

La Integración de la Patología Digital en el Flujo de Trabajo: Valor Clínico

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Centro Integral Oncológico Clara Campal
Hospital Universitario Sanchinarro
Madrid

LABORATORIO
DE

DIANAS
TERAPÉUTICAS

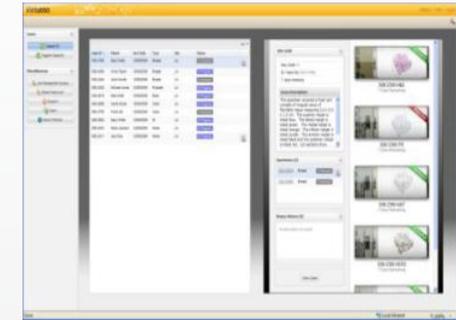


VANTAGE / Virtuoso / LIS Interface

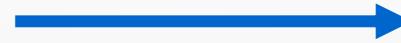
VANTAGE



Virtuoso

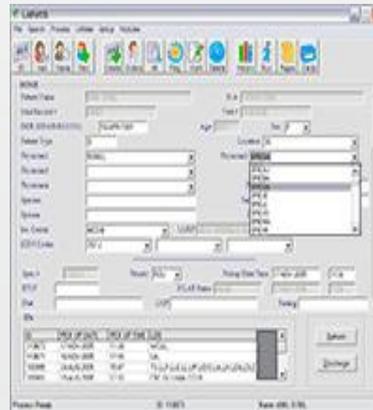


Workflow Events, Quality Issues



Case History, Slide Processing Status

AP LIS



Orders, Patient Demographics

Status Updates

Case/Slide data, Patient Demographics

FOV, slide score, report

WORKFLOW – VANTAGE 2.0 *Integración con la Patología*

Mejora de la comunicación Digital



**LABORATORIO
HISTOLOGÍA**

- EVENTOS DE WORKFLOW
- INCIDENCIAS DE CALIDAD



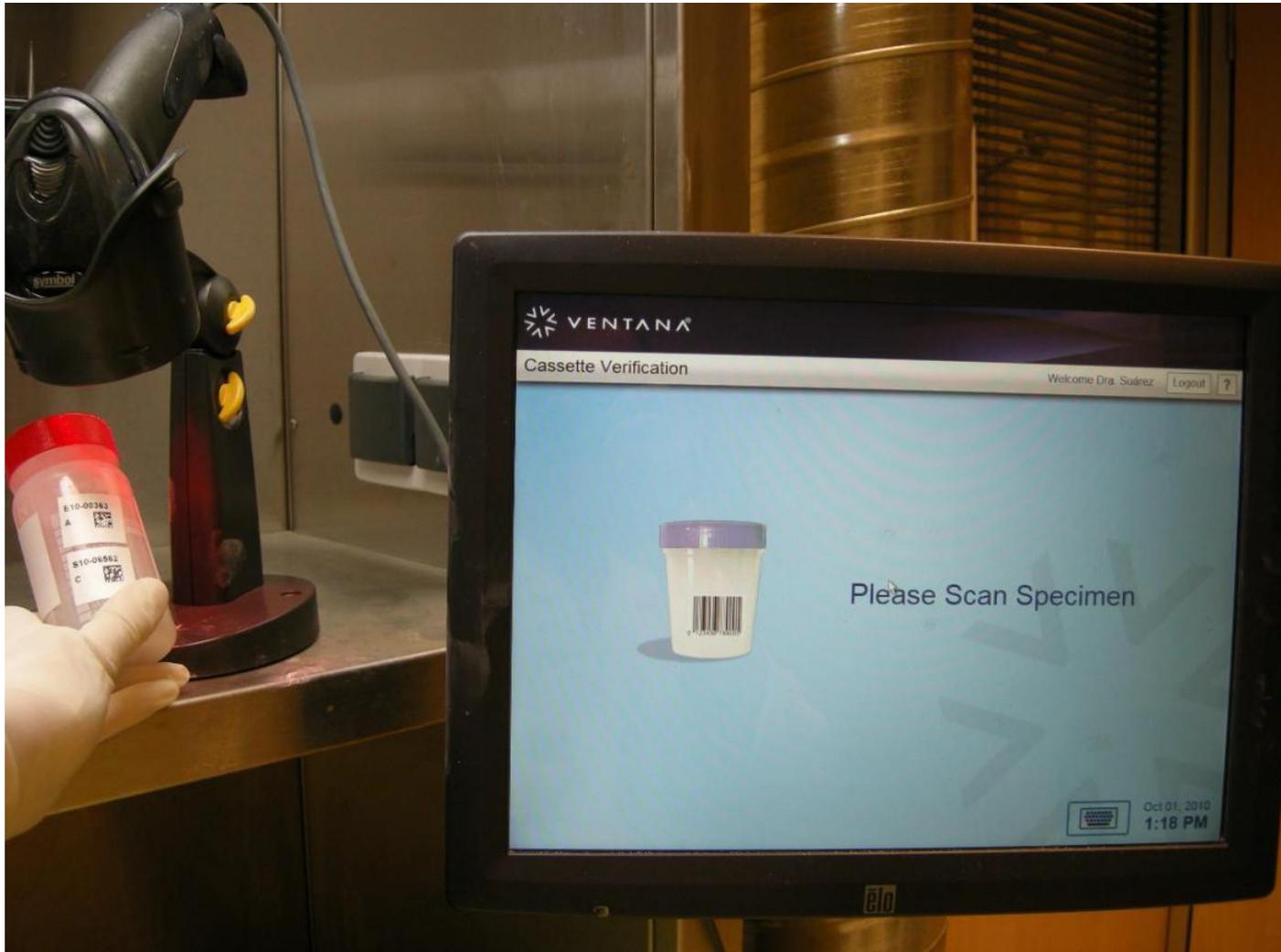
- HISTORIA DEL CASO
- ESTADO DE LA MUESTRA
EN EL PROCESO



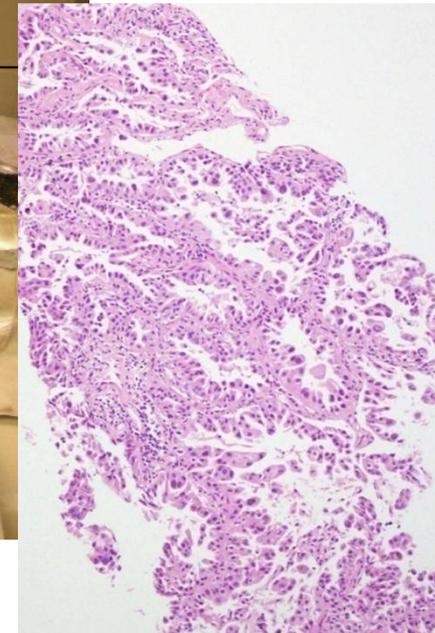
ÁREA DE PATÓGOLOS



FASE PRE-ANALÍTICA



FASE PRE-ANALÍTICA



Manejo y gestión de la muestra

INSIGHT OVERVIEW

NATURE|Vol 452|3 April 2008|doi:10.1038/nature06913

The cancer biomarker problem

Charles L. Sawyers¹

Despite much discussion on this topic, most clinical trials in patients with solid tumours do not include provisions to obtain additional tissue samples. The reasons for this include concerns about slower patient enrolment in trials and insufficient research infrastructure to obtain and process tumour samples for molecular analysis. The reluctance of the clinical trial community to force the issue by designing studies that require additional tissues may be short-sighted. Successful 're-biopsy'

Para estudiar biomarcadores hace falta tejido (bastante)

FASE PRE-ANALÍTICA

Fijación e inclusión

VOLUME 26 · NUMBER 6 · FEBRUARY 20 2008

JOURNAL OF CLINICAL ONCOLOGY

SPECIAL ARTICLE

Biomarkers of Response to Epidermal Growth Factor Receptor Inhibitors in Non–Small-Cell Lung Cancer Working Group: Standardization for Use in the Clinical Trial Setting

David A. Eberhard, Giuseppe Giaccone, and Bruce E. Johnson

- Volumen de fijador adecuado (relación mínimo fijador: tejido de 10:1)
- Tiempo óptimo de fijación:
 - 6-12 h biopsias pequeñas
 - 8-18 h resecciones quirúrgicas.
 - No se recomienda >36 horas.

Preamalytical phase
Tumor heterogeneity

Tumor heterogeneity (intertumoral and intratumoral) may confound interpretation
At least 3 representative areas should be assessed per tumor section if possible

Tissue block preferred
Cytospin cell block might be acceptable with further validation

Cytology smears not acceptable for IHC and FISH

Sample type should be recorded (eg, excision, biopsy, cytology)

Tumor tissue section area: approximately 1-2 mm², excluding nontumor cells and tissue areas

Cell number:

FISH: > 100 assessable tumor cell nuclei

IHC/mutation: ≈ 2,000 cells

Direct sequencing requires high tumor cell content (50%–70% tumor cells)

Fixation in 10% neutral buffered formalin and paraffin embedding are standard

Bouin's or mercury-containing fixatives should be avoided

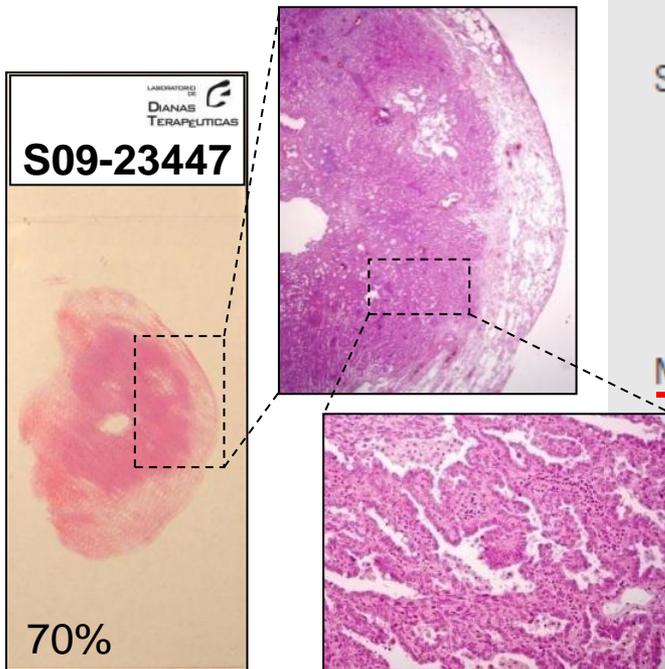
Fixative should be recorded

Sample should be stored as a block, not precut slides

If slides are precut, date of sectioning should be recorded

FASE PRE-ANALÍTICA

Evaluación, gestión y rentabilidad de la muestra



Sample type

Minimum sample size

Sample collection
and storage

At least 3 representative areas should be assessed per tumor section if possible

Tissue block preferred

Cytospin cell block might be acceptable with further validation

Cytology smears not acceptable for IHC and FISH

Sample type should be recorded (eg, excision, biopsy, cytology)

Tumor tissue section area: approximately 1-2 mm², excluding nontumor cells and tissue areas

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%

celularidad
tumoral

FASE PRE-ANALÍTICA

Manejo y gestión de la muestra

Am J Clin Pathol 2012;138:332-346

Molecular Pathology of Non-Small Cell Lung Cancer

A Practical Guide

Dara L. Aisner, MD, PhD, and Carrie B. Marshall, MD



Para minimizar la pérdida de material, se propone:

- Adecuada comunicación multidisciplinaria (neumología-radiología-cirugía-oncología-patología).
- Manejo de las biopsias pequeñas como si fuera la única muestra disponible tanto para el diagnóstico histológico como para el análisis molecular.
- Preservar la mayor cantidad posible de tejido para las potenciales pruebas moleculares.
- Uso adecuado (racional) de la inmunohistoquímica clasificatoria, utilizando un panel restringido de anticuerpos: TTF-1 y p40 (+ Napsin A y/o citoqueratina 5/6).

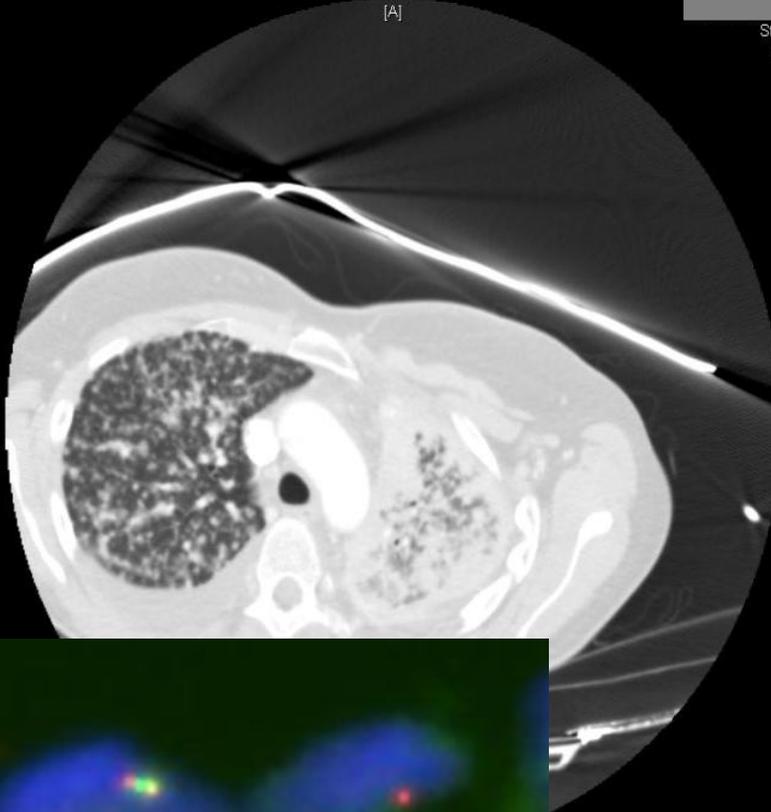


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Study Date:03/09/2010
Study Time:13:08:05
MRN:2518165

[R]

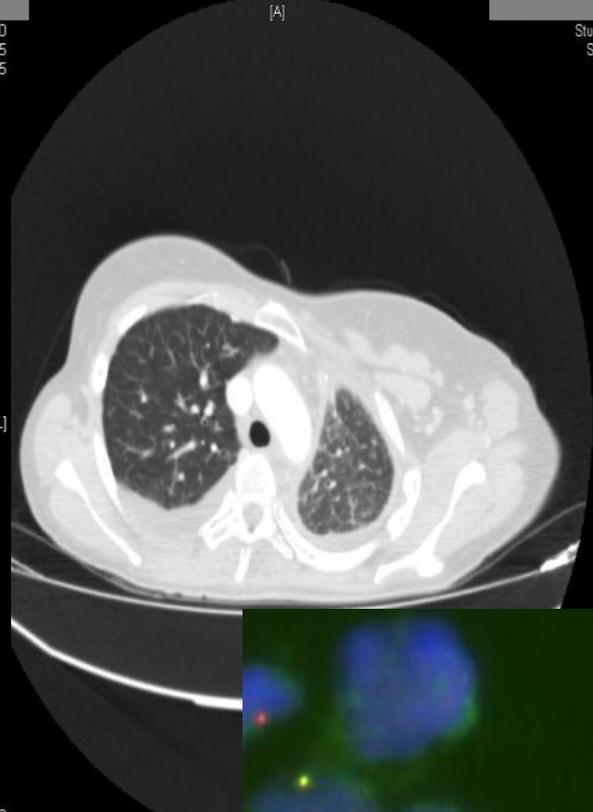


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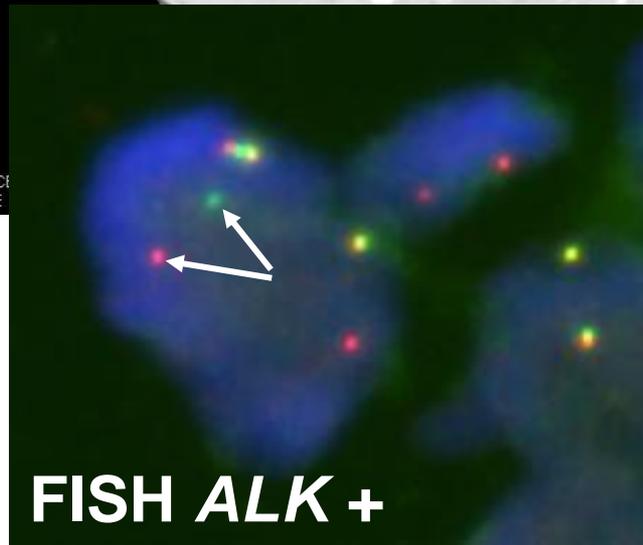
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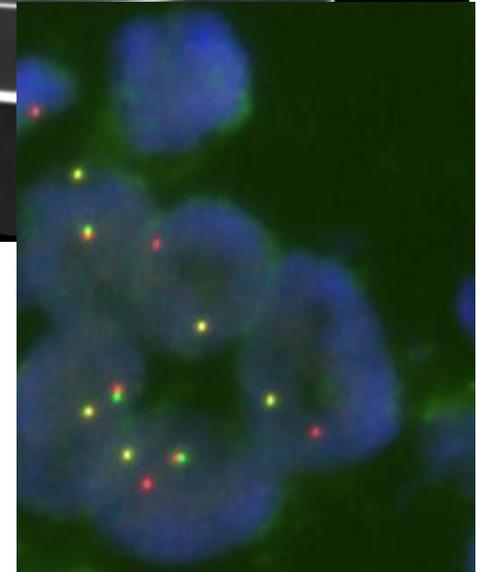


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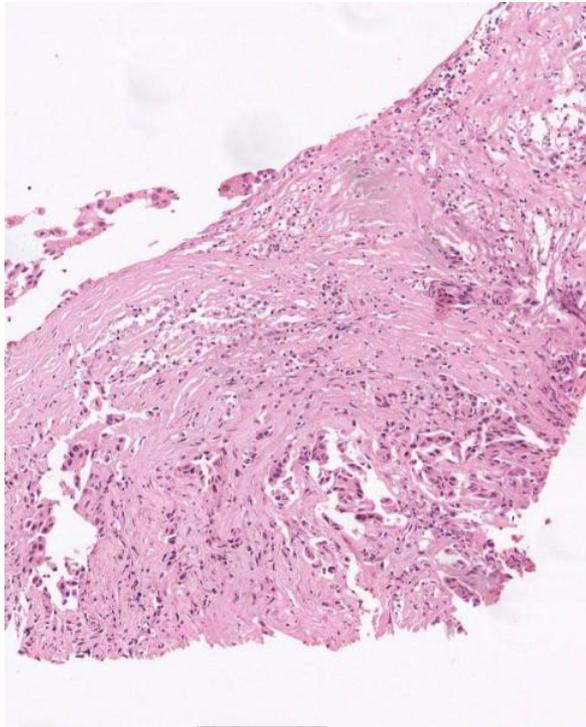
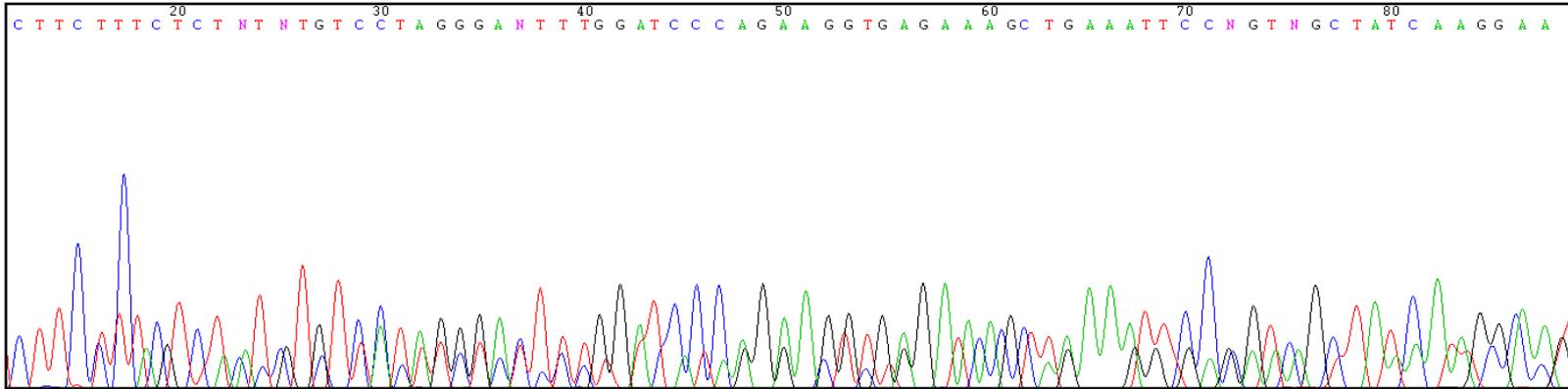


FISH ALK +

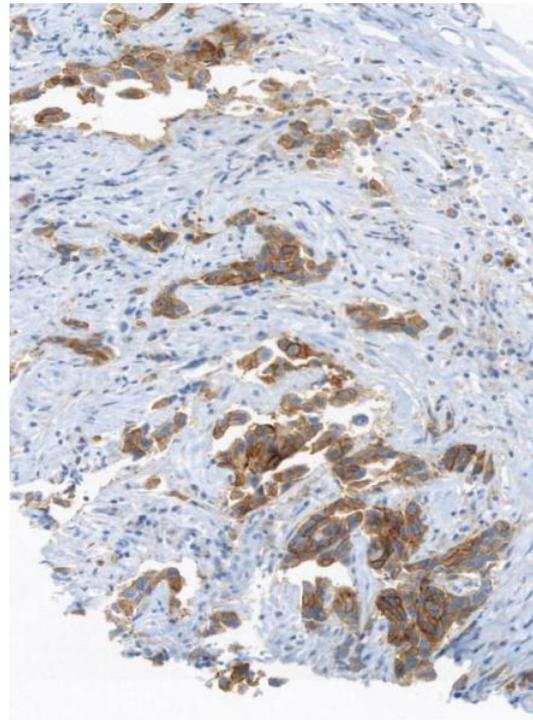


EGFR (Exón 19 E746-A450) deleción)

ADENOCARCINOMA PULMÓN



H&E



IHQ: Exon 19 E746-750 deleción, 15bp

2008 American Society for Clinical Investigation Presidential Address

Translational research: are we on the right track?

Charles L. Sawyers

Guiding Principles of Molecular Medicine

- 1) Successful new medical therapies will be based on a foundation of precise molecular understanding of disease.
- 2) Translational science questions must be solved through a multidisciplinary team approach that requires substantial infrastructure.
- 3) Human subjects are an essential early component in the evaluation of new drug candidates and should be studied at a level of scientific detail comparable to that used for non-human, preclinical model systems.

CONCLUSIONES

- LIS+Trazabilidad+patología digital
- Gestión de la muestra
- Protocolización
- Comites centrados en patología digital
- Medicina traslacional



UNIVERSITARIO

sanchinarro

HOSPITALES

CENTRO INTEGRAL ONCOLÓGICO
CLARA CAMPAL

CIOCC

LABORATORIO
DE



DIANAS
TERAPÉUTICAS

MARTIN NOWAK
WITH ROGER HIGHFIELD

Super cooperators

Altruism, evolution
and mathematics

(or, why
we need
each other
to
succeed)



ANATOMIE PATHOLOGIQUE

DU CORPS HUMAIN,

OU

DESCRIPTIONS, AVEC FIGURES LITHOGRAPHIÉES ET COLORIÉES,
DES DIVERSES ALTERATIONS MORBIDES
DONT LE CORPS HUMAIN EST SUSCEPTIBLE;

PAR J. CRUVEILHIER,

PROFESSEUR D'ANATOMIE A LA FACULTÉ DE MÉDECINE DE PARIS, MÉDECIN DE LA MAISON ROYALE DE SANTÉ,
CHEVALIER DE LA LÉGIION D'HONNEUR, MEMBRE DE L'ACADÉMIE ROYALE DE MÉDECINE,
PRÉSIDENT PÉREPETUEL DE LA SOCIÉTÉ ANATOMIQUE, ETC.

TROISIÈME LIVRAISON.

MALADIES DU POUMON (<i>Apoplexie</i>).	Texte 6 pages. Planche 1.
— — — (<i>Gangrène</i>).	— 8 — — 2.
MALADIES DES ARTÈRES (<i>Anévrysmes de l'aorte</i>).	— 6 — — 3, 4.
MALADIES DU FOIE.	— 4 — — 5.
MALADIES DE LA MOELLE ÉPINIÈRE.	— 10 — — 6.

A PARIS,

CHEZ J.-B. BAILLIÈRE,

LIBRAIRE DE L'ACADÉMIE ROYALE DE MÉDECINE ET DU COLLÈGE ROYAL DES CHIRURGIENS DE LONDRES,
RUE DE L'ÉCOLE DE MÉDECINE, N° 13 66.

A LONDRES, MÊME MAISON, 3 BEDFORD STREET, BEDFORD SQUARE.

A BRUXELLES, AU DÉPÔT DE LA LIBRAIRIE MÉDICALE FRANÇAISE.

1830.