer Hospital,, Israel

Head, Sheba Pancreatic Cancer Center - SPCC



Mark A. Schattner, MD

Memorial Sloan Kettering, NY, NY

Chief, Gastroenterology, Hepatology and Nutrition Service



Hana Algul, MD

Technical University of Munich, Germany

chair for tumor metabolism; Director of the Comprehensive Cancer Center Munich, Germany at the Klinikum rechts der Isar, and Mildred-Scheel-professor and

SIL204

First in class siRNA targeting KRAS mutation

- Phase 2/3 initiation for locally advanced pancreatic cancer to be initiated Q2/2026
- Isoform selective, pan KRAS silencer, stable siRNA with targeted delivery system
- Pipeline for additional cancers including CRC

First generation (Loder) showed trend for extending patients lives in one of the most deadly cancers, pancreatic cancer

Second generation (SIL204) broadens activity to additional cancers, optimizes stability, and incorporates cancer targeting

Dual-delivery strategy maximizes the delivery to both important disease processes: primary tumor and metastases

Thank You

Ilan Hadar

Chairman & Chief Executive Officer

email: ihadar@silexion.com

Dr. Mitchell Shirvan

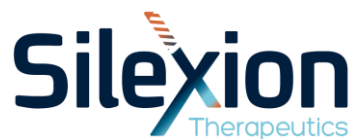
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Chief Financial Officer

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