

— TRISTAR TECHNOLOGY GROUP

Quality biospecimens, imaging & data for precision medicine

- ◆ FFPE surgical samples — Primary tumors, Mets, Normal (non-malignant) tissues
- ◆ Clinical follow-up data including treatment, response, OS & PFS
- ◆ Mutations, fusions and other diagnostic markers
- ◆ Donors from UK, Italy, France with informed consent & ethics approval
- ◆ Responders & non-responders to SOC treatment including CKI/IO
- ◆ Expert IHC capabilities — over 100 optimized assays

Imaging + Clinical Data.

Whole-slide imaging tied back to the matched surgical section and the clinical timeline behind every donor. Radiology coming soon.

RADIOLOGY

COMING SOON

Radiological images — capability in development.

PATHOLOGY

Whole-slide imaging (WSI)

CURRENT H&E REPOSITORY

30,000

donors

>100,000

H&E images

- **Aperio GT450 & AT2 scanners** — same platforms used in clinical practice
- **40x standard** scan resolution across the repository
- **.svs files** compatible with all major WSI viewers and AI pipelines
- **Scanned in-house** — no vendor coordination, no provenance gaps
- **Pathologist-reviewed** — every H&E and corresponding image checked by an experienced medical pathologist to confirm image quality is suitable for AI

LINKAGE

Every imaging asset is linked to

IMAGING

Whole-slide imaging

Scanning capabilities

SURGICAL SECTION

Matched FFPE block & slides

Cohorts available

CLINICAL DATA

Treatment, response, OS/PFS, molecular

Donor Profiles

Breadth of donor profiles.

Specimen, treatment, outcomes, and molecular data — structured at the patient level.

— PATIENT TRAJECTORY

- Primary & matched distant mets
- Matched normal tissue
- Neoadjuvant > adjuvant > SOC targeted & CKI/IO

— OUTCOMES, STRUCTURED

- Overall Survival (months)
- Progression-Free Survival (months)
- Time to events (TTE months)
- Last follow-up
- Event flags (recurrence / death / composite)

— MOLECULAR CHARACTERIZATION

- IHC
- FISH
- RNA-ISH
- NGS: SNV, CNV, Fusions

Records are fully anonymized. Not every patient has every field populated, and not every project needs every field. Cohorts are pulled to fit the project; populated fields reflect real-world clinical practice at the source center.

[See an example record →](#)

Cohorts available.

Tumor types by cohort designs we maintain.

[JUMP TO COHORT DETAIL](#)

[Advanced \(III/IV\) →](#)

[Longitudinal →](#)

[Primary + matched mets →](#)

[Pre/Post SOC →](#)

[Pre/Post IO →](#)

TUMOR TYPE	ADVANCED (III/IV)	LONGITUDINAL	PRIMARY + MATCHED METS	PRE / POST SOC	PRE / POST IO
NSCLC	✓	✓	✓	✓	✓
CRC	✓	✓	✓	✓	—
Ovarian	✓	✓	✓	✓	—
Breast	✓	✓	✓	✓	—
Gastric	✓	✓	✓	✓	—
Head & Neck SCC	✓	✓	✓	✓	✓
Prostate (mCRPC)	✓	✓	—	✓	—
Endometrial	✓	✓	✓	✓	—
Pancreatic ADC	✓	—	—	✓	—
Bladder (UC)	✓	✓	✓	✓	—
Melanoma	✓	✓	✓	✓	✓
RCC	✓	✓	✓	✓	✓
HCC	✓	✓	✓	✓	—
Esophageal	✓	✓	✓	✓	—

All cohorts are available as FFPE, TMA, or slides. Treatment, response, OS/PFS data and indication-specific molecular characterization (IHC and mutation panels) are linked at the patient level.

Uniquely positioned to support Oncology AI companies today.

Quality, standardized datasets with matching samples to support their algorithmic products and pharma services.

READY TO SHIP

Pre-designed cohorts

Multiple indication cohorts ready off the shelf — each comes with linked imaging, surgical samples, clinical timeline, and molecular characterization.

BUILT TO SPEC

Custom cohort design

We build cohorts to your protocol — indication, stage, treatment line, biomarker, and follow-up requirements all configurable.

EXPAND

Complement existing cohorts

Expand on your existing cohorts with our datasets to meet the sample size needed for projects.

PROFILE

Expand tumor profiling

Expand clinical molecular data by sequencing the matched samples with a larger panel or for new relevant biomarkers.

VALIDATE

Validation cohorts

Confirm your algorithmic product programs with a cohort that validates results against the biological sample utilizing our linked samples.

A repository purpose-built for translational medicine in oncology.

Standardized, sample-linked, anonymized patient, clinical, and molecular data — in-depth where translational science needs depth.

- ◆ **Anonymized and sample-linked** — anonymized before it enters our collection and linked to physical specimen(s) in our repository.
- ◆ **Standardized data scope** reflects what translational programs actually need to make decisions.
- ◆ **Specimens behind the records** — the underlying tissue is available for re-staining, re-extraction, or re-characterization.
- ◆ **IHC, NGS, RNA-Seq, RNAScope, DSP, and digital image analysis** — orthogonal testing in a single lab.
- ◆ **Expand the molecular profile** — additional panel sequencing on the same blocks as markers of interest emerge.
- ◆ **Same patients, new questions** — the data set extends with the program, without re-sourcing.

A core partner for translational programs.

Why top pharma and biotechs working on oncology therapeutics work with us.

- ◆ **The translational bar has moved.** Sponsors developing oncology therapeutics need high-quality samples paired with in-depth, standardized data across EHR and orthogonal sources.
- ◆ **Ethically sourced, quality samples and data.** Quality samples and data improve the reliability of results.
- ◆ **Validation for regulators.** Data derived from TriStar samples is frequently included in IND submissions — tissue quality and annotation rigor shape what is defensible.
- ◆ **Validation for the program.** Translational evidence is increasingly what investment committees and partnership negotiations anchor on.
- ◆ **Translational evidence is increasingly the rate-limiting step.** Tissue quality, annotation depth, and provenance decide whether downstream analysis withstands scientific and regulatory scrutiny.

Scanning capabilities.

How cohorts arrive in your environment.

MAGNIFICATION	40x	Standard scan resolution across the repository.
SCANNERS	Aperio GT450 & AT2	Whole-slide imaging on the same platforms used in clinical practice.
FILE FORMAT	.SVS	Whole-slide files compatible with all major WSI viewers and AI pipelines.
CLOUD HANDOFF	Your choice*	*Box, AWS, Azure etc. or your company's approved procurement / data portal.

Lab capabilities — validation, extension & characterization.

Run in-house on the same donors and samples behind every cohort — no vendor coordination, no provenance gaps.

100+

OPTIMIZED IHC ASSAYS

DEVELOPED FOR

- Ventana Benchmark
- Dako autostainers

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MEDICAL PATHOLOGISTS

15+ combined years in pharma

SERVICES

- IHC
- NGS
- Digital Spatial Profiling
- RNAScope
- RNA-Seq
- Digital image analysis

Advanced disease (Stage III/IV) surgical samples

— APPROXIMATE NUMBER OF DONORS **500–900 per tumor type**

— TUMOR TYPES

NSCLC

CRC

Ovarian

Prostate (mCRPC)

Breast

Gastric

Endometrial

Pancreatic ADC

Bladder (UC)

Melanoma

RCC

HCC

Esophageal

Head & Neck SCC

— FOLLOW-UP DATA

Treatment

Response

OS/PFS

— MUTATIONS*

KRAS

NRAS

EGFR

ALK fusion

BRAF

BRCA

MET alteration

HRD status

MSI status

** as available from donor records*

— IHC MARKERS

ER/PR

HER2

MMR IHC

PD-L1

TROP2

Nectin-4

B7-H3

B7-H4

DLL3

p16

p53

— HBS FORMATS

FFPE

TMA

Slides

[Example HBS Cohorts & Data Available](#) [↗](#)

Sequentially collected (longitudinal) surgical samples from the same donor

— APPROXIMATE NUMBER OF DONORS **20–70 sets per indication**

— TUMOR TYPES

NSCLC CRC Ovarian Head & Neck SCC Breast Gastric Endometrial RCC Bladder (UC) Melanoma

— FOLLOW-UP DATA

Treatment Response OS/PFS

— MUTATIONS*

KRAS NRAS EGFR ALK fusion BRAF BRCA MET alteration HRD status MSI status

** as available from donor records*

— IHC MARKERS

ER/PR HER2 MMR IHC PD-L1 TROP2 Nectin-4 B7-H3 B7-H4 DLL3 p16 p53

— HBS FORMATS

FFPE TMA Slides

[Example HBS Cohorts & Data Available](#) [↗](#)

Longitudinal Example: NSCLC.

Per-patient. Per matched metastasis. Treatment-line resolved. Examples below are anonymized records from the repository.

Patient #001

Immunotherapy: **No**

Treatment status: **Treatment naïve**

PRIMARY SPECIMEN

Surgery: Left lung upper lobectomy and lymph node sampling

Site: Lung, left upper lobe

MATCHED MET 1

Site: Superficial cerebrum and dura

Treatment: Immunotherapy naïve

Patient #002

Immunotherapy: **No**

Treatment status: **Treatment naïve**

PRIMARY SPECIMEN

Surgery: Left Thoracotomy and upper lobectomy with wedge of the lower lobe taken en bloc. Sleeve resection of PA

Site: Left lung, upper lobe

MATCHED MET 1

Site: Lymph node

Treatment: Treatment naïve

MATCHED MET 2

Site: Lymph node

Surgery date: Q1-2018

Treatment: Treatment naïve

Patient #007

Immunotherapy: **No**

MATCHED MET 1

Site: Lymph node

Treatment: Treatment naïve

MATCHED MET 2

Site: Lymph node

Treatment: Treatment naïve

MATCHED MET 3

Site: Hilar Lymph node

Surgery date: Q1-2022

Treatment: Treatment naïve

Block #: C7

[Example HBS Cohorts & Data Available](#)

Primary & matched distant metastases (surgical samples)

— APPROXIMATE NUMBER OF DONORS **20–50 sets per indication**

— TUMOR TYPES

NSCLC

CRC

Ovarian

Head & Neck SCC

Breast

Gastric

Endometrial

Bladder (UC)

Melanoma

RCC

— EXAMPLES OF METASTATIC SITES

Lymph nodes

Bone

Liver

Lung

Brain

Peritoneal

**Mets only (without matched primary) samples available*

— FOLLOW-UP DATA

Treatment

Response

OS/PFS

— MUTATIONS*

KRAS

NRAS

EGFR

ALK fusion

BRAF

BRCA

MET alteration

HRD status

MSI status

**As available from donor records.*

— IHC MARKERS

ER/PR

HER2

MMR IHC

PD-L1

TROP2

Nectin-4

B7-H3

B7-H4

DLL3

p16

p53

— HBS FORMATS

FFPE Slides

TMA Block or slides

[Example HBS Cohorts & Data Available](#) [↗](#)

Pre & Post standard of care (SOC) treatment surgical samples

Includes a sub-set of donor matched sets.

— APPROXIMATE NUMBER OF DONORS **25–150 per indication**

— TUMOR TYPES

NSCLC

CRC

Ovarian

Head & Neck SCC

Breast

Gastric

Endometrial

Pancreatic ADC

Bladder (UC)

Melanoma

RCC

— FOLLOW-UP DATA

Treatment

Response

OS/PFS

— MUTATIONS*

KRAS

NRAS

EGFR

ALK fusion

BRAF

BRCA

MET alteration

HRD status

MSI status

** as available from donor records*

— IHC MARKERS

ER/PR

HER2

MMR IHC

PD-L1

TROP2

Nectin-4

B7-H3

B7-H4

DLL3

p16

p53

— HBS FORMATS

FFPE

TMA

Slides

[Example HBS Cohorts & Data Available](#) [↗](#)

Pre & Post IO (Pembro/Nivo) treatment surgical samples

1st line SOC chemo, 2nd line IO. Includes a sub-set of donor matched sets.

— APPROXIMATE NUMBER OF DONORS **10–25 per indication**

— TUMOR TYPES

- NSCLC
- RCC
- Head & Neck SCC
- Melanoma

— FOLLOW-UP DATA

- Treatment
- Response
- OS/PFS

— MUTATIONS*

- KRAS
- NRAS
- EGFR
- ALK fusion
- BRAF
- BRCA
- MET alteration
- HRD status
- MSI status

** as available from donor records*

— IHC MARKERS

- ER/PR
- HER2
- MMR IHC
- PD-L1
- TROP2
- Nectin-4
- B7-H3
- B7-H4
- DLL3
- p16
- p53

— HBS FORMATS

- FFPE Slides
- TMA Block or slides

[Example HBS Cohorts & Data Available](#) 

FFPE blocks & TMAs with matched double-spun plasma.

FFPE block & 4ml matched double-spun plasma or whole blood.

~330

TOTAL SAMPLE SETS

8

INDICATIONS

40 / 60

STAGE I-II / III-IV (%)

5-20_{min}

ISCHEMIC TIME

INDICATION	FFPE BLOCKS	PLASMA / BLOOD	NGS-ELIGIBLE [†]
NSCLC	50	●	●
CRC	100	●	●
Gastric ADC	30	●	●
RCC	30	●	●
Esophageal cancer	40	●	●
Endometrial cancer	50	●	●
Ovarian cancer	20	●	●
Melanoma	10	●	●

COMPATIBLE ASSAYS

IHC

RNA-ISH

NGS (Oncomine)

[†] NGS (Oncomine) panel can be ordered separately on any indication.
Note — these sets do not have outcome data and were collected from Ukraine.
Quantities are approximate and subject to change.

Example HBS Cohorts & Data Available [↗](#)

GET IN TOUCH

Let's talk about your program.

Quality biospecimens, imaging & data for precision medicine — sourced, characterized, and delivered in-house.



HEAD OF PROJECTS & IO APPLICATIONS

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