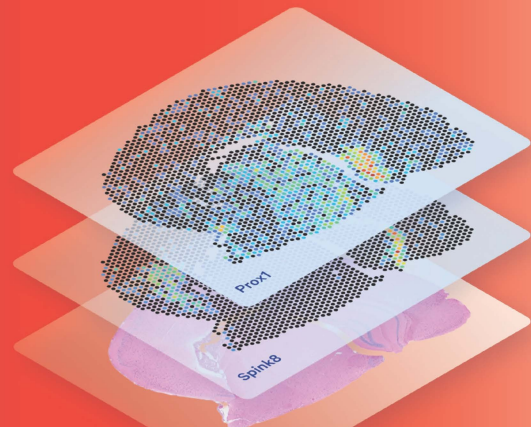


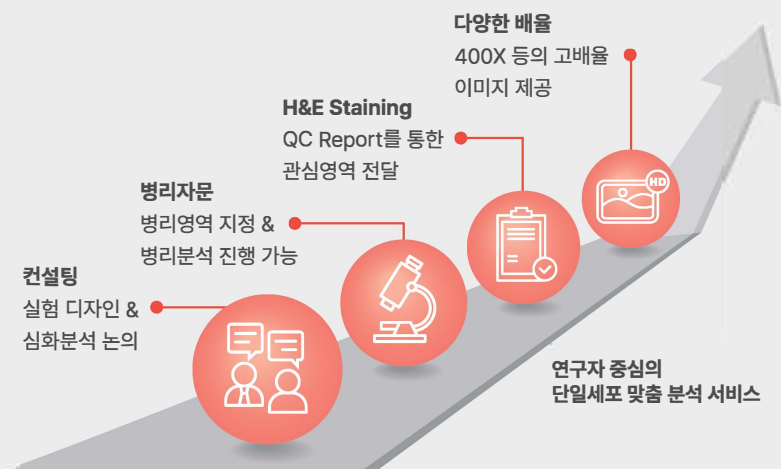
Map the **Whole Transcriptome**
within the Tissue Context

Visium



Visium은 조직에서 유전자의 발현정도를 위치에 따라 한 눈에 볼 수 있는 획기적인 유전체 프로파일링 기술입니다.

Whole Transcriptome을 확인하여 새로운 세포 및 바이오마커를 Discovery하고, Spatial Analysis에 대한 Insight를 제공합니다.



How does Visium provide Insights in Research

Gene의 공간적 패턴 파악
위치에 따른 Gene 발현 패턴 차이 확인

검체 당 20,000여개 Gene 발현
Spot 당 2,000여개 Gene 발현 확인

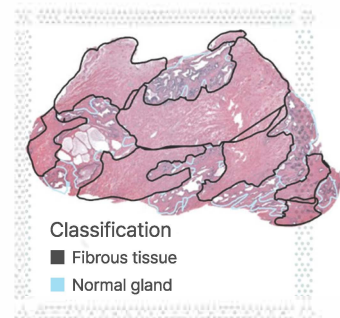
질병 기전의 새로운 기작 발견
병리부위에서 나타나는 새로운 특징 확인

새로운 바이오마커 발굴
약물유효군 특이적 마커 발굴 가능

Example Results

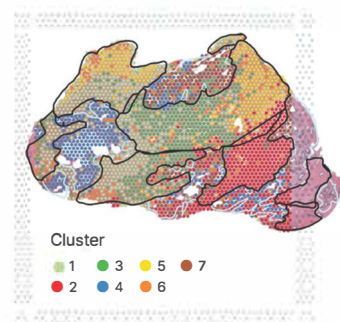
Pathologist Annotation

병리 분석을 통한 관심부위 설정

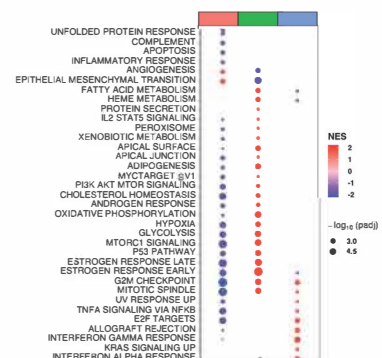


Spatial Gene Expression

같은 병리 소견 내 세분화 된 Gene 발현 패턴 확인

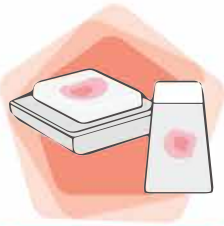


발현 패턴 확인을 통한 새로운 Insight 도출



© Images Provided by 10X Genomics

Convenience for Use

**다양한 형태의 시료 활용**

Fresh, Fixed, FFPE Block / Slide

**유연한 사이즈 선택**

6.5mm or 11mm

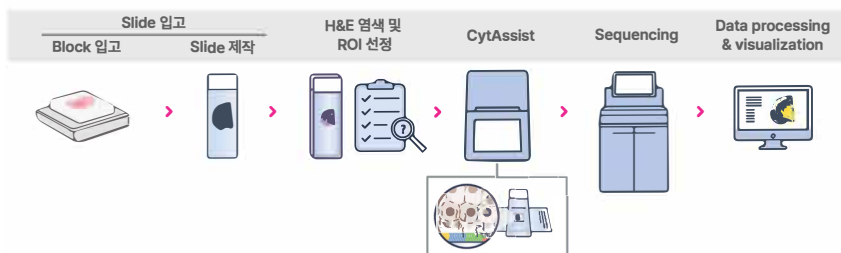
**단백질 Co-Detection**

Up to ~100

**User Friendly 소프트웨어**

무료 소프트웨어, Loupe Browser

Workflow

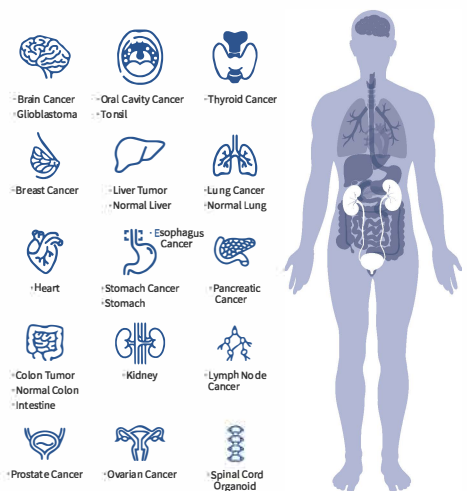


Sample Guide	Fresh Frozen	Fixed Frozen	FFPE
Section Thickness	10µm	10µm	5µm
QC Criteria	RIN ≥ 4	DV200 ≥ 50%	DV200 ≥ 30%

* ROI 선정 협의 후 5주 이내 결과 송부 (실험 상황에 따라 상이)

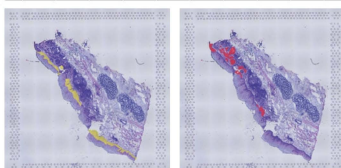
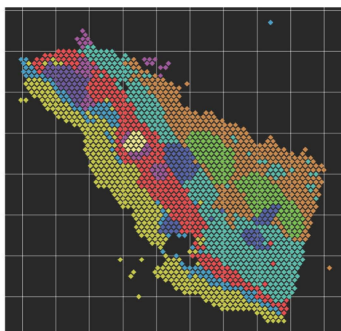
Validated Tissue

- 1) Human Organ
- 2) Mouse Organ
- 3) 기타 Species (Poly-A tail capture)

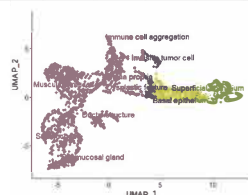
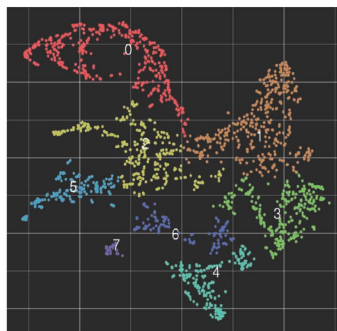


Data Analysis

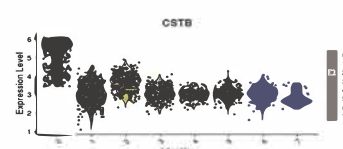
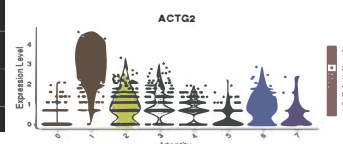
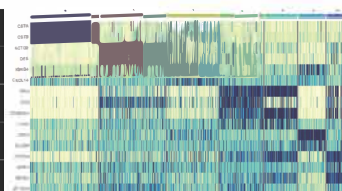
Clustering



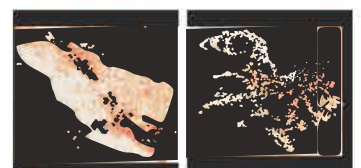
UMAP, tSNE



DEG 선별

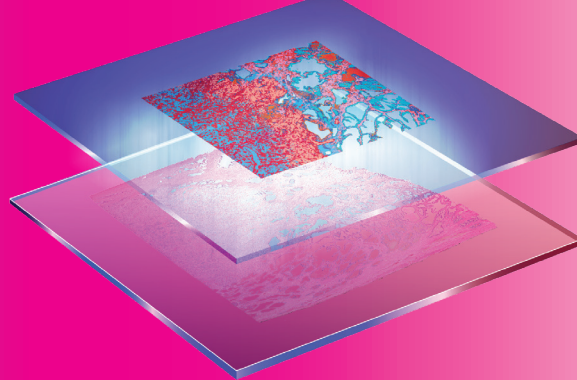


마커 발현 확인



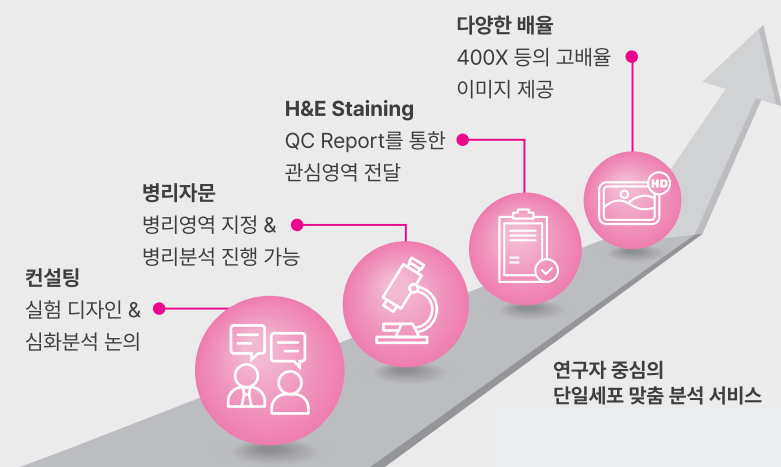
Whole Transcriptome
Spatial Discovery in High Definition

Visium HD



Visium은 조직에서 유전자의 발현정도를 위치에 따라 한 눈에 볼 수 있는 획기적인 유전체 프로파일링 기술입니다.

Whole Transcriptome을 **Sub-cellular** 단위의 해상도로 빈 공간 없이 확인하여 새로운 세포 및 바이오마커를 Discover하고, Spatial Analysis에 대한 Insight를 제공합니다.



How Visium HD empowers your research

다양한 시료 사용
Block or Pre-sectioned Slide

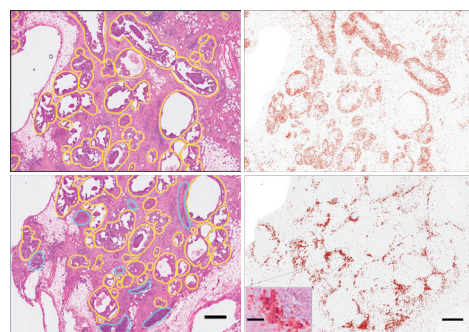
Sub-cellular 단위의 고해상도
2 μ m의 해상도로 빈 공간 없이 분석

새로운 바이오마커 발굴
Whole Transcriptome with
Deeper Sequencing

병리적 데이터 분석
Histological + Gene Expression

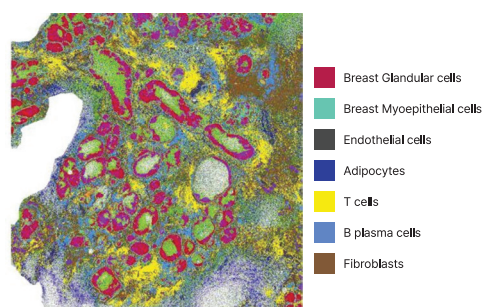
Example Results

Pathologist Annotation

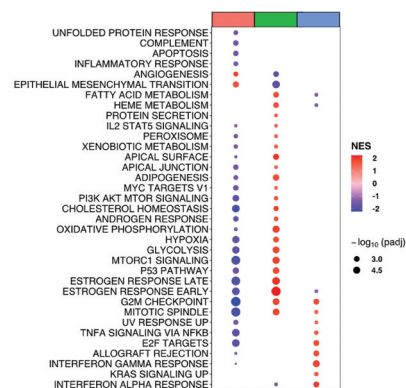


Spatial Gene Expression

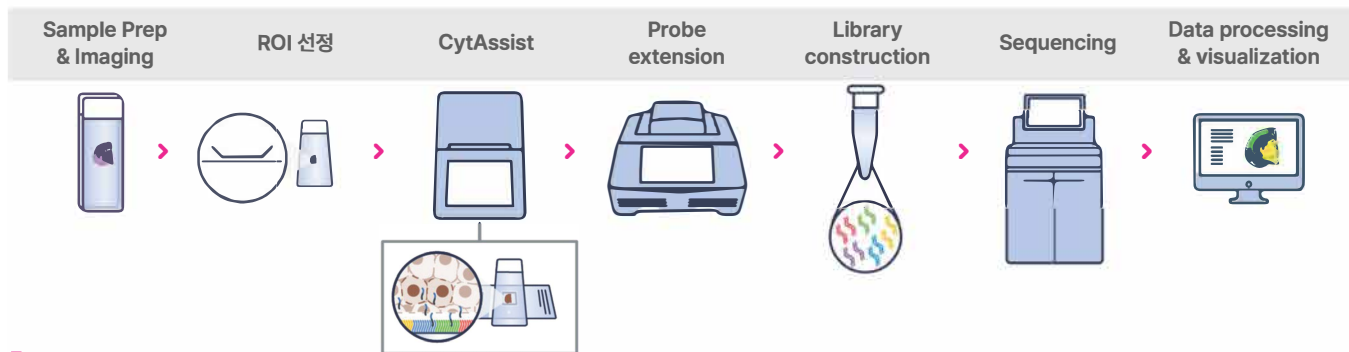
같은 병리 소견 내 세분화 된 Gene 발현 패턴 확인



발현 패턴 확인을 통한 새로운 Insight 도출

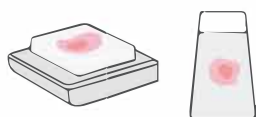


Workflow



Sample Guide

- Block
- Pre-sectioned Slide (*Positive Slide)

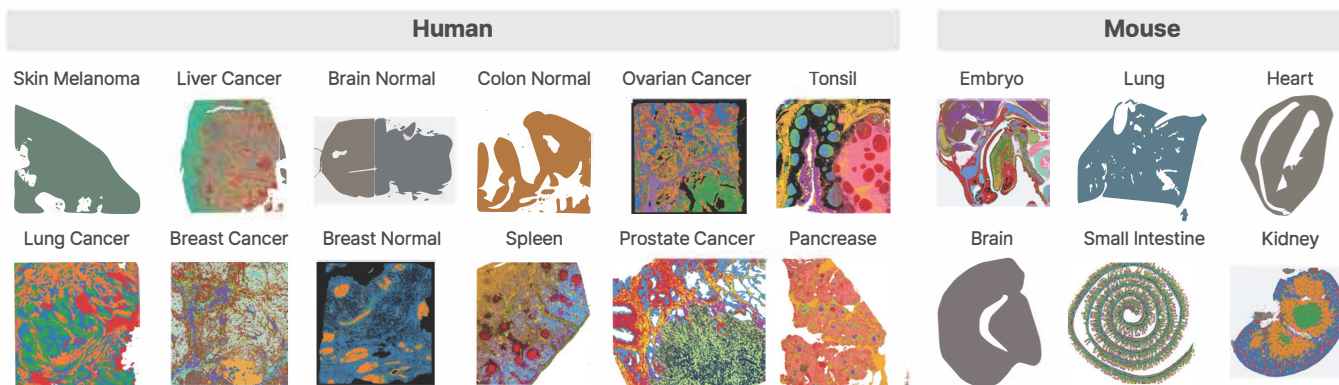


Sample Type	FFPE
Section	5μm
RNA QC 기준	DV200 ≥ 30%

Spec.

- Platform : 10x Genomics CytAssist
- Method : Sequencing
- Resolution : 2μm, No Gap
- Size : 6.5mm x 6.5mm

Validated Tissue



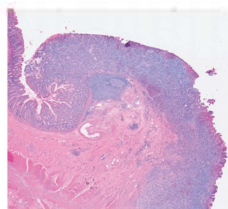
※ 이외 조직은 추가 상담이 필요합니다.

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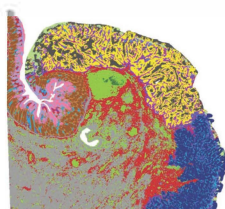
Data Analysis

세분화 된 Clustering

A. H&E staining
Human colon cancer

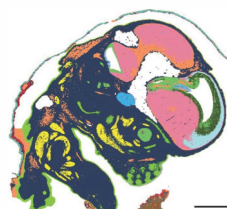


B. Graph-based clustering

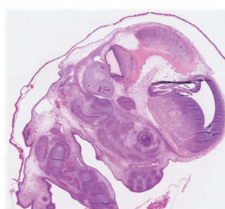


원하는 특정 마커 Discovery

A. Graph-based clustering HD
Mouse embryo E15.5



B. H&E staining
Mouse embryo E15.5

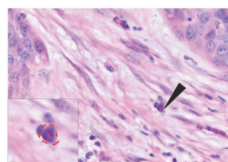


C. Marker gene expression HD

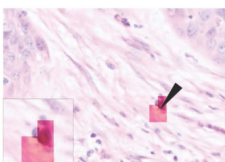


원하는 Cell 관련 마커 도출

A. H&E staining, single cell present

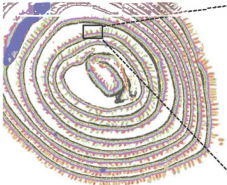


B. Overlay with JCHAIN, plasma cell marker

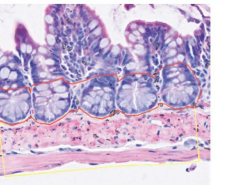


조직 병리에 대한 새로운 Insight 도출

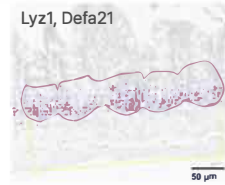
A. Graph-based clustering
Mouse small intestine



B. H&E staining



C. Overlay with marker



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