

Basic Histopathological Diagnosis (MLS-HIST-421)
Histopathology and cytology department
Pathology department

Lec 25

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Lung Cancer

INTRODUCTION TO ENDOCRINE SYSTEM PATHOLOGY

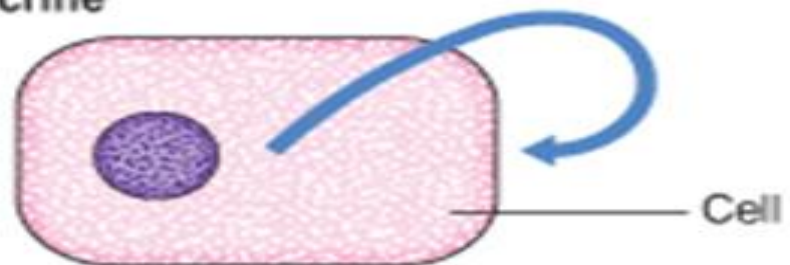
Objectives :

- By the end of this lecture you will be able to :
- define endocrine system.
- Classify the endocrine diseases.
- List the pathological basis of each diseases.

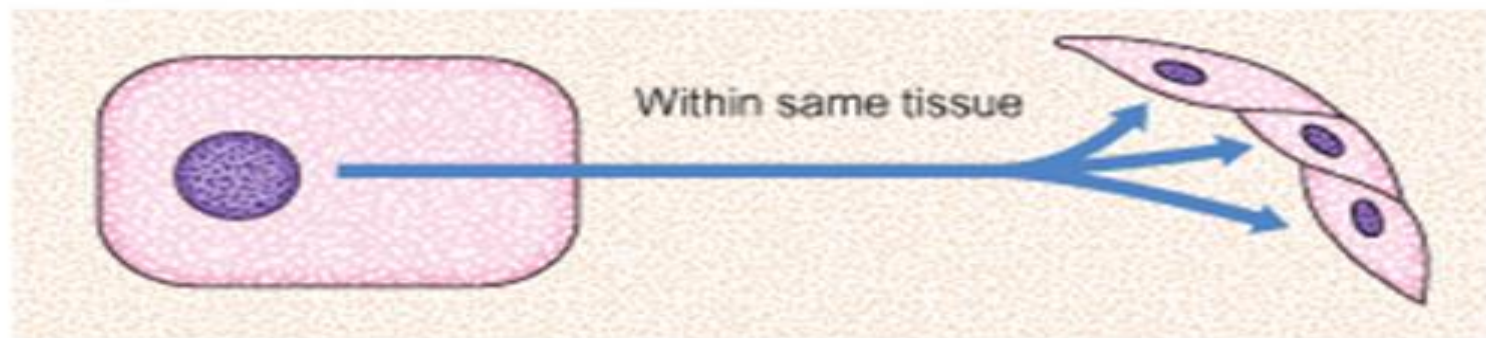
endocrine system

- highly integrated and widely distributed group of organs
- autocrine, paracrine, or endocrine?
- *hormones*, act on target cells distant from their site of synthesis.
- endocrine hormone typically is carried by the blood
- *feedback inhibition?*

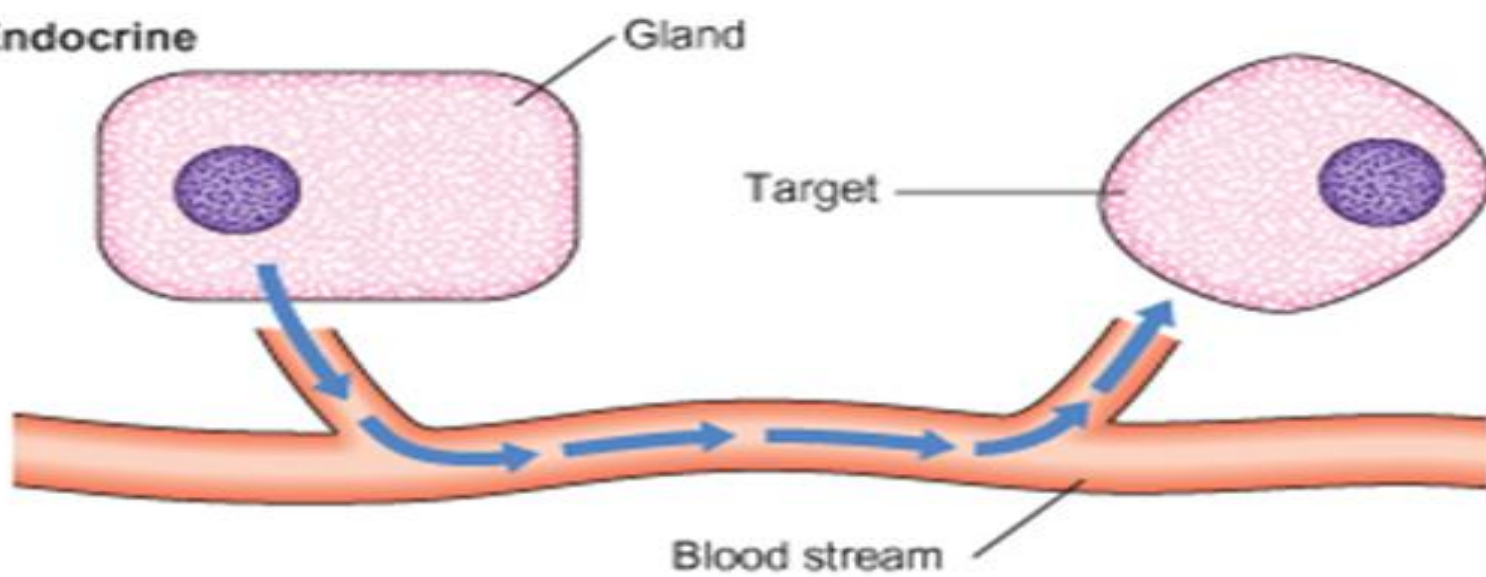
Autocrine



Paracrine



Endocrine



The major disorders of an endocrine gland are

1. hyper function
2. hypofunction
3. benign and malignant tumors, which themselves may cause disordered function.

Sign or symptom	Pathological basis
Signs or symptoms of hormone excess (hyperfunction)	Endocrine gland hyperplasia caused by increased trophic stimulus to secretion
	Functioning neoplasm of endocrine gland
Signs or symptoms of hormone deficiency (hypofunction)	Endocrine gland atrophy due to loss of trophic stimulus to secretion
	Destruction of endocrine gland by inflammation, ischaemia or non-functioning tumour
Diffuse enlargement of gland	Inflammatory cell infiltration Hyperplasia
Nodular enlargement of gland	Tumour (benign or malignant)

Some organ-specific features

- headache, bitemporal hemianopia

Pituitary tumour

- anxiety, sweating, tremor

Increased thyroid hormone secretion due to hyperplasia or neoplasia of gland

- exophthalmos

Autoimmune involvement of retrobulbar connective tissue in Graves' disease

- hypertension

Adrenocortical hyperplasia or neoplasia

Adrenal medullary neoplasm
(phaeochromocytoma)

- excessive growth (features vary according to whether prepubertal or postpubertal)

Growth-hormone secreting pituitary tumour

- glycosuria

Absolute or relative deficiency of insulin (diabetes mellitus)