ANATOMIA PATOLOGICA
Prospettive per il futuro

Andrea Rinnovati

- **Anatomia Patologica**

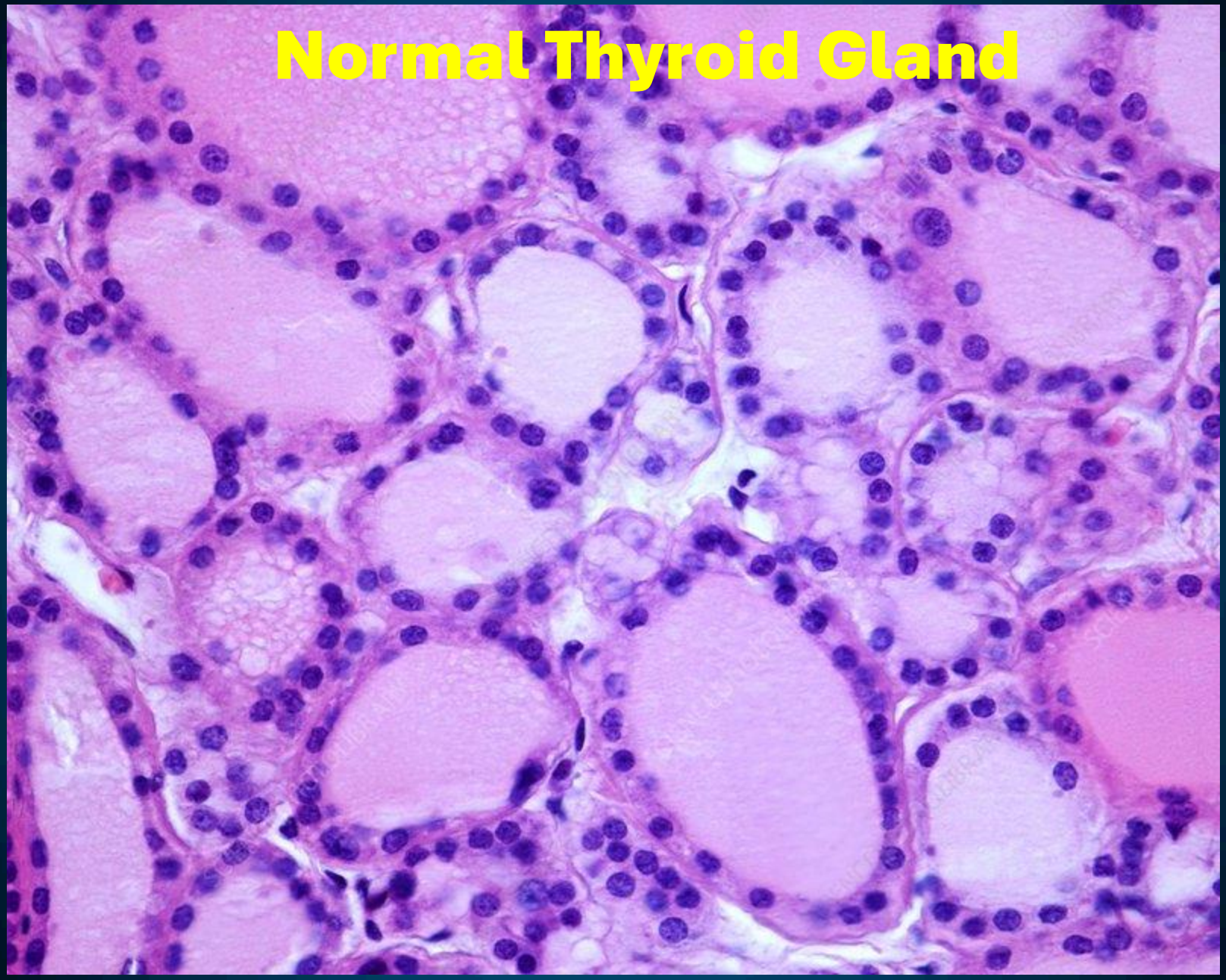
Aiuto indispensabile per tutti gi ambiti della medicina

La conoscenza del problema dall'esame dei tessuti

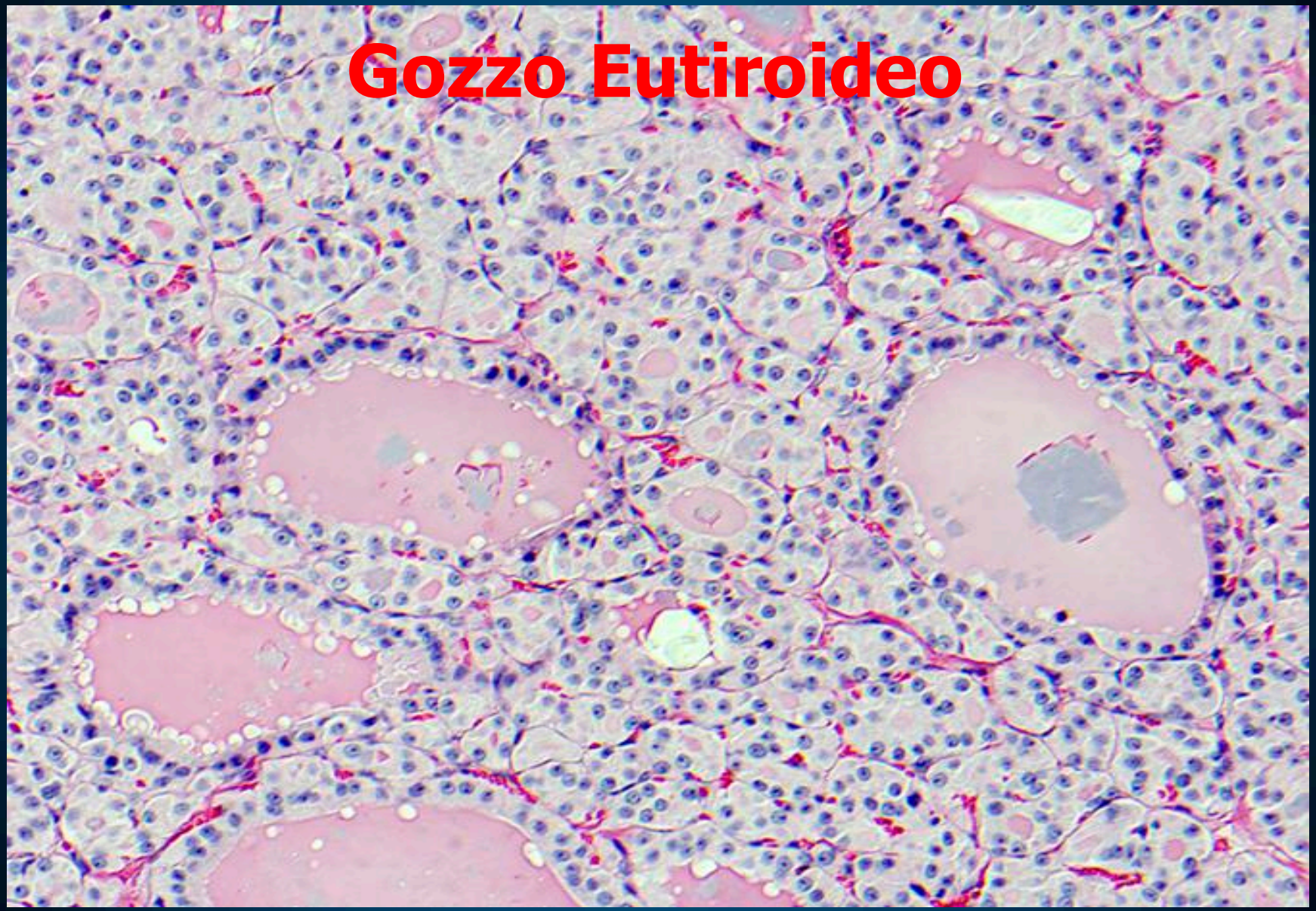
Indispensabile a: Chirurgo, Ematologo, internista, Gastroenterologo, dermatologo and so on

- **La diagnosi morfologica oggi**
- **Affinamento diagnostico con immunostochimica**
- **La biologia molecolare per la patologia**
- **The Artificial Intelligence for Surgical Pathology**
- **Our next future**

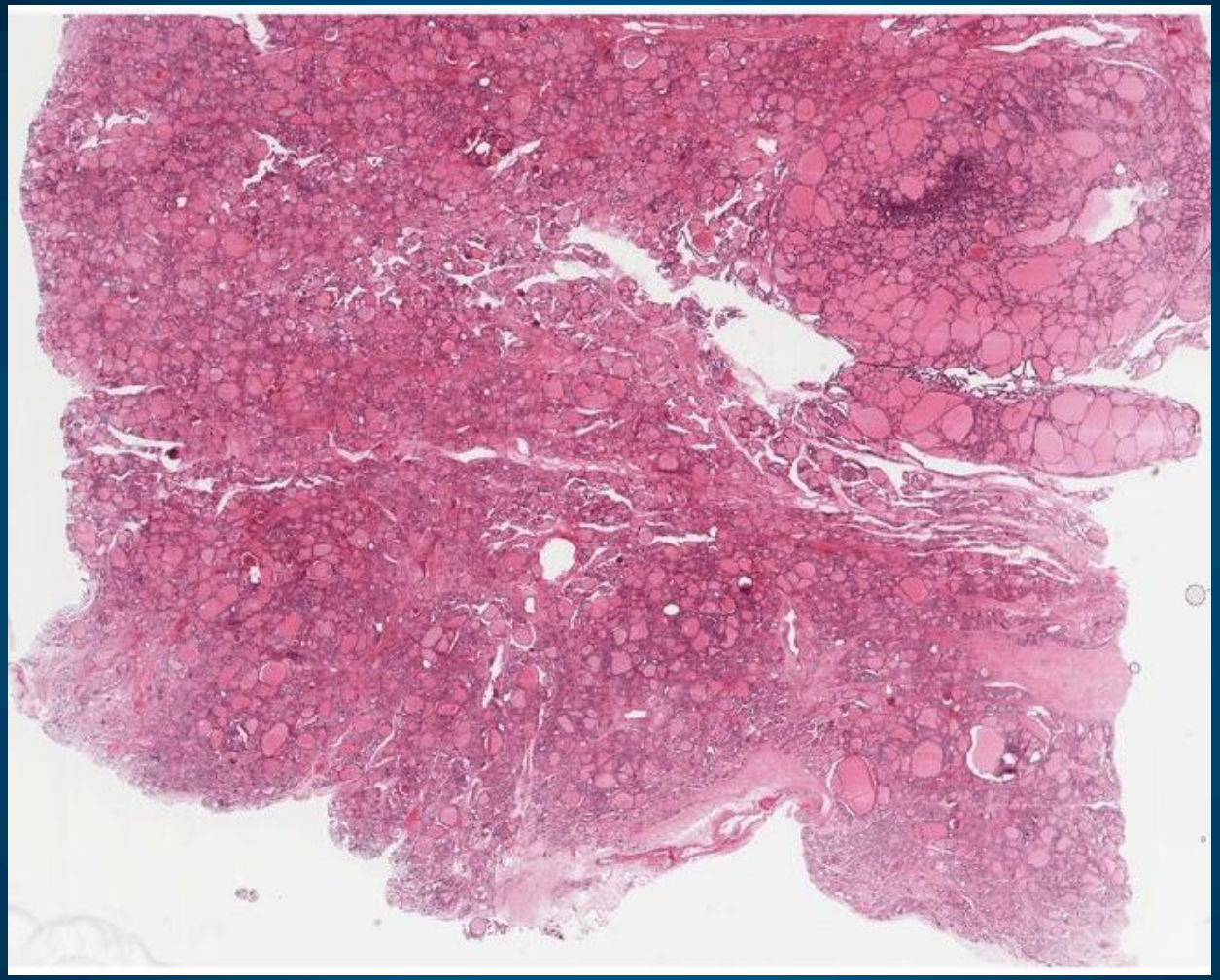
Normal Thyroid Gland



Gozzo Eutiroideo

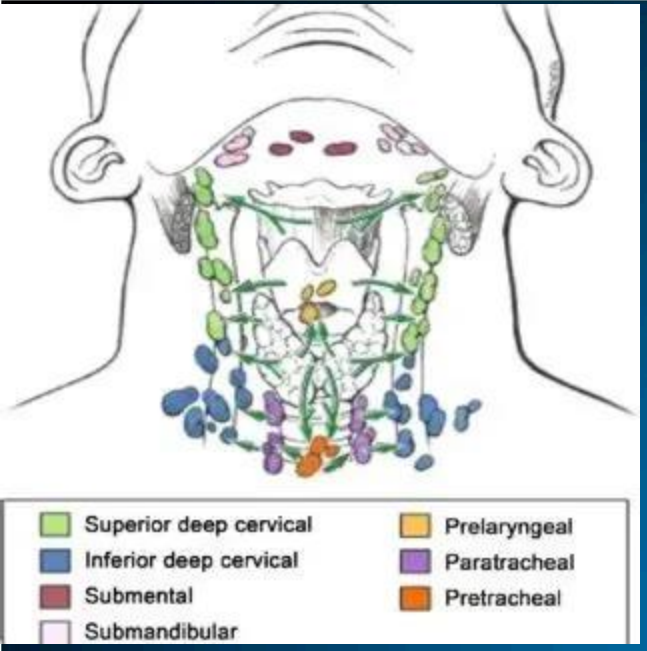


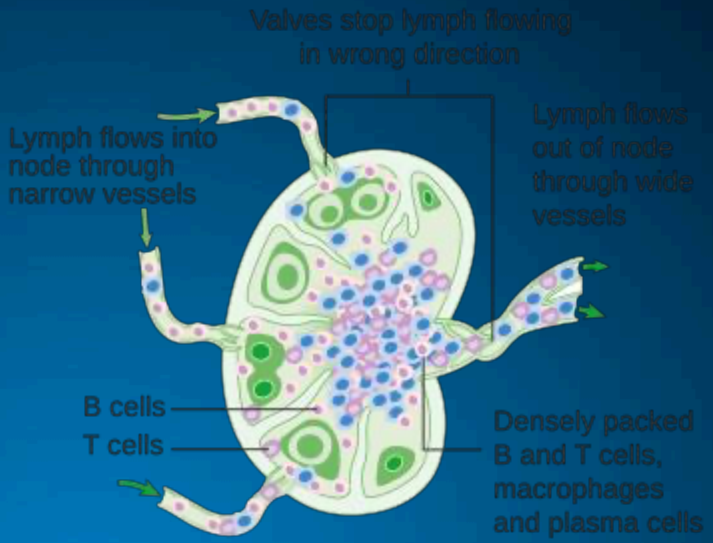
Thyroid Gland

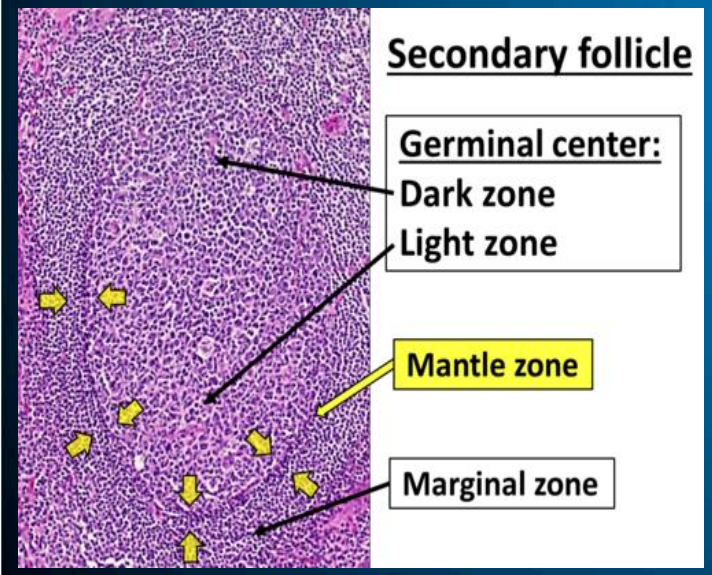


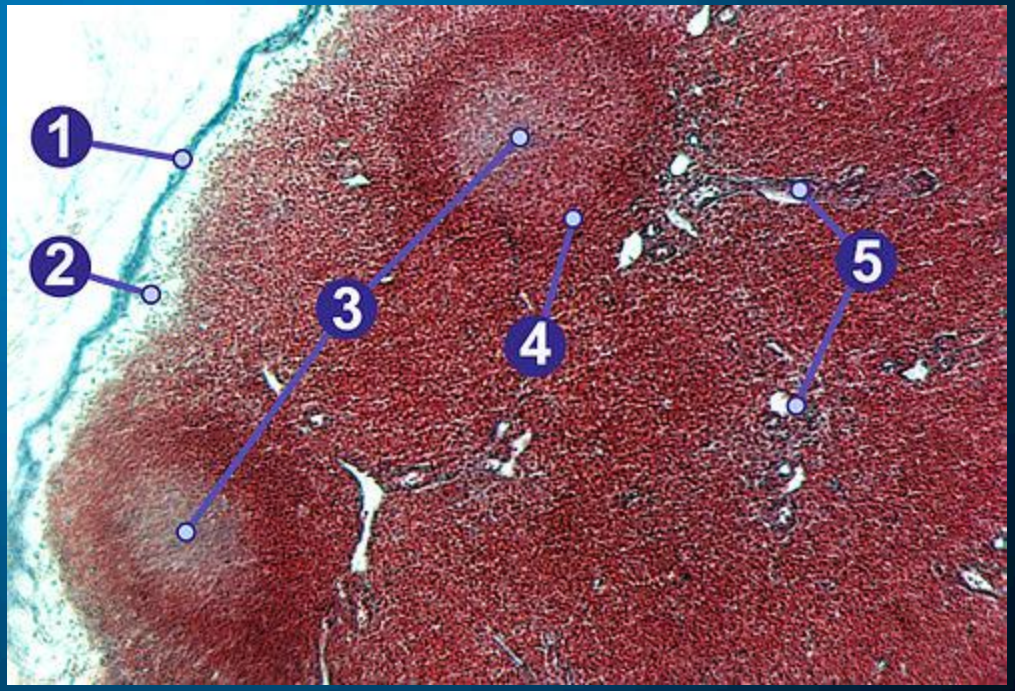
Immunoistochimica elemento base

- Consente l'affinamento diagnostico sui casi complessi
- Riconoscimento di tessuti eterologhi in ambito estraneo
- i.e linfonodo da altra patologia rispetto alla principale
- Incremento delle probabilità di accuratezza diagnostica
- Prospettive futura della immunoistochimica


Superior deep cervical
Inferior deep cervical
Submental
Submandibular
Prelaryngeal
Paratracheal
Pretracheal


Valves stop lymph flowing in wrong direction
Lymph flows into node through narrow vessels
Lymph flows out of node through wide vessels
B cells
T cells
Densely packed B and T cells, macrophages and plasma cells


Secondary follicle
Germinal center:
Dark zone
Light zone
Mantle zone
Marginal zone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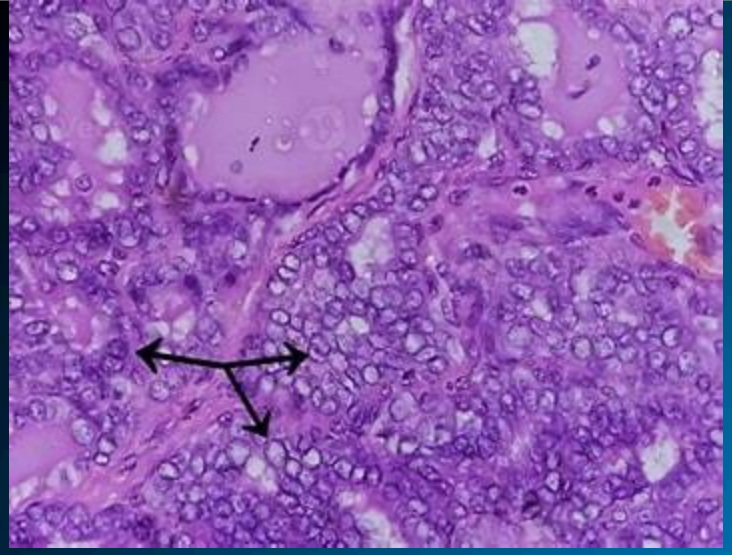
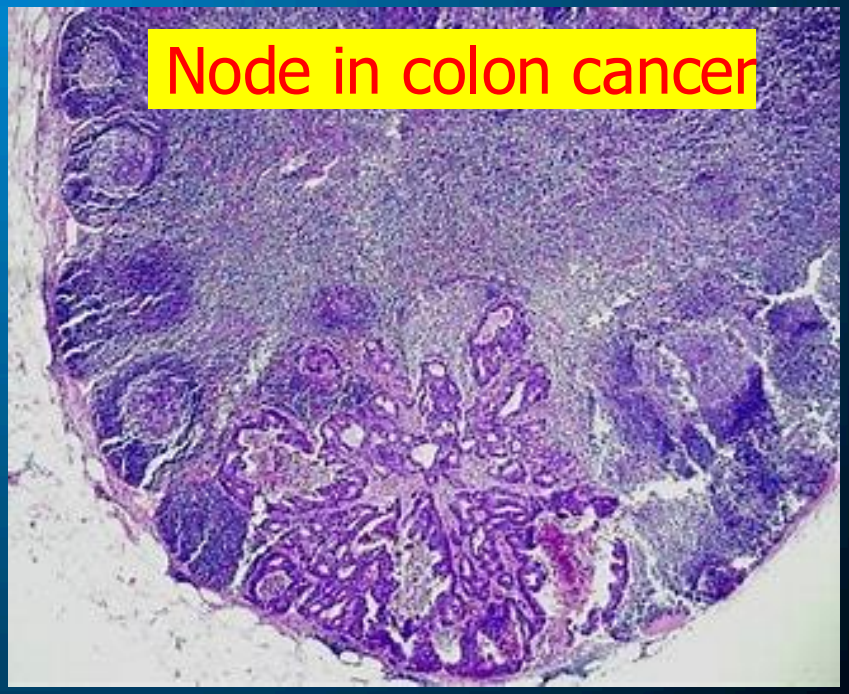
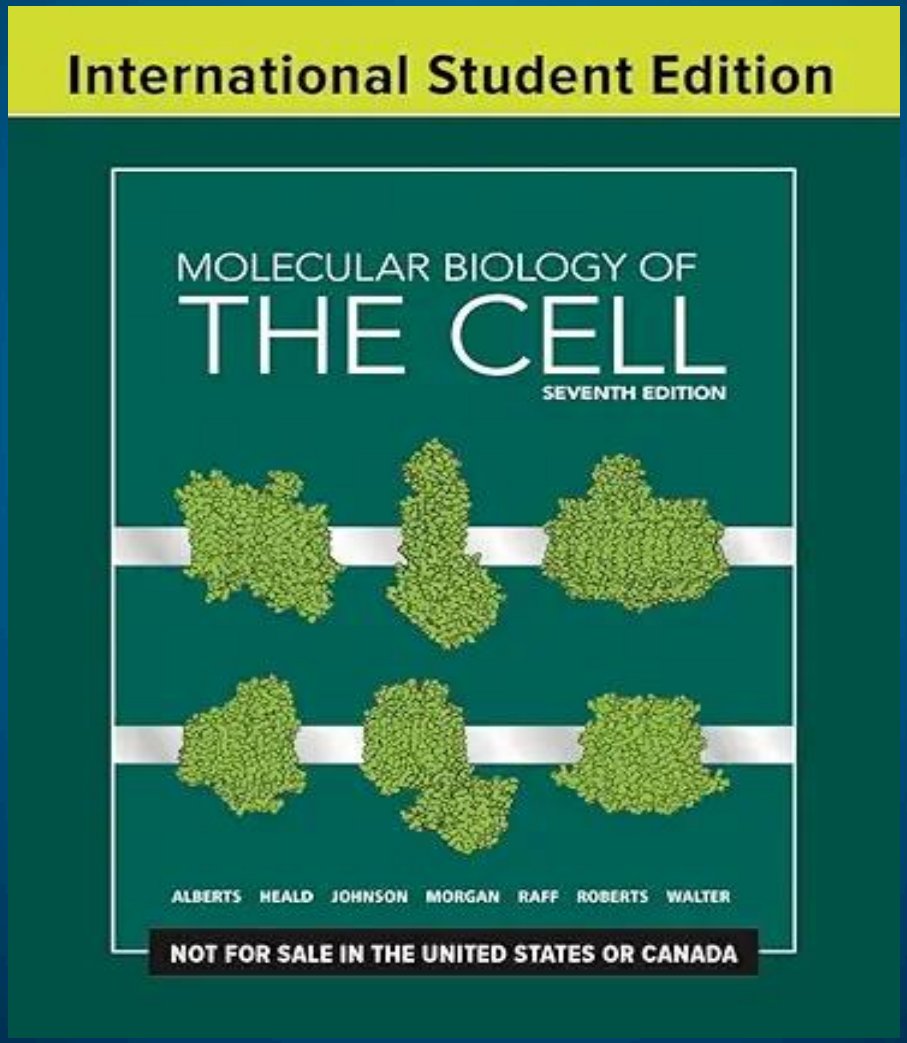


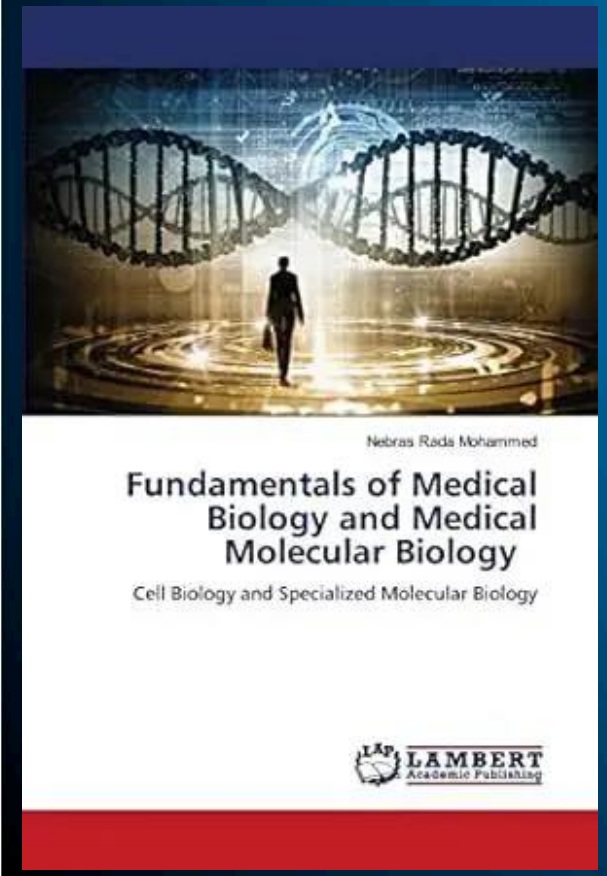
Metastatic Papillary carcinoma

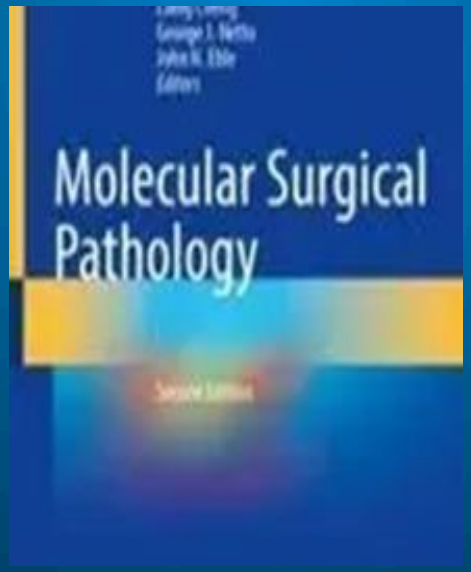


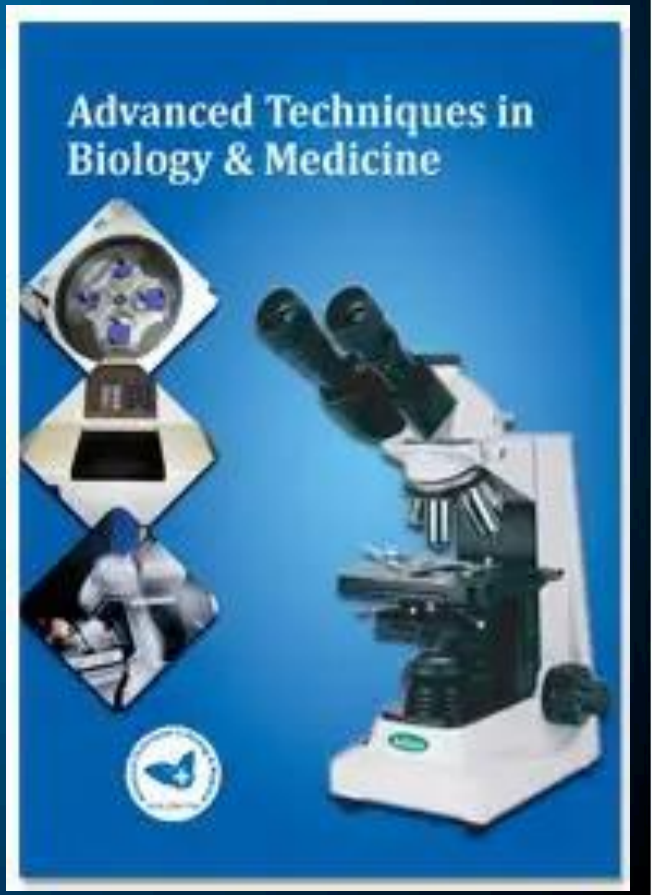
Molecular Biology Nowadays



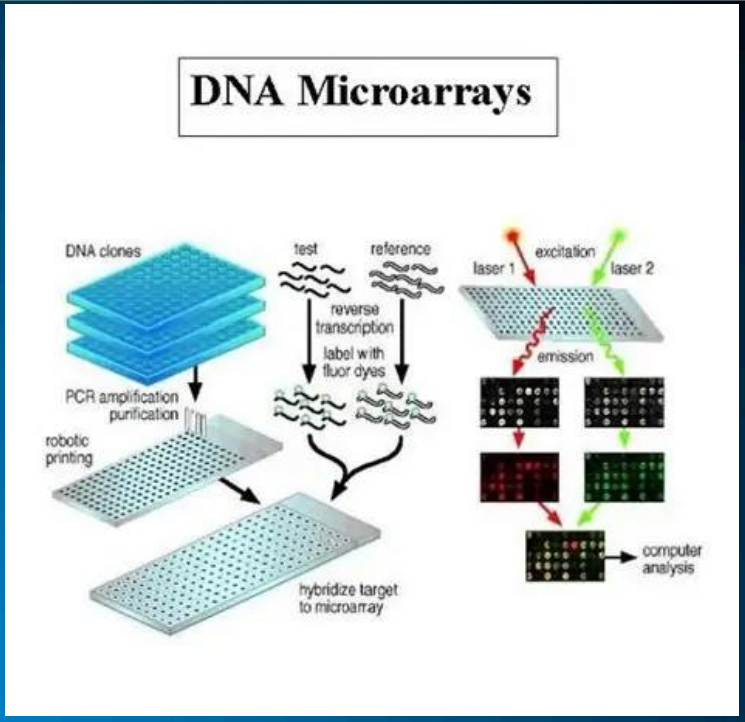
Molecular biology is the study of biological processes at the molecular level, focusing on the interactions and functions of various molecules that make up living organisms. These molecules include DNA, RNA, proteins, and various small molecules like metabolites and ions.



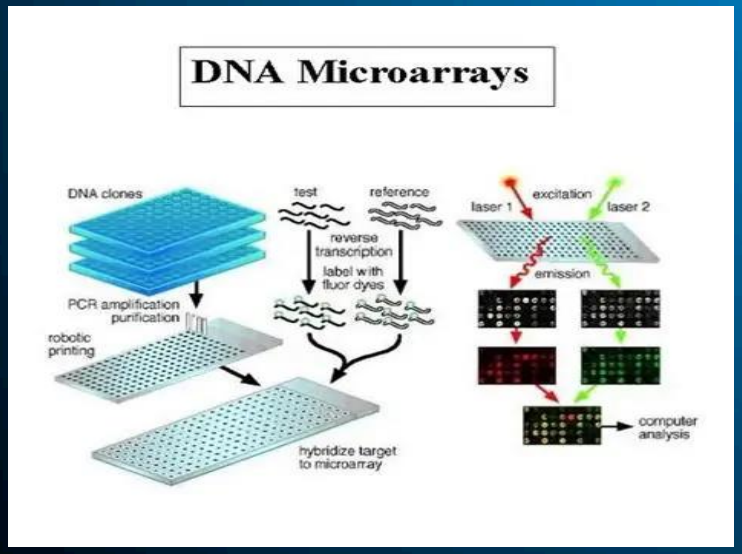


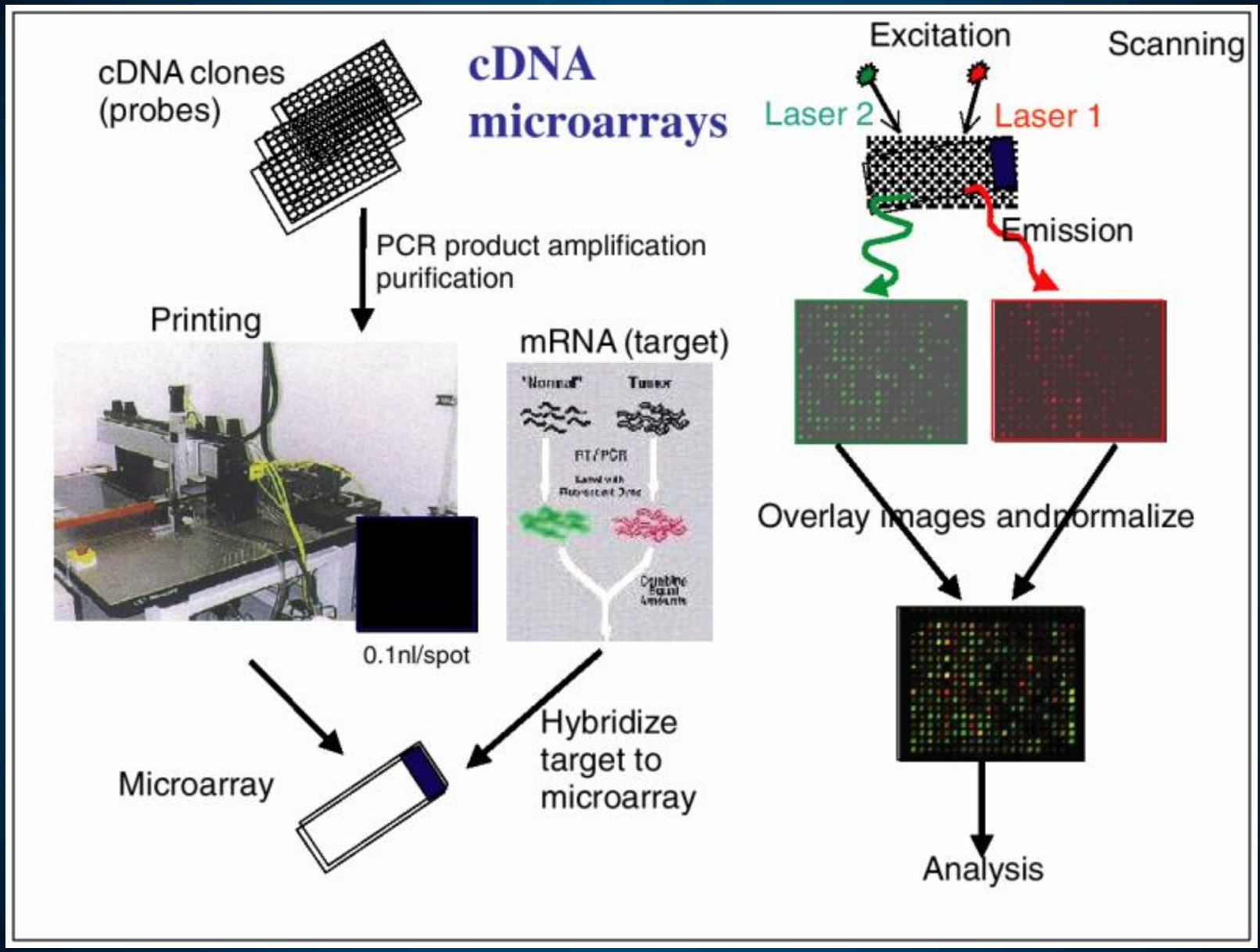


Molecular pathology is a field that merges the study of disease with molecular biology techniques. It involves the use of cutting-edge technologies, such as genomics, transcriptomics, proteomics, and metabolomics, to understand the molecular underpinnings of diseases.



With the rapid advancement of genomics, DNA microarray technology has become an essential tool in genetic research. This technology enables high-throughput analysis of a large number of genes by integrating numerous DNA probes onto a small chip.




cDNA clones
(probes)
cDNA
microarrays
PCR product amplification
purification
Printing
mRNA (target)
0.1nl/spot
Microarray
Hybridize
target to
microarray
Excitation
Scanning
Laser 2
Laser 1
Emission
Overlay images and normalize
Analysis

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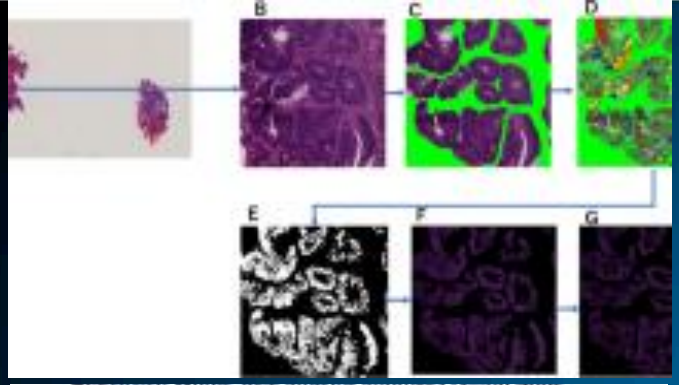
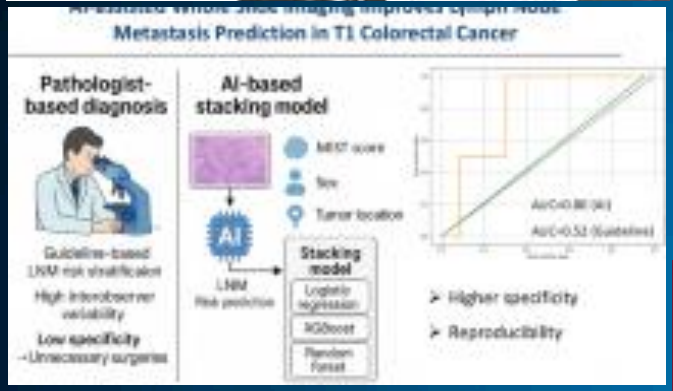
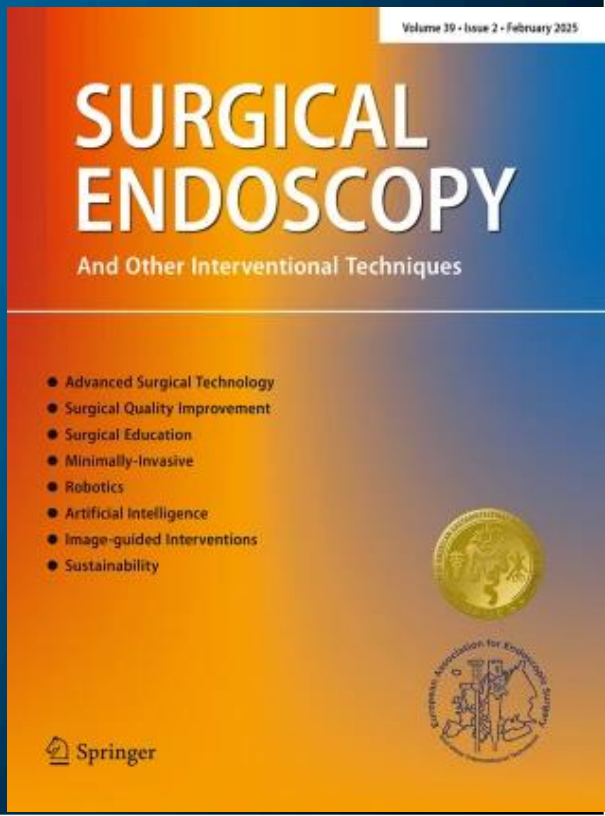
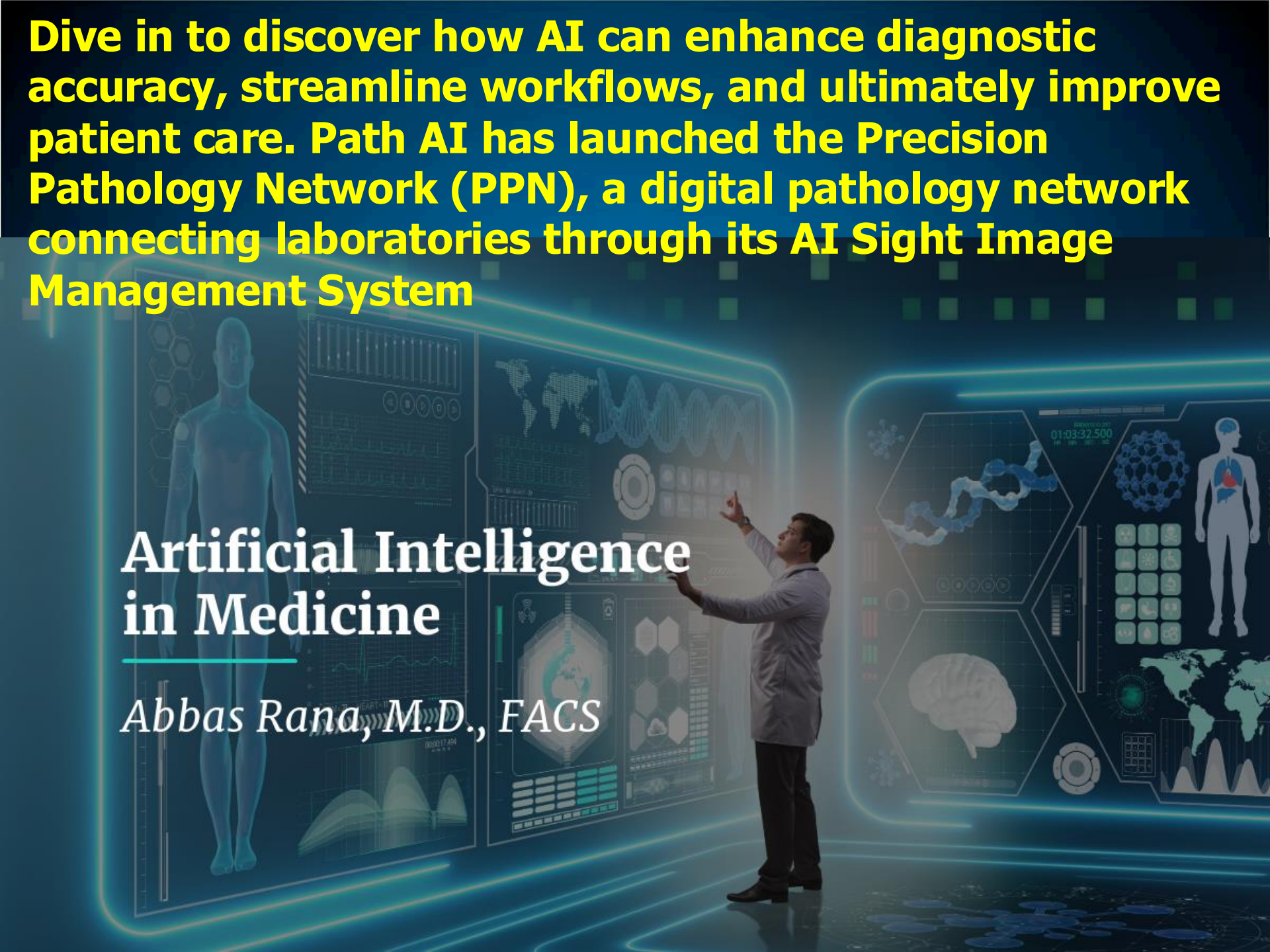


A novel artificial intelligence approach to the prediction of lymph node metastasis using whole-slide imaging in patients with T1 colorectal cancer





Dive in to discover how AI can enhance diagnostic accuracy, streamline workflows, and ultimately improve patient care. Path AI has launched the Precision Pathology Network (PPN), a digital pathology network connecting laboratories through its AI Sight Image Management System

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Grazie per l’attenzione