ANAND'S ATLAS OF PATHOLOGY

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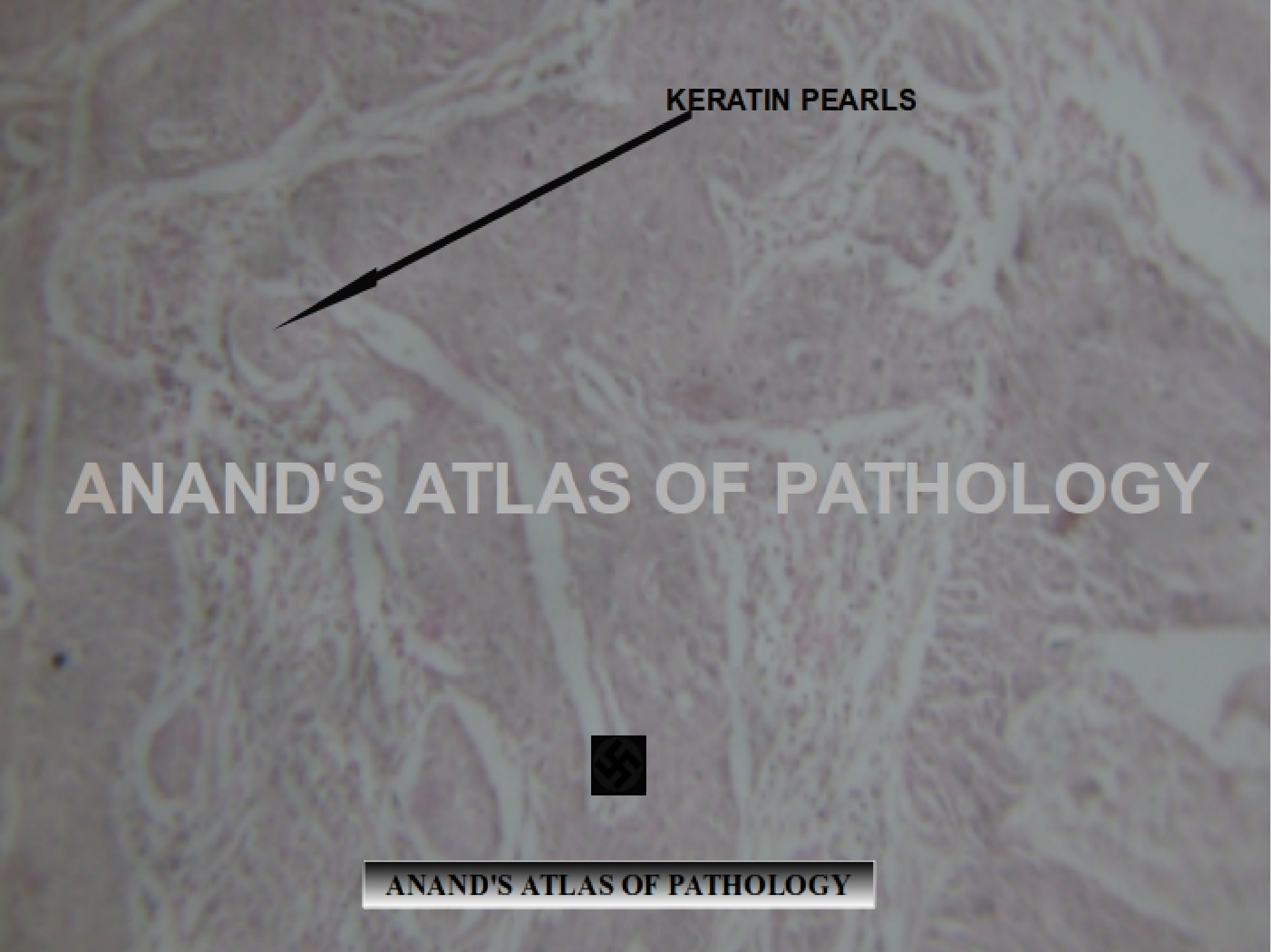

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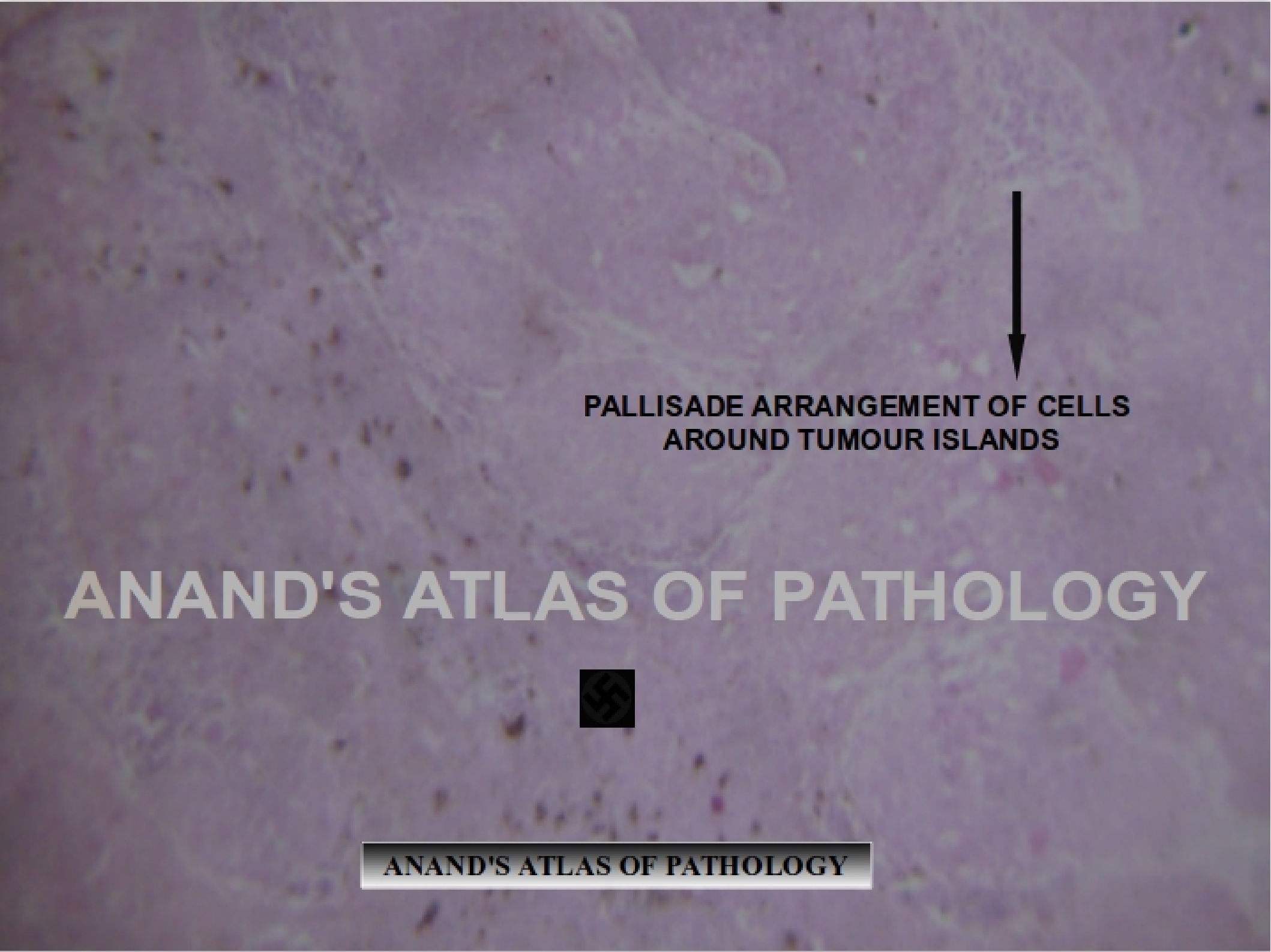
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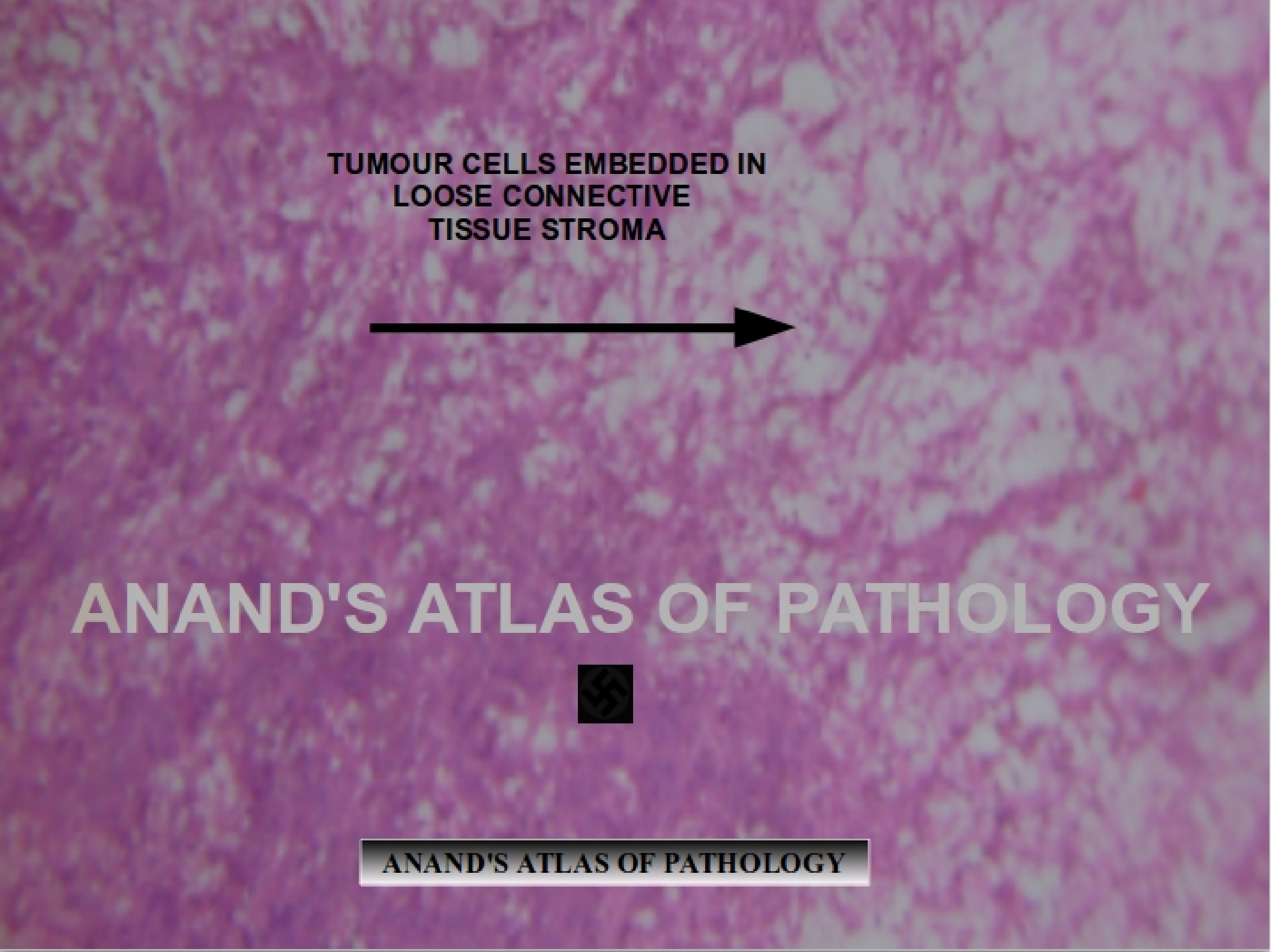
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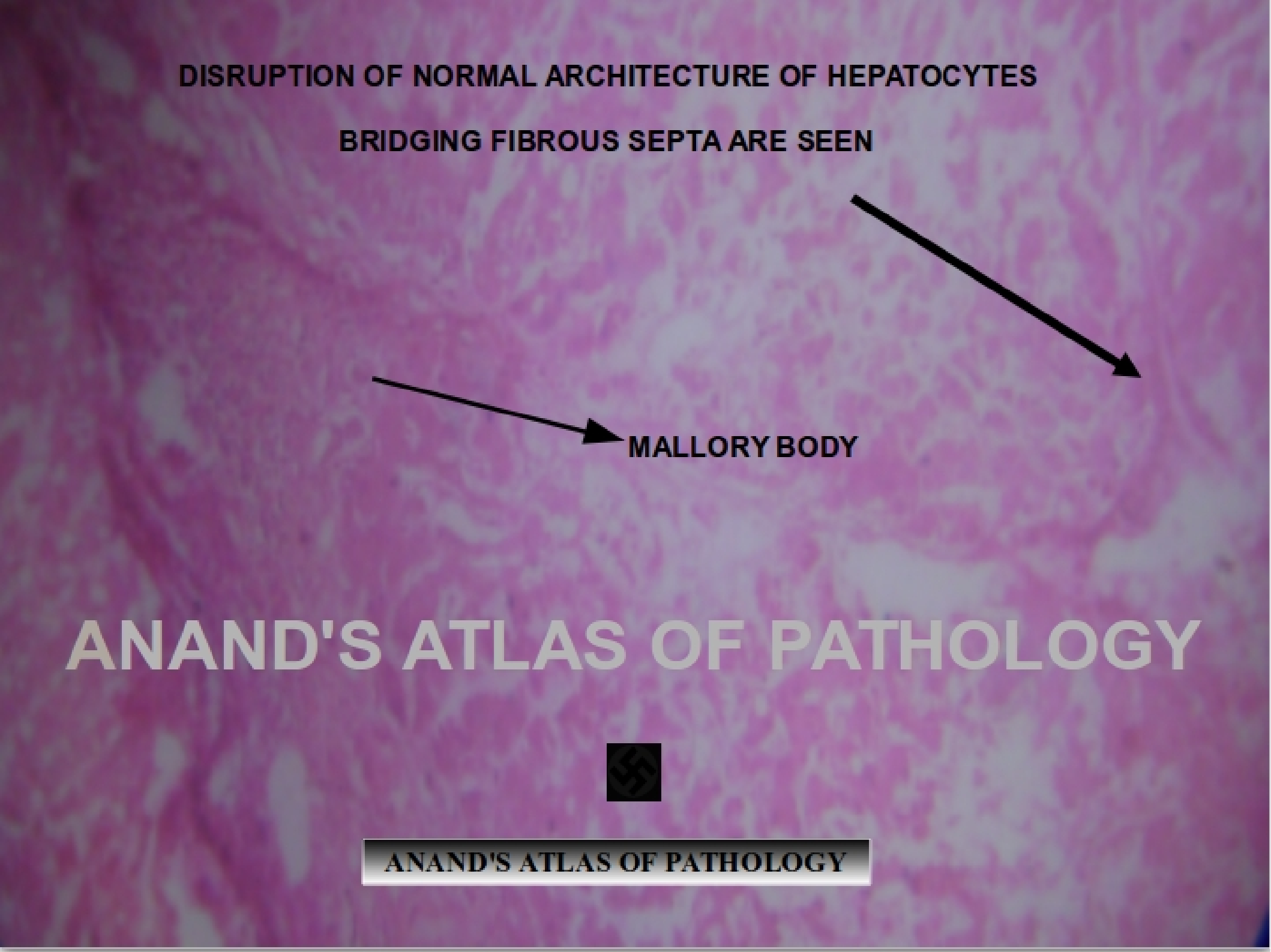
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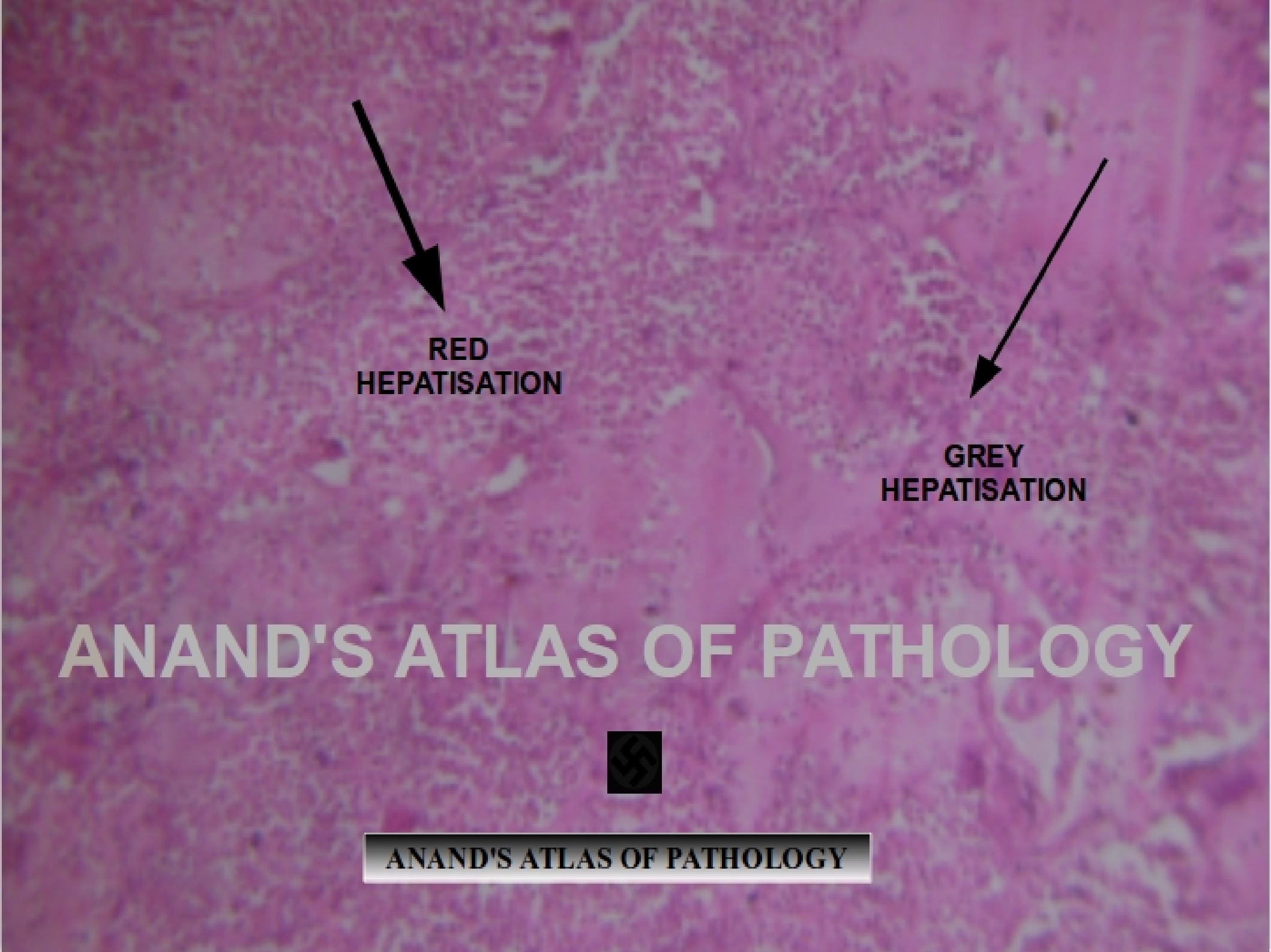
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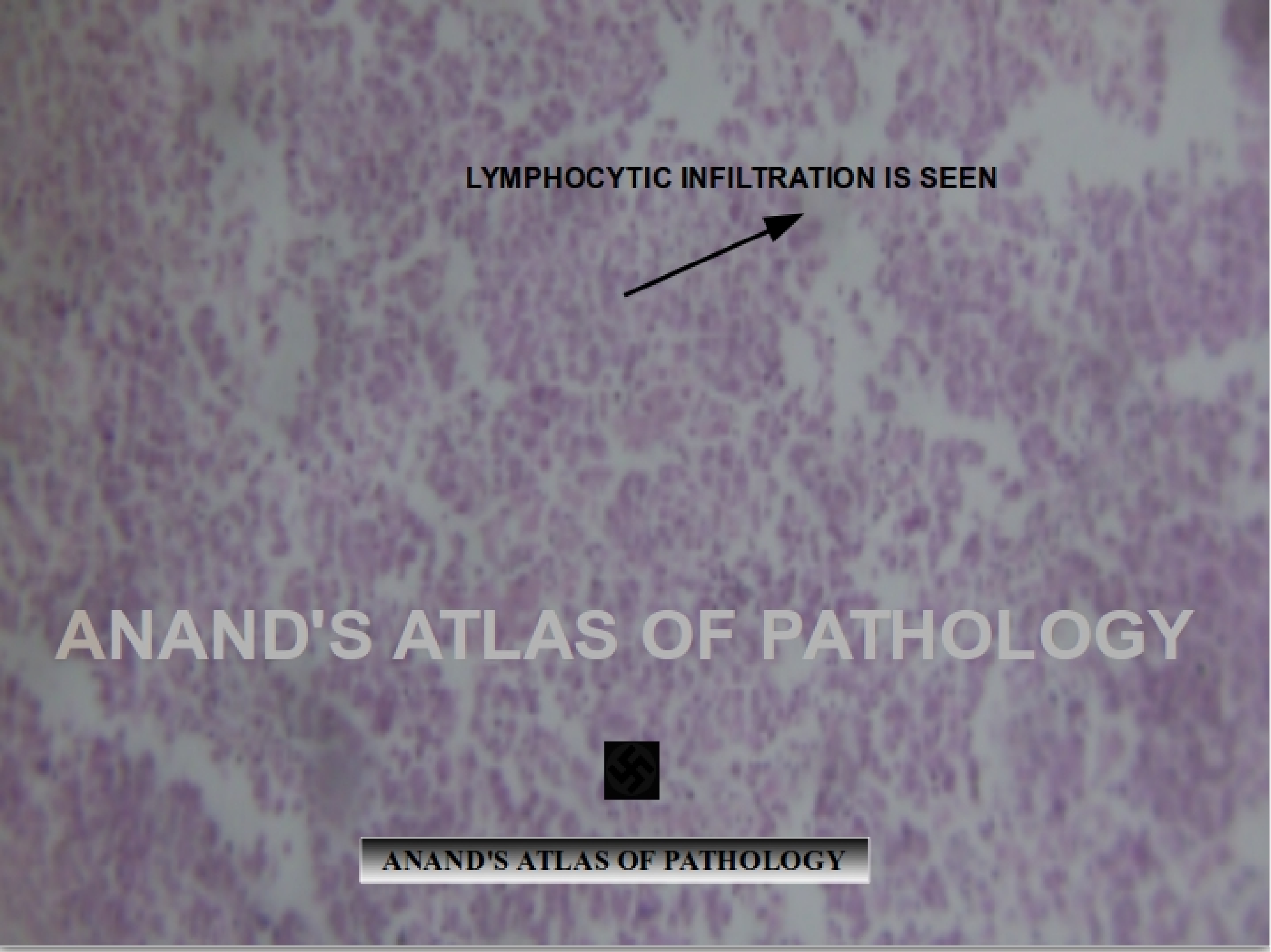
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- IT IS A GERM CELL TUMOUR
- CRYPTORCHIDISM IS A COMMONLY ASSOCIATED CAUSE
- IT IS COMPOSED OF LARGE CELLS WITH DISTINCT CELL BORDERS, CLEAR GLYCOGEN RICH CYTOPLASM
- PRESENCE OF ROUND NUCLEI WITH CONSPICUOUS NUCLEOLI
- CELLS ARE ARRANGED IN SMALL LOBULES WITH INTERVENING FIBROUS SEPTA
- LYMPHOCYTIC INFILTRATION IS SEEN
- GRANULOMATOUS INFLAMMATORY REACTION CAN BE PRESENT

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OSTEOCLASTOMA – GIANT CELL TUMOUR

PRESENTS AS A CYSTIC BONY LESION

USUALLY AROUND THE 2ND AND 3RD DECADE

LONG BONES ARE AFFECTED

LESIONS ARE PRESENT AROUND THE EPIPHYSIS

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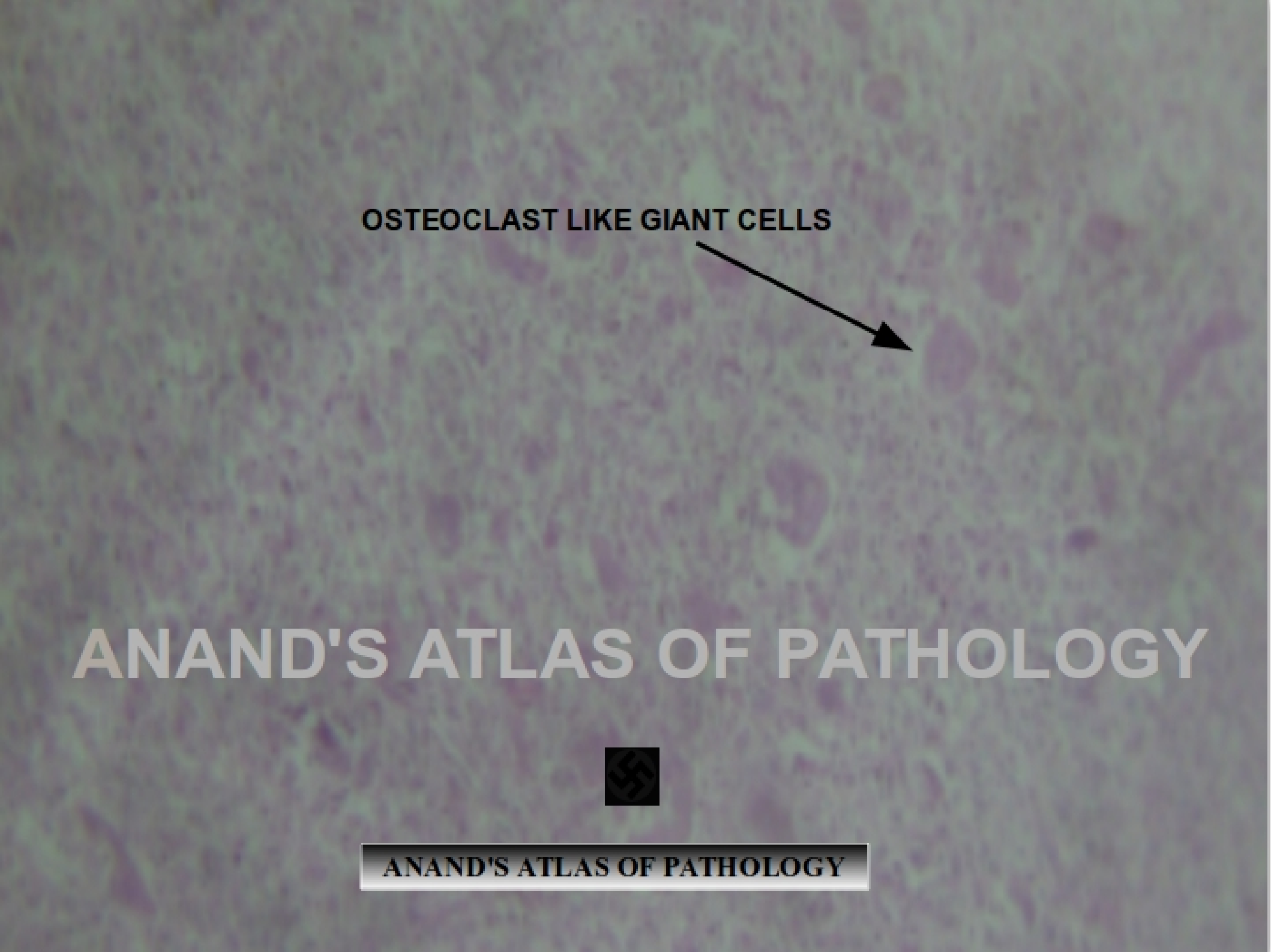

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OSTEOCLASTOMA – GIANT CELL TUMOUR

ALSO KNOWN AS GIANT CELL TUMOUR OF BONE

THE NEOPLASM CONTAINS LARGE NUMBERS OF OSTEOCLAST LIKE GIANT CELLS ADMIXED WITH MONONUCLEAR CELLS

USUALLY ARISES FROM EPIPHYSES OF LONG BONES

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OSTEOCLASTOMA – GIANT CELL TUMOUR

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RENAL CELL CARCINOMA

PATIENT PRESENTS WITH MASS
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OCCURS AFTER THE 4TH DECADE

RENAL BIOPSY IS DONE FOR
CONFIRMATION OF DIAGNOSIS

NEPHRECTOMY IS DONE


VACUOLATED TUMOUR CELLS
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RENAL CELL CARCINOMA

THESE TUMOURS ARE DERIVED FROM RENAL TUBULAR EPITHELIUM

HENCE THEY PREDOMINANTLY AFFECT THE CORTEX OF THE KIDNEY

THREE TYPES - CLEAR CELL CARCINOMA, PAPILLARY RENAL CELL CARCINOMA AND CHROMOPHOBE RENAL CARCINOMA

CLEAR CELL CARCINOMA IS THE MOST COMMONEST TYPE

RENAL CELL CARCINOMA

TUMOR CELLS APPEAR VACUOLATED DUE TO PRESENCE OF LIPID MATERIAL AND CAN BE DEMARCATED ONLY BY THEIR CELL MEMBRANE

THEIR NUCLEI ARE SMALL AND ROUND

ALSO SEEN ARE GRANULAR CELLS RESEMBLING TUBULAR EPITHELIUM WHICH HAVE SMALL ROUND REGULAR NUCLEI ENCLOSED WITHIN GRANULAR PINK CYTOPLASM

CONNECTIVE TISSUE STROMA IS USUALLY SCANT BUT HIGHLY VASCULARISED

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CHRONIC PYELONEPHRITIS

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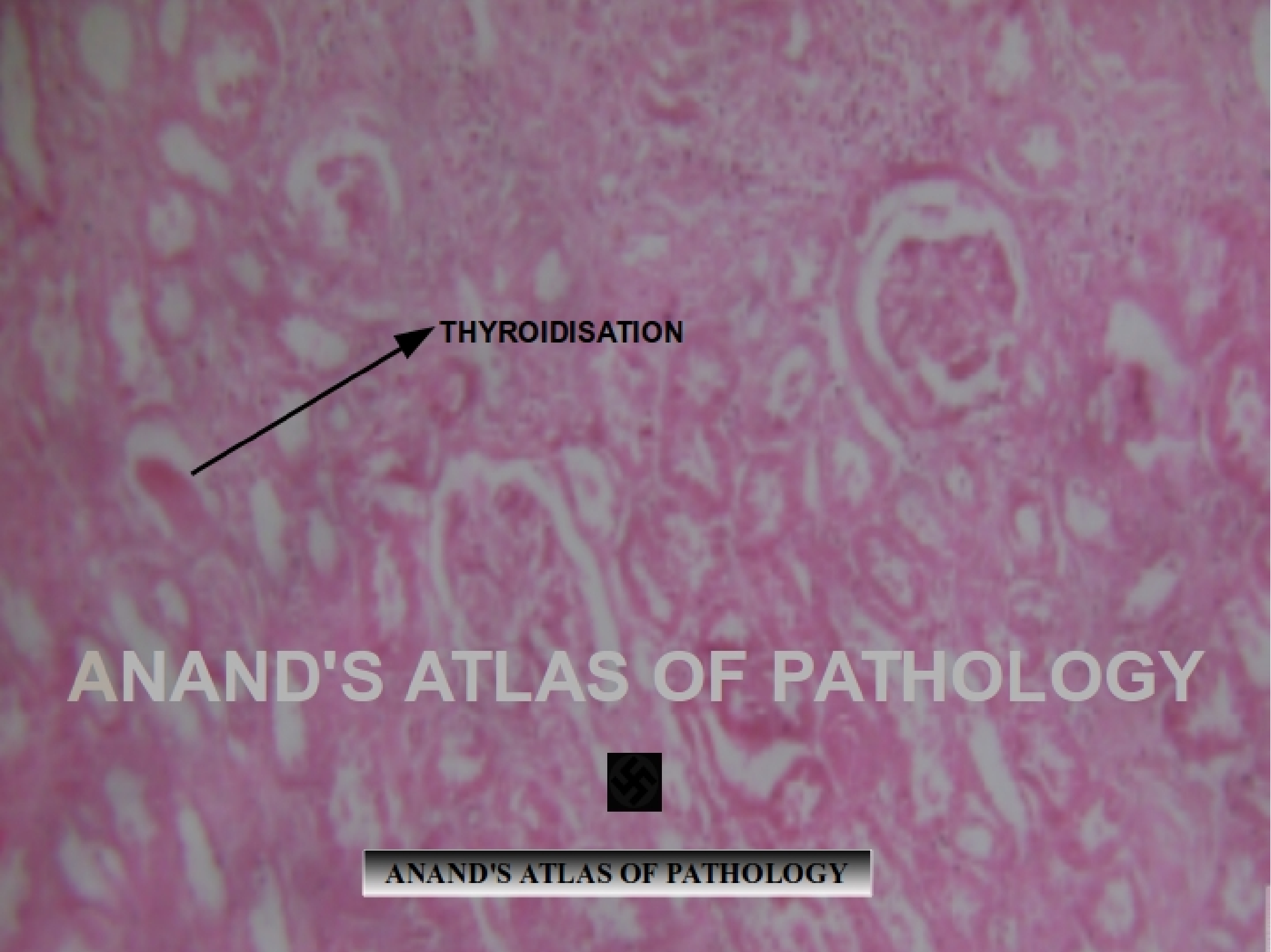
PYURIA IS A PRESENTING FEATURE

ULTRASOUND AND RENAL BIOPSY
LEADS TO CONFIRMATION
OF DIAGNOSIS

NEPHRECTOMY IS DONE IN EXTREME CASES


THYROIDISATION
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CHRONIC PYELONEPHRITIS

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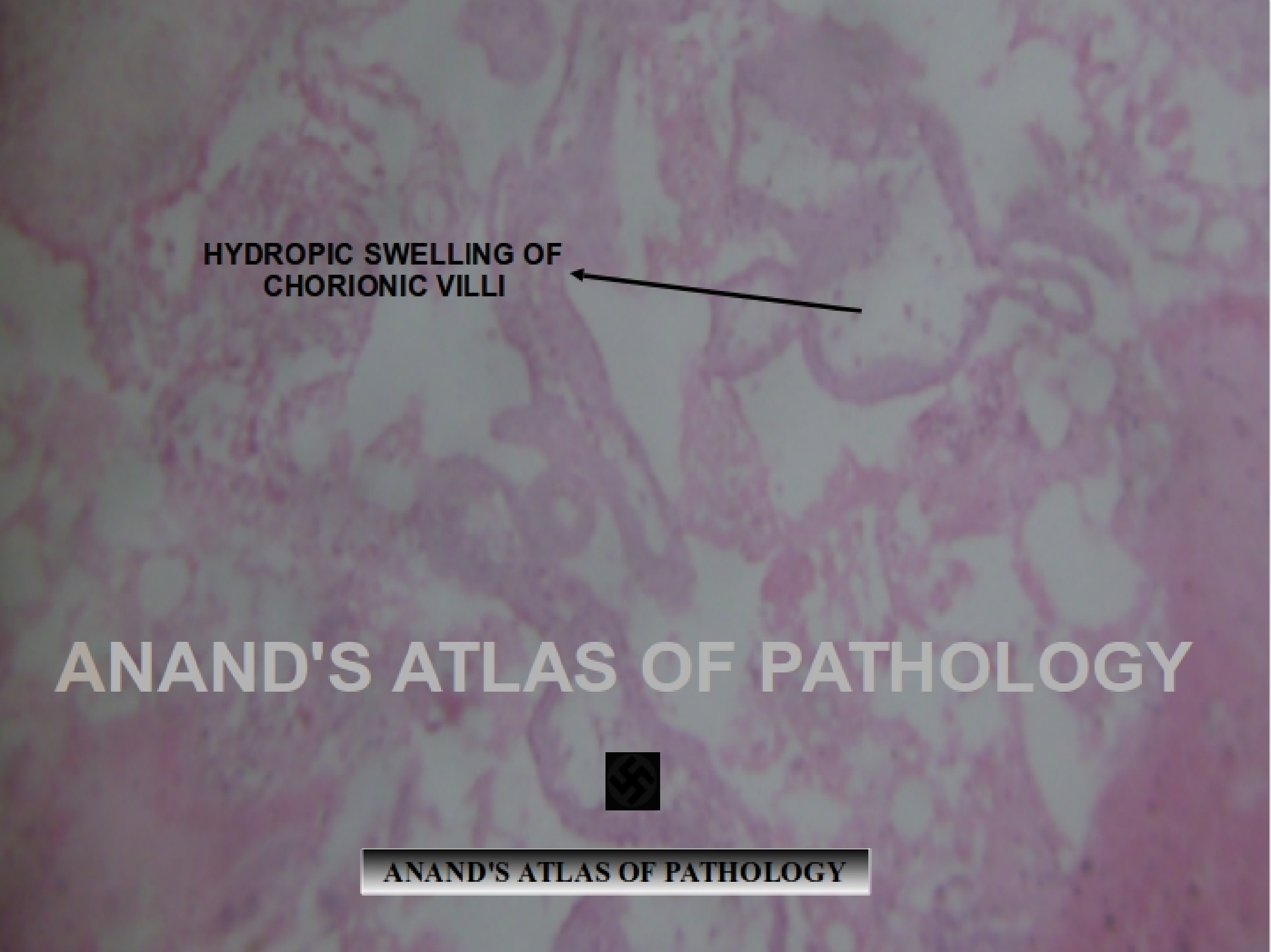
FEMALE PATIENT USUALLY PRESENTS WITH AMENORRHOEA AND BLEEDING PER VAGINUM

GROSS APPEARANCE RESEMBLES GRAPE LIKE MASSES

SERUM HCG LEVELS ARE ELEVATED

DILATATION AND CURETTAGE IS DONE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VESICULAR MOLE

IT IS A GESTATIONAL TROPHOBLASTIC DISEASE

ALSO KNOWN AS **HYDATIDIFORM MOLE**

IT CAN BE COMPLETE OR PARTIAL

CHARACTERISED BY VOLUMINOUS MASS OF SWOLLEN, CYSTICALLY DILATED CHORIONIC VILLI APPEARING LIKE A **BUNCH OF GRAPES**

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BIOPSY IS CONFIRMATORY

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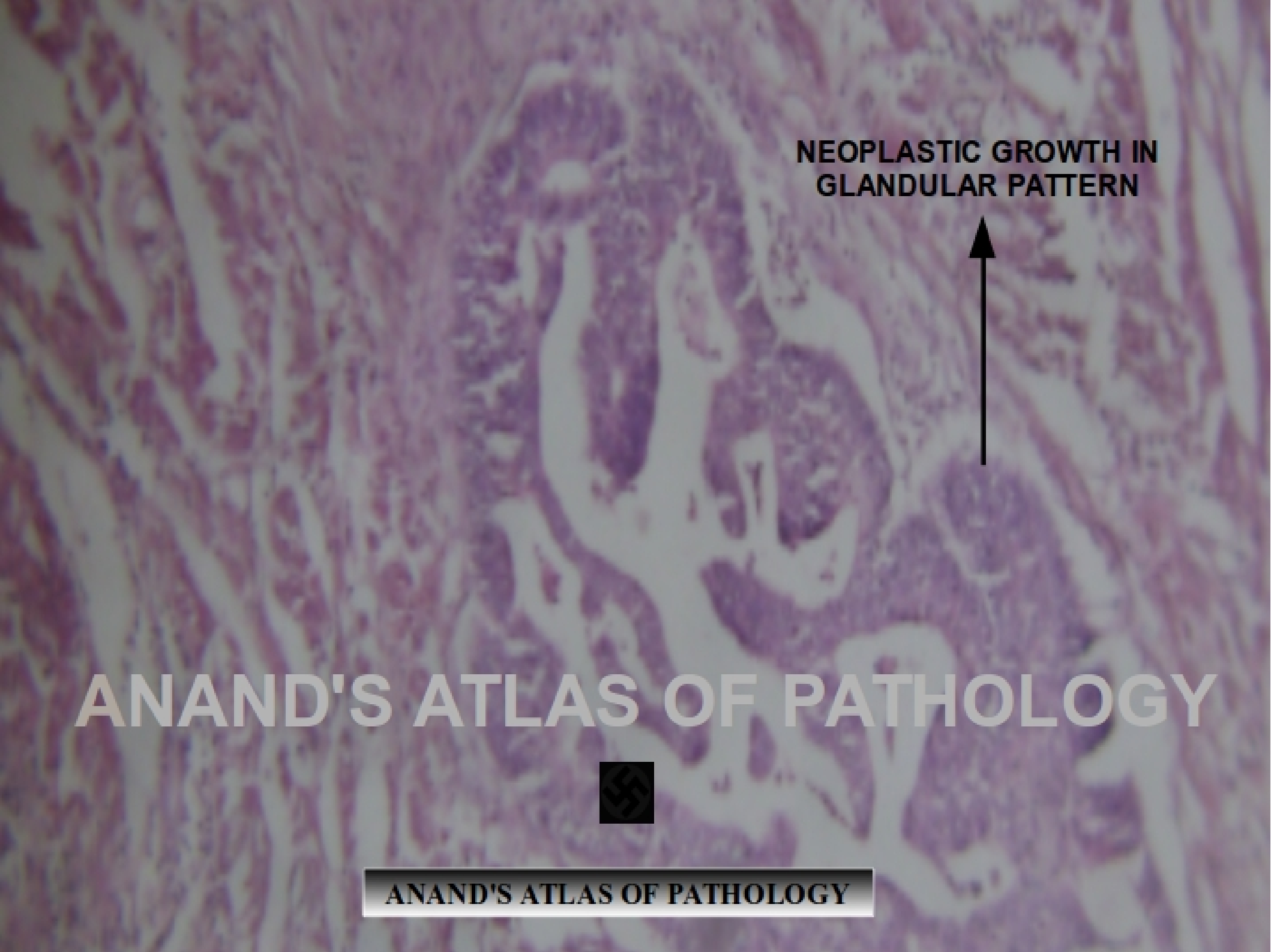
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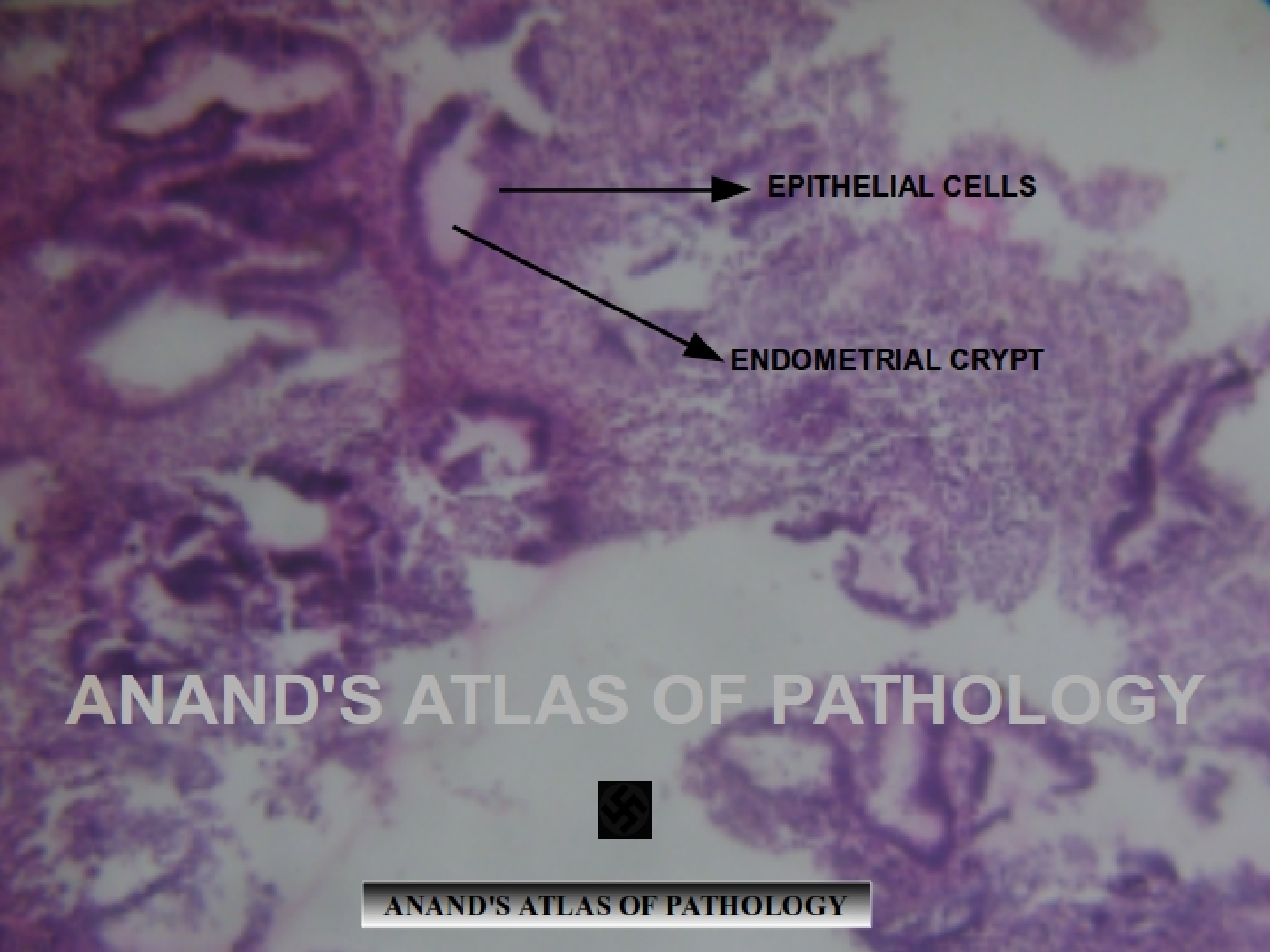

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PROLIFERATIVE ENDOMETRIUM

IT IS THE OESTROGEN PHASE OF THE OVARIAN CYCLE

AFTER MENSTRUATION ONLY A THIN LAYER OF ENDOMETRIAL STROMA LIES AT THE BASE OF ORIGINAL ENDOMETRIUM

ONLY EPITHELIAL CELLS ARE LEFT IN THE REMAINING DEEP PORTIONS OF GLANDS AND CRYPTS OF ENDOMETRIUM

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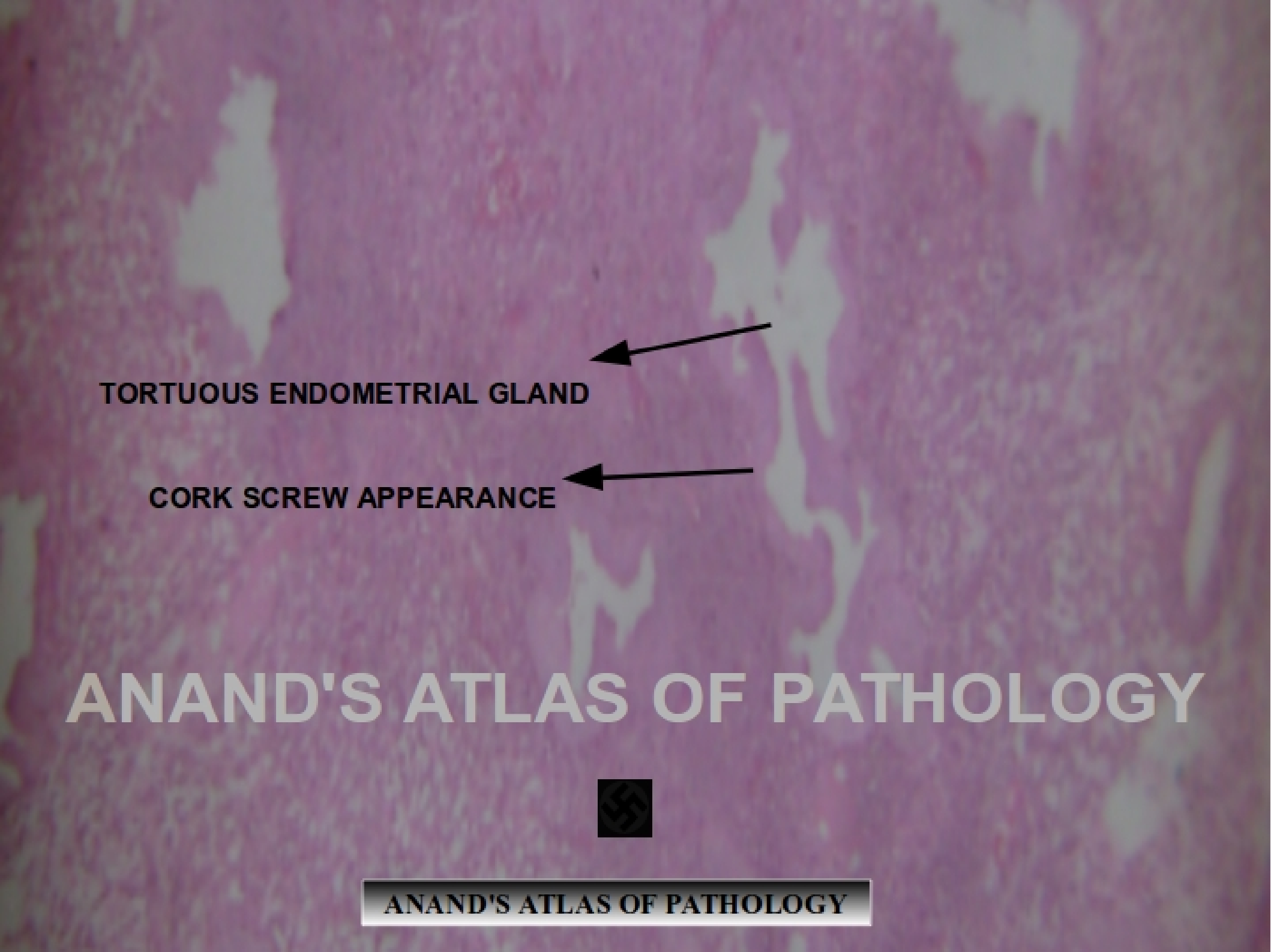
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SECRETORY ENDOMETRIUM

IT IS THE **PROGESTERONE** PHASE OF THE OVARIAN CYCLE

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BENIGN HYPERPLASIA OF PROSTATE

PATIENT IS USUALLY AN ELDERLY MALE IN THE 6TH DECADE OF LIFE

PRESENTING COMPLAINTS INCLUDE FREQUENT MICTURITION, URGENCY, DRIBBLING DROPLETS OF URINE AND PAIN

PROSTATECTOMY IS DONE

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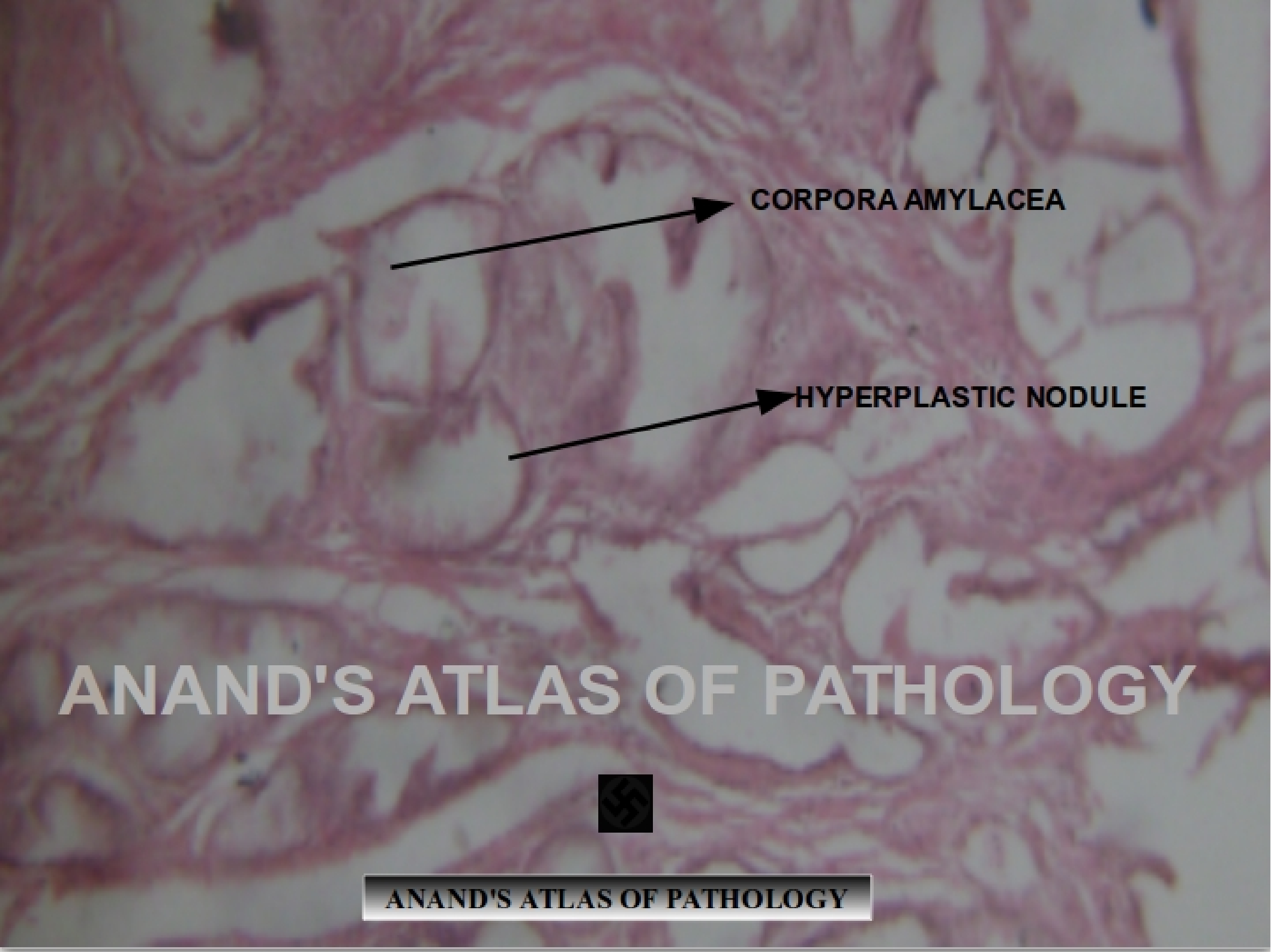

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BENIGN HYPERPLASIA OF PROSTATE

ALSO KNOWN AS NODULAR HYPERPLASIA, GLANDULAR AND STROMAL HYPERPLASIA

CHARACTERISED BY PROLIFERATION OF EPITHELIAL AND STROMAL ELEMENTS RESULTING IN ENLARGEMENT OF THE GLAND

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BENIGN HYPERPLASIA OF PROSTATE

IT ARISES FROM THE **PERIURETHRAL GLANDS** OF THE PROSTATE

HYPERPLASTIC NODULES ARE COMPOSED OF VARYING PROPORTIONS OF PROLIFERATING GLANDULAR ELEMENTS AND FIBROMUSCULAR STROMA

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COLLOID GOITRE

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PRESENTS AS GLOBULAR SWELLING
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BIOPSY IS CONFIRMATORY

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CUT SECTION OF MASS REVEALS BROWNISH COLLOID

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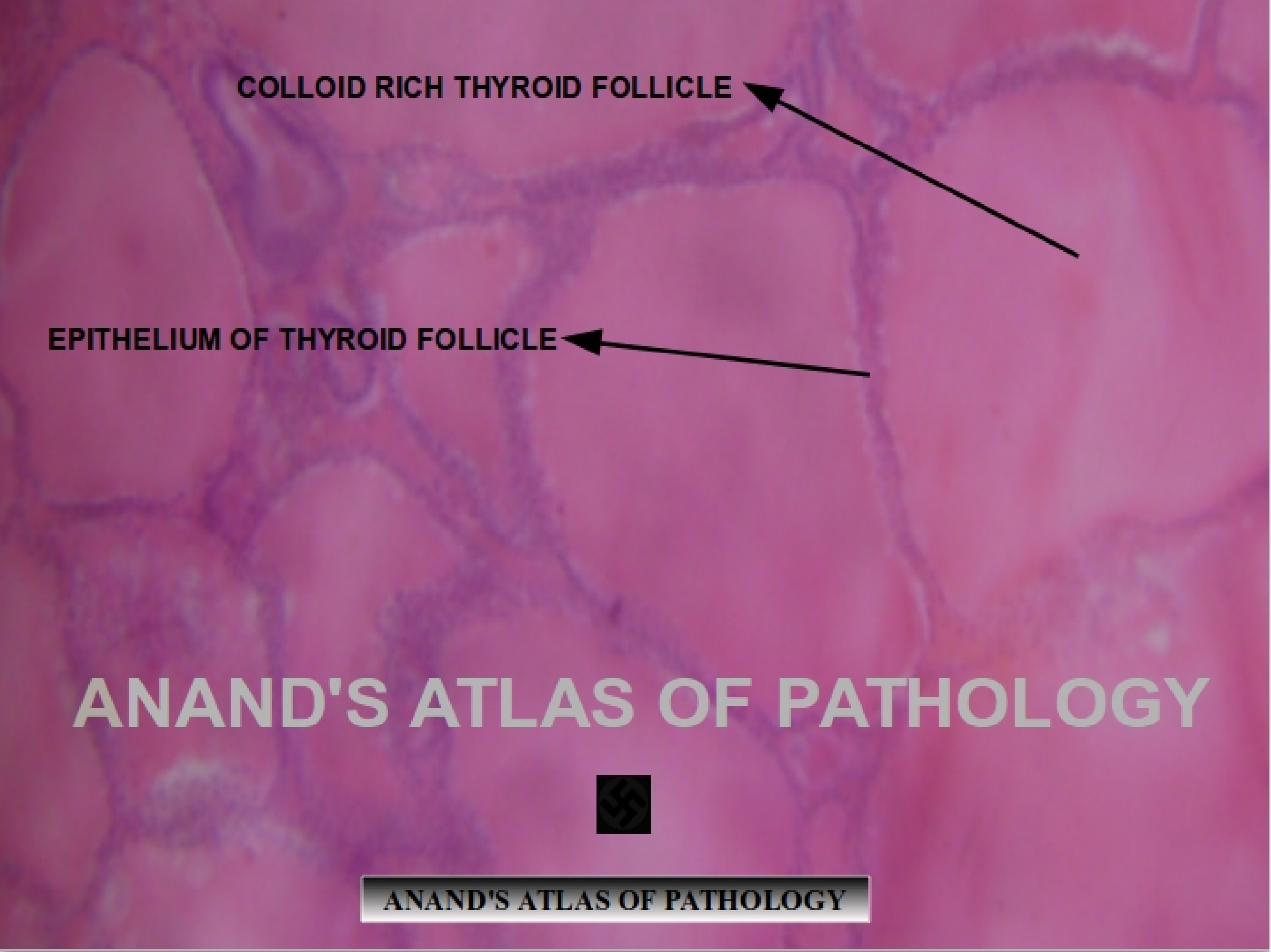
COLLOID RICH THYROID FOLLICLE
EPITHELIUM OF THYROID FOLLICLE
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ANAND'S ATLAS OF PATHOLOGY

COLLOID GOITRE

GOITRE IS A SIMPLE ENLARGEMENT OF THYROID GLAND

IT IS THE MOST COMMON THYROID DISEASE

IF DIETARY IODINE INCREASES OR DEMANDS FOR THYROID HARMONE DECREASES, THE STIMULATED FOLLICULAR EPITHELIUM INVOLUTES TO FORM AN ENLARGED COLLOID RICH GLAND CALLED AS COLLOID GOITRE

THE FOLLICULAR EPITHELIUM IS HYPERPLASTIC AND MAY BE FLATTENED OR CUBOIDAL DEPENDING ON THE LEVEL OF COLLOID

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LEIOMYOMA OF UTERUS (FIBROID UTERUS)

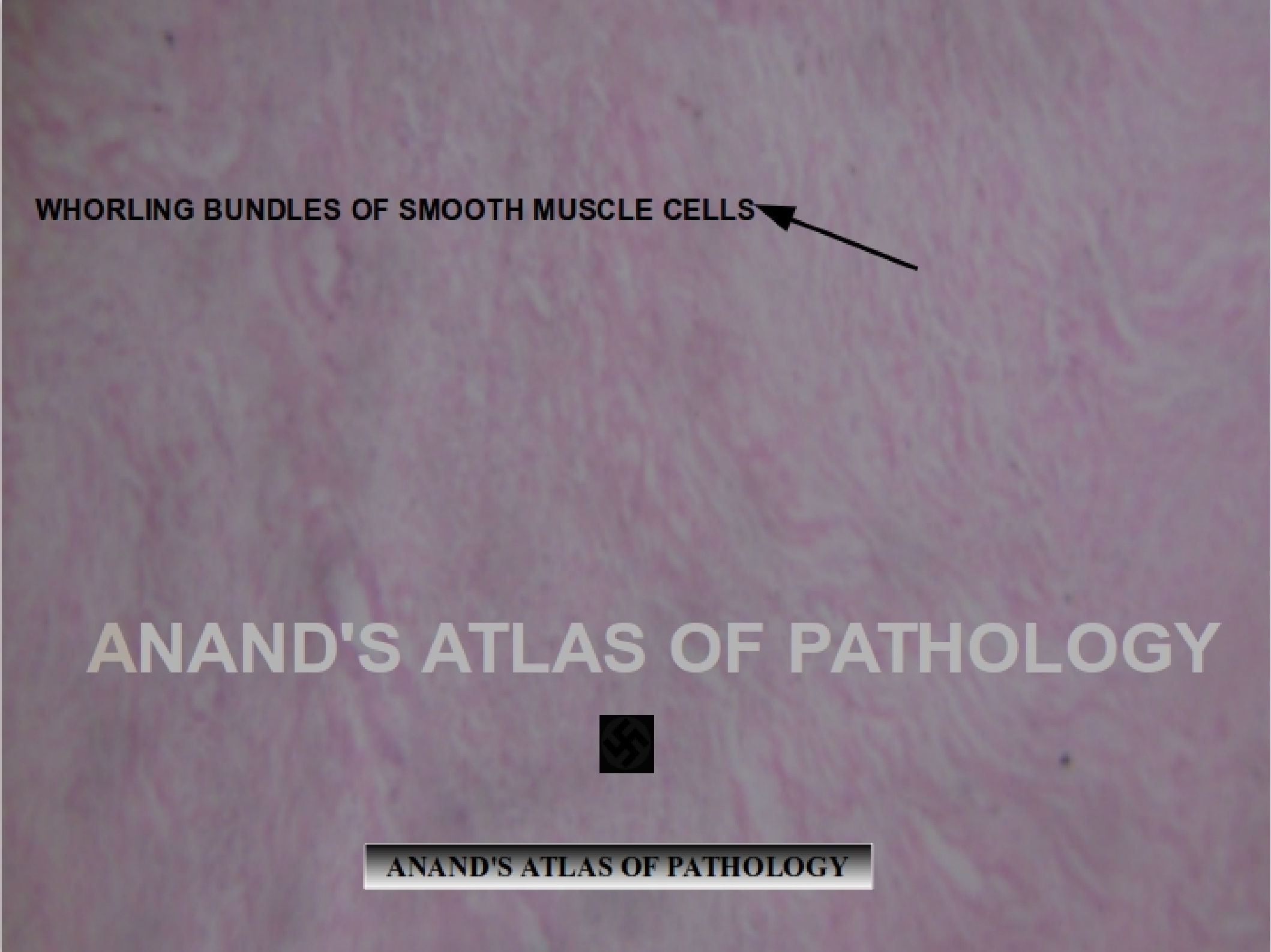
FEMALE PATIENT PRESENTS
WITH COMPLAINTS OF MENORRHAGIA
URINARY DISTURBANCE AND LOW BACK ACHE

ULTRASONOGRAPHY REVEALS MASS IN
THE UTERINE WALLS

MAY BE SINGLE OR MULTIPLE

OCCURS AROUND THE 4TH DECADE

HYSTERECTOMY IS A PREFERRED
TREATMENT MODALITY


WHORLING BUNDLES OF SMOOTH MUSCLE CELLS
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LEIOMYOMA OF UTERUS (FIBROID UTERUS)

BENIGN TUMOUR ARISING FROM SMOOTH MUSCLE CELLS IN THE MYOMETRIUM OF UTERUS ARE TERMED AS LEIOMYOMAS

ALSO CALLED AS FIBROID UTERUS

MICROSCOPICALLY IT SHOWS WHORLING BUNDLES OF SMOOTH MUSCLE CELLS DUPLICATING THE ARCHITECTURE OF NORMAL MYOMETRIUM

FOCI OF FIBROSIS, CALCIFICATION, ISCHAEMIC NECROSIS, CYSTIC DEGENERATION AND HAEMORRHAGE MAY BE PRESENT

ACUTE APPENDICITIS

YOUNG INDIVIDUAL PRESENTS WITH SUDDEN ONSET OF FEVER, VOMITTING AND ABDOMINAL PAIN

TENDERNESS IS PRESENT IN THE RIGHT ILIAC FOSSA

BLOOD SMEAR REVEALS NEUTROPHILIA

ULTRASONOGRAPHY REVEALS AN ENLARGED AND INFLAMMED APPENDIX

APPENDICECTOMY IS DONE

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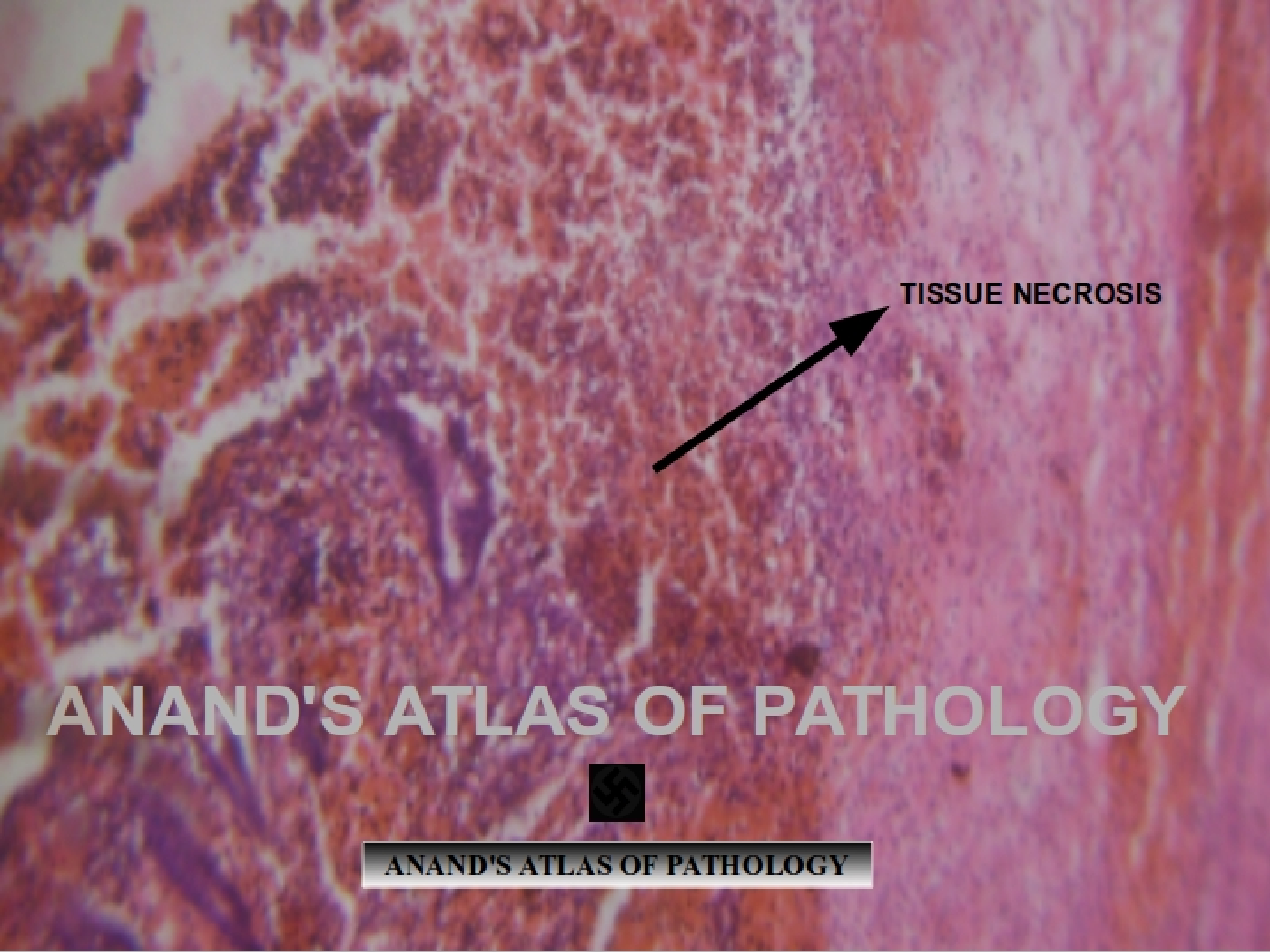

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ACUTE APPENDICITIS

IN EARLY STAGES SCANT NEUTROPHILIC EXUDATES WILL BE FOUND IN THE COATS OF THE APPENDIX

THE INFLAMMATORY REACTION TRANSFORMS NORMAL GLISTENING SEROSA INTO A DULL, GRANULAR RED MEMBRANE

IN LATER STAGES, PROMINENT NEUTROPHILIC EXUDATE GENERATES A FIBROPURULENT REACTION OVER SEROSA

THIS LEADS TO AN ABSCESS FORMATION

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ACUTE APPENDICITIS

ABSCESS FORMATION WITHIN THE WALLS LEADS TO ULCERATIONS AND FOCI OF NECROSIS IN THE MUCOSA

FURTHER DETERIORATION RESULTS IN GANGRENOUS NECROSIS OF APPENDICULAR MUCOSA

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TUBERCULOUS LYMPHADENITIS

PATIENT PRESENTS WITH
HISTORY OF TUBECULOSIS

MULTIPLE SWELLINGS / ENLARGEMENT
OF LYMPH NODES IN THE NECK

CERVICAL GROUP OF LYMPH NODES
ARE ENLARGED

LYMPH NODE EXCISION BIOPSY
IS CONFIRMATORY

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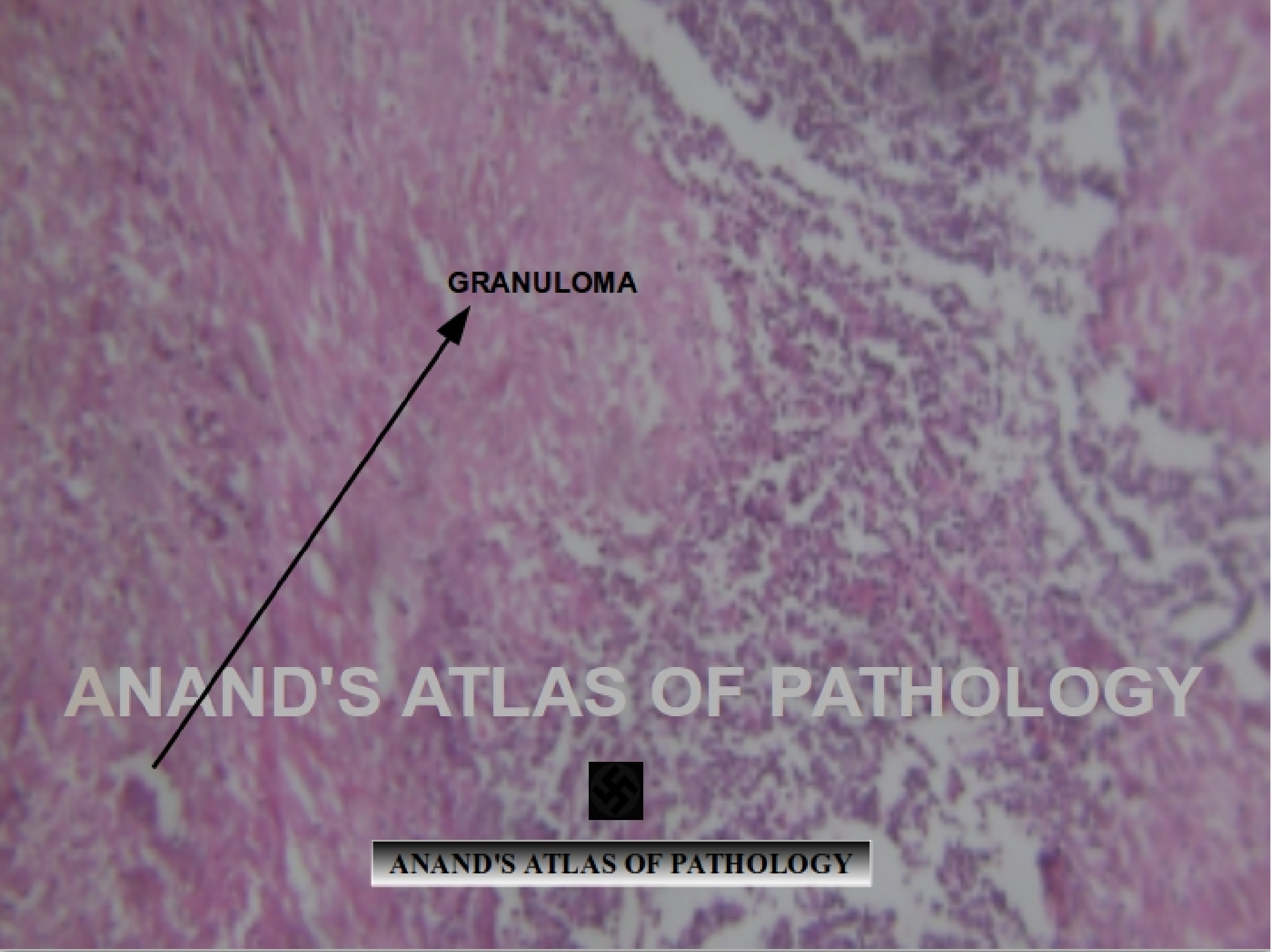
GRANULOMA
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ANAND'S ATLAS OF PATHOLOGY

TUBERCULOUS LYMPHADENITIS

SECONDARY INFLAMMATION OF DRAINING LYMPH NODES IS CALLED AS **LYMPHADENITIS**

IT IS THE COMMONEST FORM OF EXTRAPULMONARY TUBERCULOSIS

USUALLY OCCURS IN THE CERVICAL REGION - **SCROFULA**

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TUBERCULOUS LYMPHADENITIS

- AFFECTED LYMPH NODES SHOW GRANULOMATOUS INFLAMMATORY REACTION
- MAY FORM CASEATING OR NON CASEATING TUBERCLES
- GRANULOMAS ARE ENCLOSED WITHIN A FIBROELASTIC RIM PUNCTUATED BY LYMPHOCYTES
- MULTINUCLEATED GIANT CELLS WILL BE PRESENT IN THE GRANULOMAS

RHINOSPOROIDOSIS

COMMONLY OCCURS IN YOUNG INDIVIDUALS

PRESENTS AS A POLYP IN THE NOSE

USUALLY INFECTION SPREADS WHO COME IN CONTACT WITH WATER BODIES LIKE SWIMMING

POLYPECTOMY IS DONE

EXCISION BIOPSY IS CONFIRMATORY

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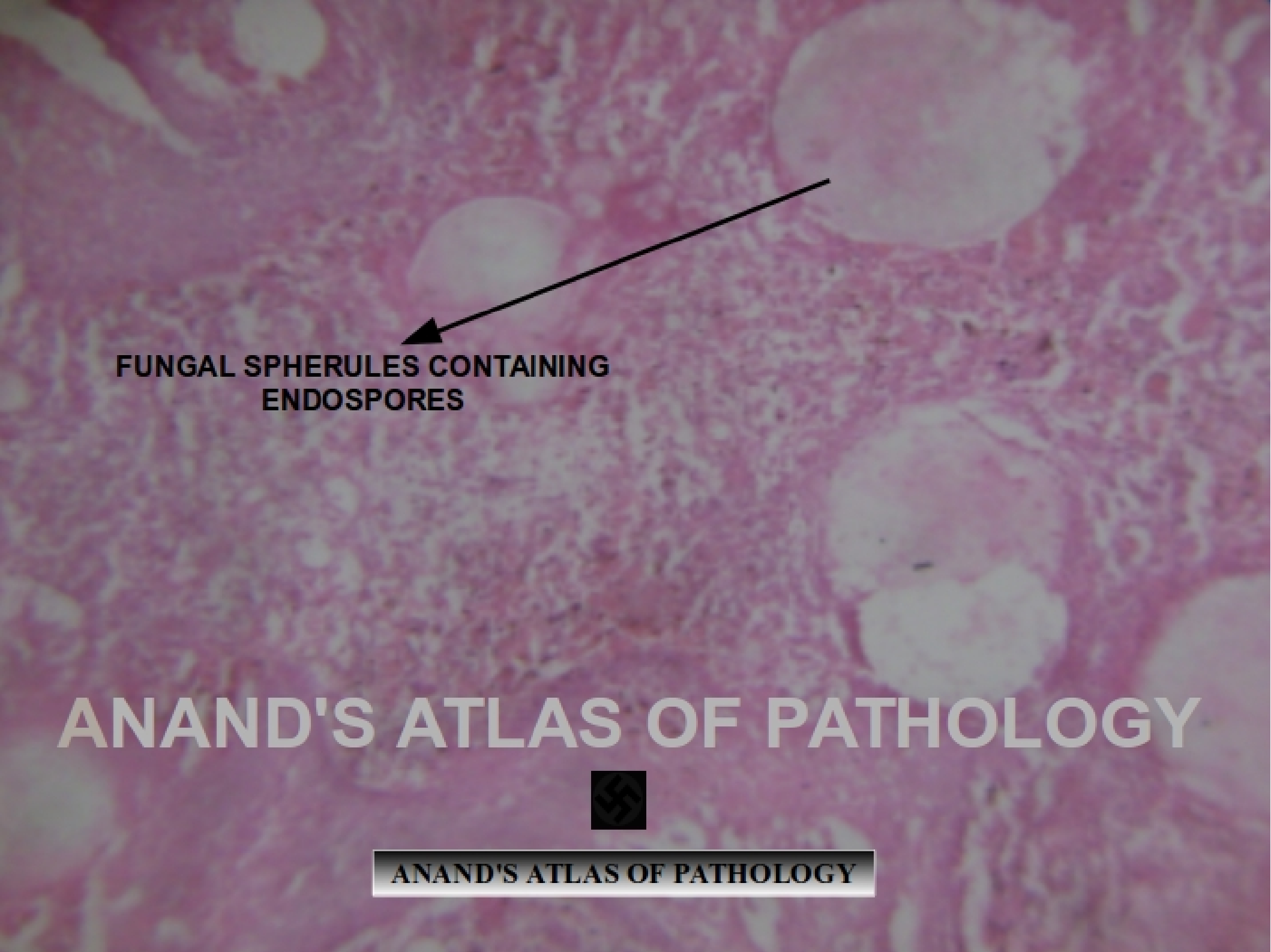

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RHINOSPOROIDOSIS

IT IS A CHRONIC GRANULOMATOUS DISEASE

A TYPE OF SUBCUTANEOUS MYCOSES

CAUSATIVE FUNGUS IS RHINOSPORIDIUM SEEBERI

MODE OF INFECTION IS NOT KNOWN BUT THOUGHT TO ORIGINATE FROM STAGNANT WATER OR AQUATIC LIFE

FUNGUS HAS NOT BEEN CULTIVATED IN A LABORATORY

RHINOSPOROIDOSIS

CHARACTERISED BY DEVELOPMENT OF FRIABLE POLYPS CONFINED TO NOSE, MOUTH OR EYE

DISEASE IS LIMITED TO THE MUCOUS MEMBRANES

MICROSCOPICALLY LESION SHOWS LARGE NUMBERS OF FUNGAL SPHERULES EMBEDDED IN A STROMA OF CONNECTIVE TISSUE AND CAPILLARIES

THE SPHERULES CONTAIN THOUSANDS OF ENDOSPORES

MADURA MYCOSIS

OCCURS IN AGRICULTURAL WORKERS

ALSO KNOWN AS MADURA FOOT

HISTORY OF A PENETRATING INJURY IS PRESENT

PATIENT PRESENTS WITH A MASS IN THE FOOT WITH MULTIPLE DISCHARGING SINUSES

EXCISION BIOPSY IS DONE

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FUNGAL GRANULES CONTAINING
MADURELLA MYCETOMI
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MADURA MYCOSIS

IT IS A TYPE OF SUBCUTANEOUS MYCOSES

DISEASE FIRST REPORTED FROM MADURAI IN 1842

IT IS A CHRONIC SLOWLY PROGRESSING FUNGAL INFECTION OF THE SUBCUTANEOUS TISSUE

CAUSATIVE ORGANISM IS BELIEVED TO ENTER THROUGH A MINOR TRAUMA

ORGANISM IS MADURELLA MYCETOMI

MADURA MYCOSIS

DISEASE USUALLY BEGINS AS A SWELLING IN THE FOOT

IT BURROWS INTO DEEPER TISSUES AND RESULTS IN MULTIPLE DISCHARGING SINUSES

MICROSCOPICALLY MICROCOLONIES OF AETIOLOGICAL AGENTS IN THE FORM OF GRANULES OR GRAINS CAN BE DEMONSTRATED

ACTINOMYCOSIS

PREDOMINANTLY SEEN IN FEMALES

PRESENTS AS A MASS AROUND THE CHEEKS AND THE JAW

MASS CONTAINS MULTIPLE DISCHARGING SINUSES

BIOPSY IS CONFIRMATORY

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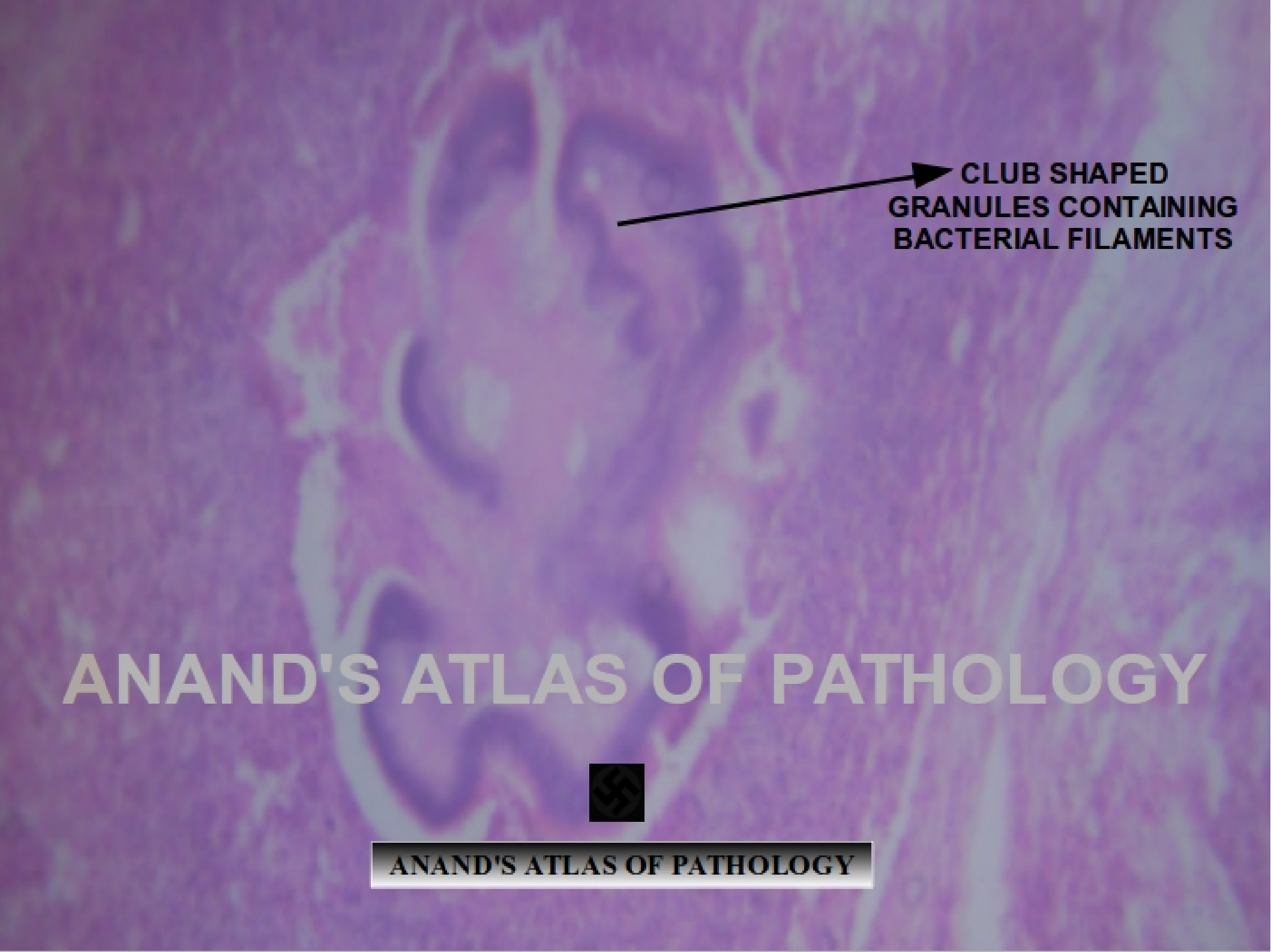
CLUB SHAPED
GRANULES CONTAINING
BACTERIAL FILAMENTS
ANAND'S ATLAS OF PATHOLOGY
ANAND'S ATLAS OF PATHOLOGY

ACTINOMYCOSIS

IT IS A CHRONIC GRANULOMATOUS INFECTION

CHARACTERISED BY INDURATED SWELLINGS, SUPPURATION AND DISCHARGE OF SULPHUR GRANULES

PRESENCE OF MULTIPLE DISCHARGING SINUSES

CERVICOFACIAL TYPE PRESENTS WITH INDURATED LESIONS ON THE CHEEK AND SUBMAXILLARY REGIONS

ACTINOMYCOSES CAN ALSO PRESENT AS A MYCETOMA

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ACTINOMYCOSIS

MICROSCOPICALLY THE GRANULES ARE BACTERIAL COLONIES WITH DENSE NETWORK OF FILAMENTS SURROUNDED BY A PERIPHERAL ZONE OF SWOLLEN RADIATING CLUB SHAPED STRUCTURES

THIS IS SUN RAY APPEARANCE

THE CLUBS ARE FORMED BY DEPOSITION OF LIPOID MATERIAL AROUND THE BACTERIAL FILAMENTS AS A PART OF TISSUE REACTION

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FIBROADENOMA - MIXED

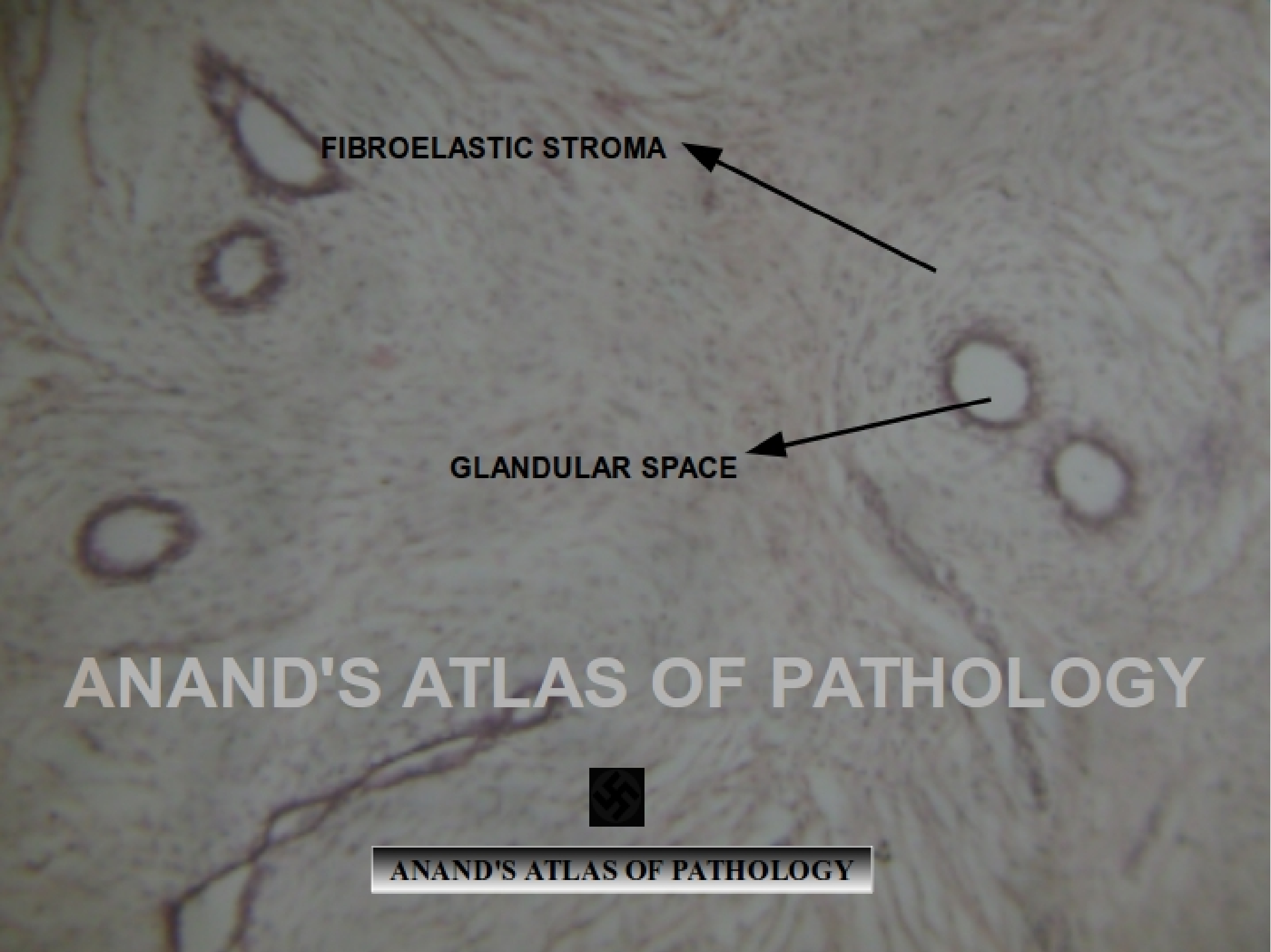
OCCURS IN YOUNG FEMALES

PRESENTS AS A FREELY MOBILE MASS IN THE BREAST

ALSO KNOWN AS THE BREAST MOUSE

FNAC IS DONE

EXCISION BIOPSY IS DONE


FIBROELASTIC STROMA
GLANDULAR SPACE
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ANAND'S ATLAS OF PATHOLOGY

FIBROADENOMA – MIXED

FIBROADENOMA OF BREAST IS A COMMON MIXED TUMOUR

IT IS ALWAYS BENIGN, RARELY UNDERGOES MALIGNANT CHANGE

TUMOUR CONTAINS A MIXTURE OF PROLIFERATED DUCTAL ELEMENTS (**ADENOMA**) EMBEDDED IN A LOOSE FIBROUS TISSUE (**FIBROMA**)

IT APPEARS IN YOUNG WOMEN AND AN INCREASE IN OESTROGEN ACTIVITY IS THOUGHT TO PLAY A ROLE IN ITS DEVELOPMENT

FIBROADENOMA – MIXED

HISTOLOGICALLY THERE IS A LOOSE FIBROELASTIC STROMA CONTAINING DUCT LIKE EPITHELIUM LINED SPACES OF VARIOUS FORMS AND SIZES

THESE GLANDULAR SPACES ARE LINED WITH SINGLE OR MULTIPLE LAYERS OF CELLS AND HAVE A WELL DEFINED INTACT BASEMENT MEMBRANE

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SECTION - 2

CYTOLOGY SLIDES

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LIST OF COLOUR PLATES

CARCINOMA OF BREAST

ASCITIC FLUID - SECONDARY DEPOSITS

CARCINOMA OF BREAST

OCCURS PREDOMINANTLY IN FEMALES

RARELY CAN OCCUR IN MALES ALSO

USUALLY PRESENTS AROUND THE 5TH DECADE

DIFFUSE MASS PRESENT IN THE BREAST

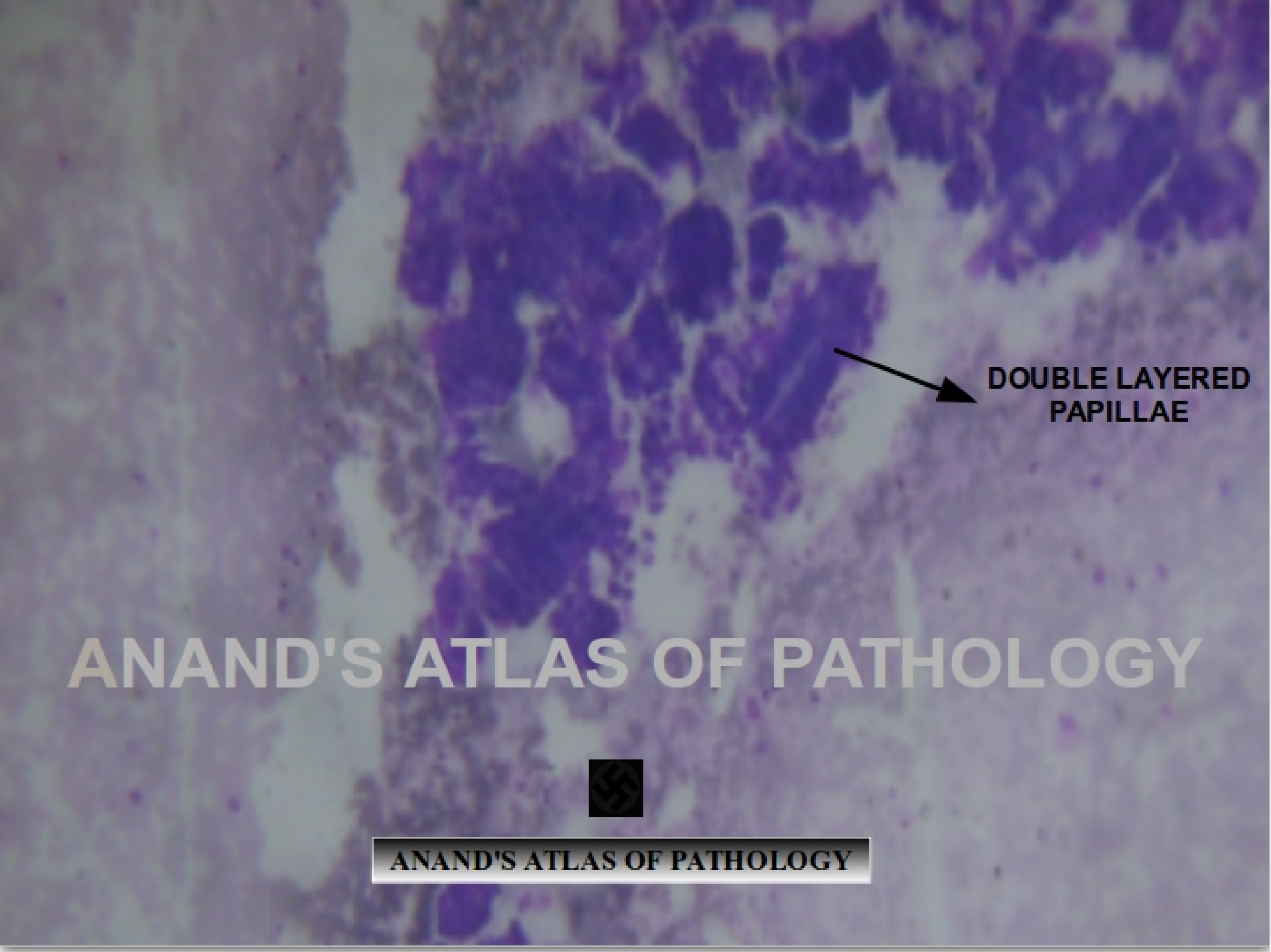
REGIONAL LYMPHADENITIS IS PRESENT

SKIN OVER THE BREAST RESEMBLES
AN ORANGE PEEL (PEAU D ORANGE)

NIPPLE IS RETRACTED

FNAC IS THE CHOICE OF INVESTIGATION

MASTECTOMY IS DONE


DOUBLE LAYERED
PAPILLAE
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CARCINOMA OF BREAST

FINE NEEDLE ASPIRATION CYTOLOGY IS A LABORATORY METHOD FOR DIAGNOSIS OF MALIGNANCY

INVOLVES ASPIRATION OF CELLS FROM A MASS

FOLLOWED BY CYTOLOGICAL EXAMINATION OF THE SMEAR

DONE USUALLY IN PATIENTS NOT FIT FOR OPEN BIOPSY

CARCINOMA BREAST IS NOT COMMON IN WOMEN BELOW THE AGE OF 30 YEARS

CARCINOMA OF BREAST

FEATURES COMMON TO ALL INVASIVE CANCERS

- BREAST LUMP
- FIXITY TO CHEST WALL
- RETRACTION OR DIMPLING OF NIPPLE
- LYMPHOEDEMA
- PEAU D'ORANGE -THICKENING OF SKIN AROUND EXAGGERATED HAIR FOLLICLES

ASCITIC FLUID - SECONDARY DEPOSITS

ASCITES – COLLECTION OF FLUID IN THE GENERAL PERITONEAL CAVITY

THIS COLLECTION CAN BE SECONDARY TO LIVER DYSFUNCTION OR MAY BE DUE TO MALIGNANCY IN PELVIC ORGANS

THIS CASE PERTAINS TO MASS IN THE OVARY IN A WOMAN IN THE 7TH DECADE

THE ASPIRATED FLUID WAS HAEMORRHAGIC

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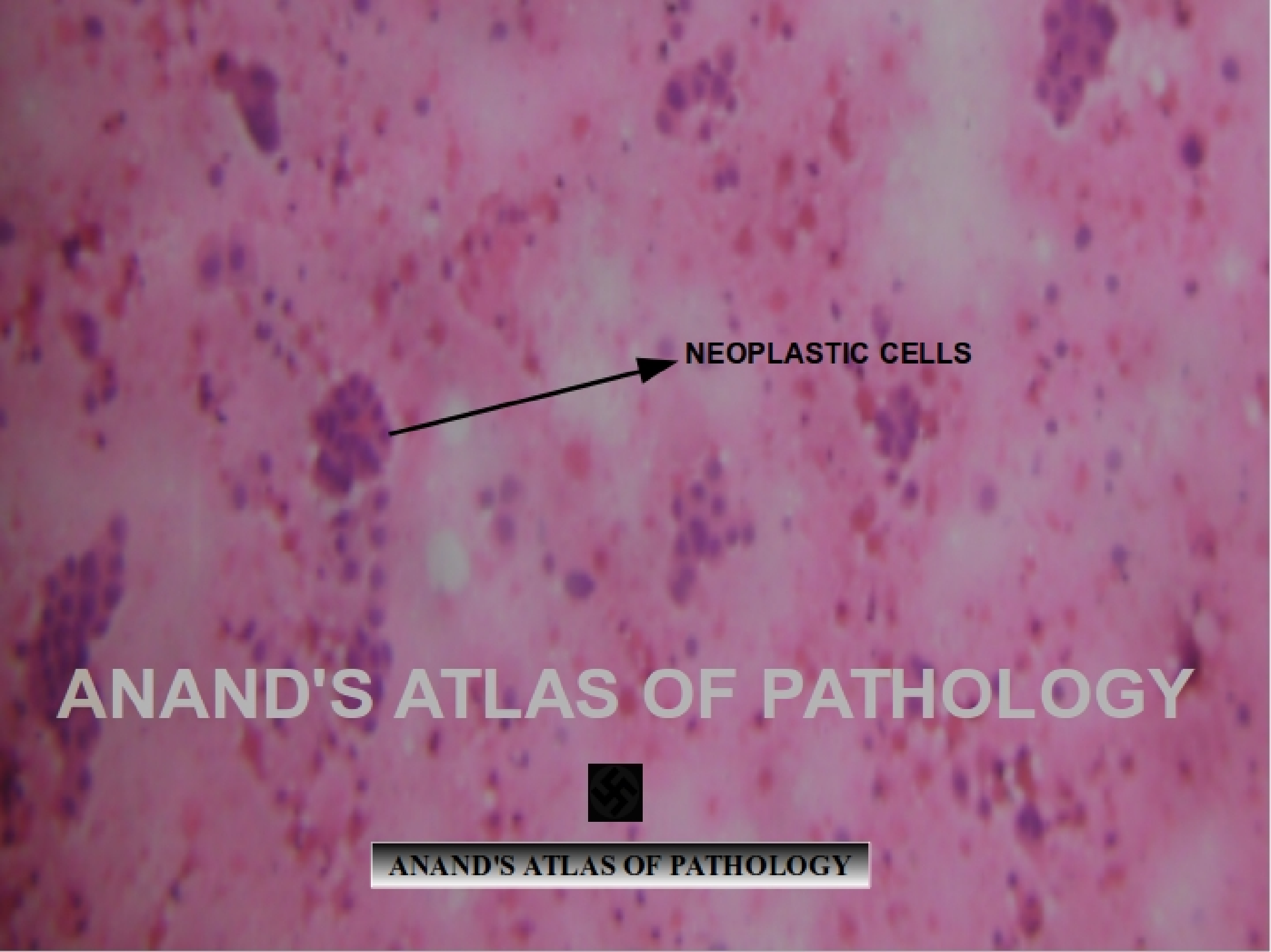

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ASCITIC FLUID – SECONDARY DEPOSITS

INCREASED FLUID IN INTERSTITIAL TISSUE SPACES IS TERMED AS **OEDEMA**

ACCUMULATION OF FLUID IN THE GENERAL PERITONEAL CAVITY IS TERMED AS HYDROPERITONEUM OR ASCITIS

ASCITIC FLUID ASPIRATION AND CYTOLOGICAL SMEAR PREPARATION IS A LABORATORY METHOD FOR DIAGNOSIS OF NEOPLASIA

PRIMARY IN THIS CASE - OVARIAN MALIGNANCY

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ASCITIC FLUID – SECONDARY DEPOSITS

ASCITIC FLUID ASPIRATION AND CYTOLOGY IS DONE FOR DIAGNOSING PRIMARY SITE OF MALIGNANCY - FLUID IS USUALLY HAEMORRHAGIC

PROBABLE SITES OF MALIGNANCY - ENDOMETRIUM OF UTERUS, LUNGS, URINARY BLADDER, PROSTATE AND STOMACH

NEOPLASTIC CELLS ARE LESS COHESIVE THAN NORMAL CELLS HENCE THEY ARE SHED INTO BODY FLUIDS - EXFOLIATION

SHED CELLS ARE EVALUATED FOR FEATURES OF ANAPLASIA INDICATIVE OF THEIR ORIGIN OF CANCER

SECTION - 3

HAEMATOLOGY SLIDES

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LIST OF COLOUR PLATES

IRON DEFICIENCY ANAEMIA

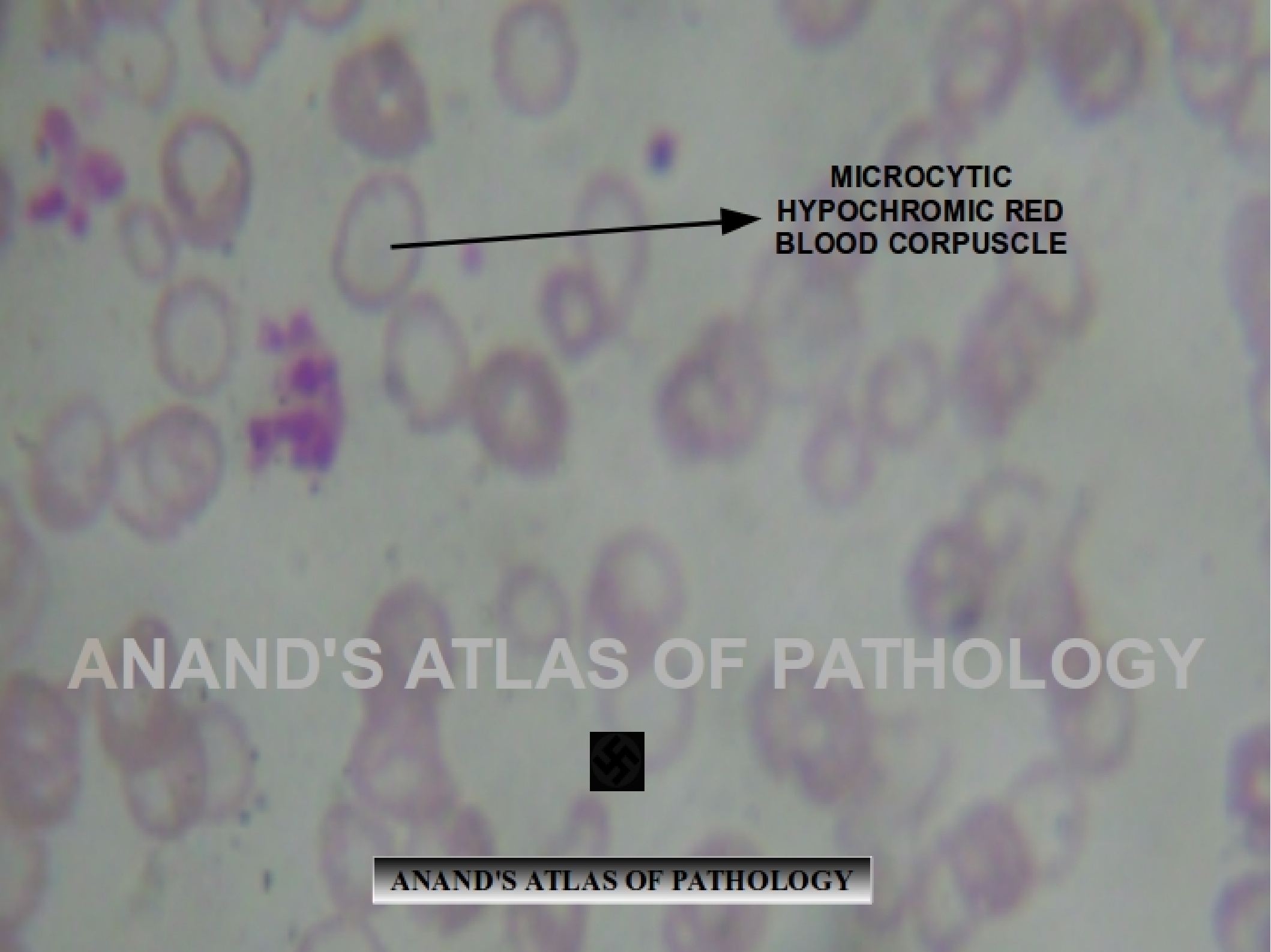
THERE IS SEVERE REDUCTION IN HAEMOGLOBIN %

VERY COMMON IN WOMEN

CAN ALSO OCCUR IN WORM INFESTATION AND MALIGNANCY

PREGNANCY IS A PROBABLE PHYSIOLOGICAL CAUSE

PERIPHERAL BLOOD SMEAR IS THE COMMONEST INVESTIGATION



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IRON DEFICIENCY ANAEMIA

- MOST COMMONEST FORM OF NUTRITIONAL DEFICIENCY
- MICROSCOPICALLY RBC'S ARE MICROCYTIC AND HYPOCHROMIC REFLECTING THE REDUCED MCV AND MCHC
- IRON DEFICIENCY ANAEMIA IS USUALLY ACCOMPANIED BY AN INCREASE IN THE PLATELET COUNT
- PICTURE WILL ALSO SHOW NORMOBLASTIC HYPERPLASIA
- HAEMOSIDERIN IN CYTOPLASM FORM LARGE CLUSTERS

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NEUTROPHILIA

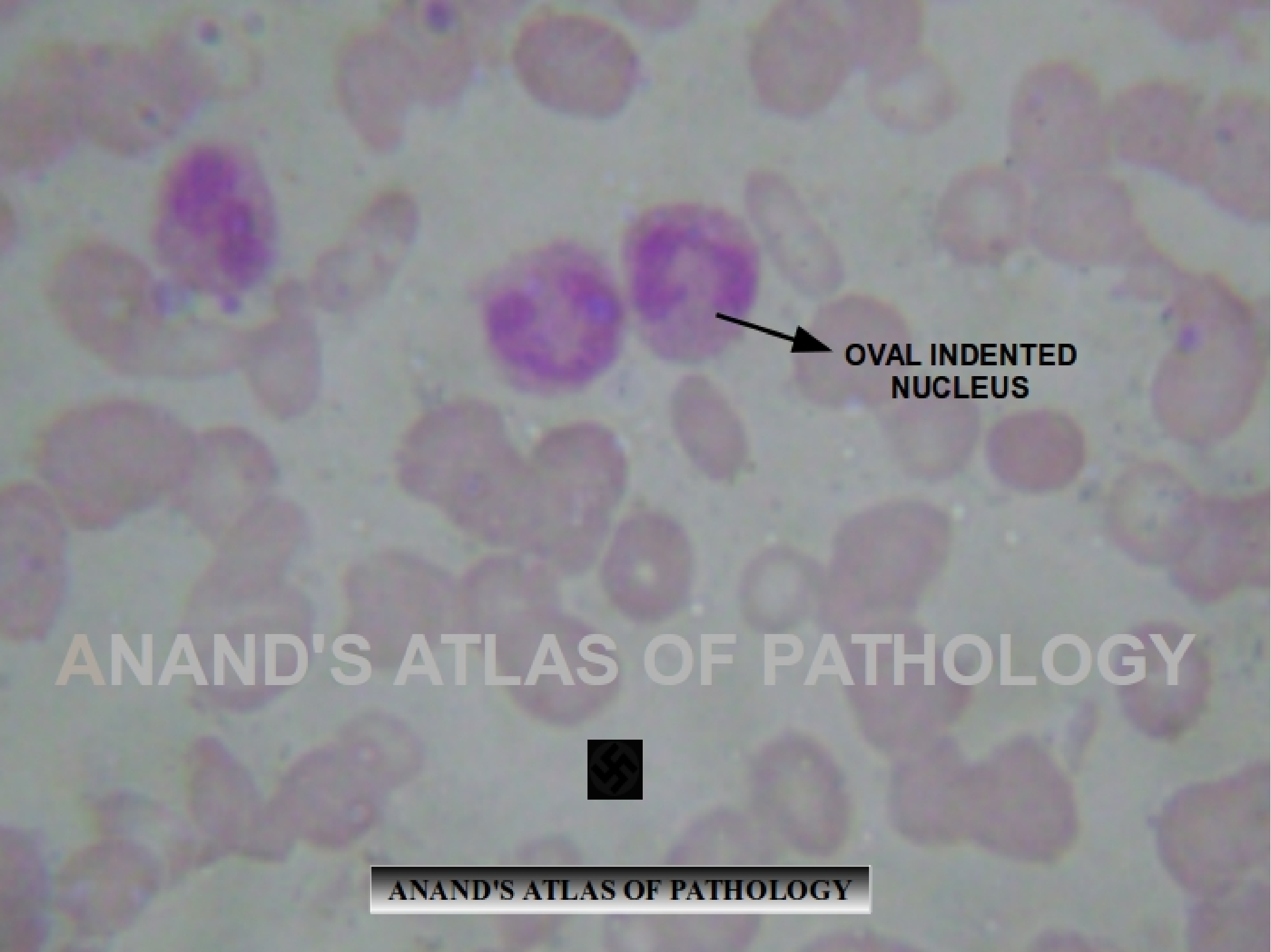
PATIENT USUALLY PRESENTS WITH FEVER AND MALAISE

COUGH WITH EXPECTORATION IS PRESENT

SPUTUM USUALLY RESEMBLES PUS

LUNG OPACITY IS SEEN IN AN XRAY

PERIPHERAL BLOOD SMEAR IS TAKEN


OVAL INDENTED
NUCLEUS
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ANAND'S ATLAS OF PATHOLOGY

NEUTROPHILIA

NEUTROPHILIA IS RELATIVELY A SELECTIVE INCREASE IN POLYMORPHONUCLEAR CELLS INDUCED BY BACTERIAL INFECTIONS

IT IS BASICALLY A NON NEOPLASTIC DISORDER OF WBC'S

MICROCOPICALLY THERE ARE A LARGE NUMBER OF ATYPICAL LYMPHOCYTES

LYMPHOCYTES ARE CHARACTERISED BY ABUNDANT CYTOPLASM CONTAINING MULTIPLE CLEAR VACUOLATIONS AND AN OVAL INDENTED OR FOLDED NUCLEUS

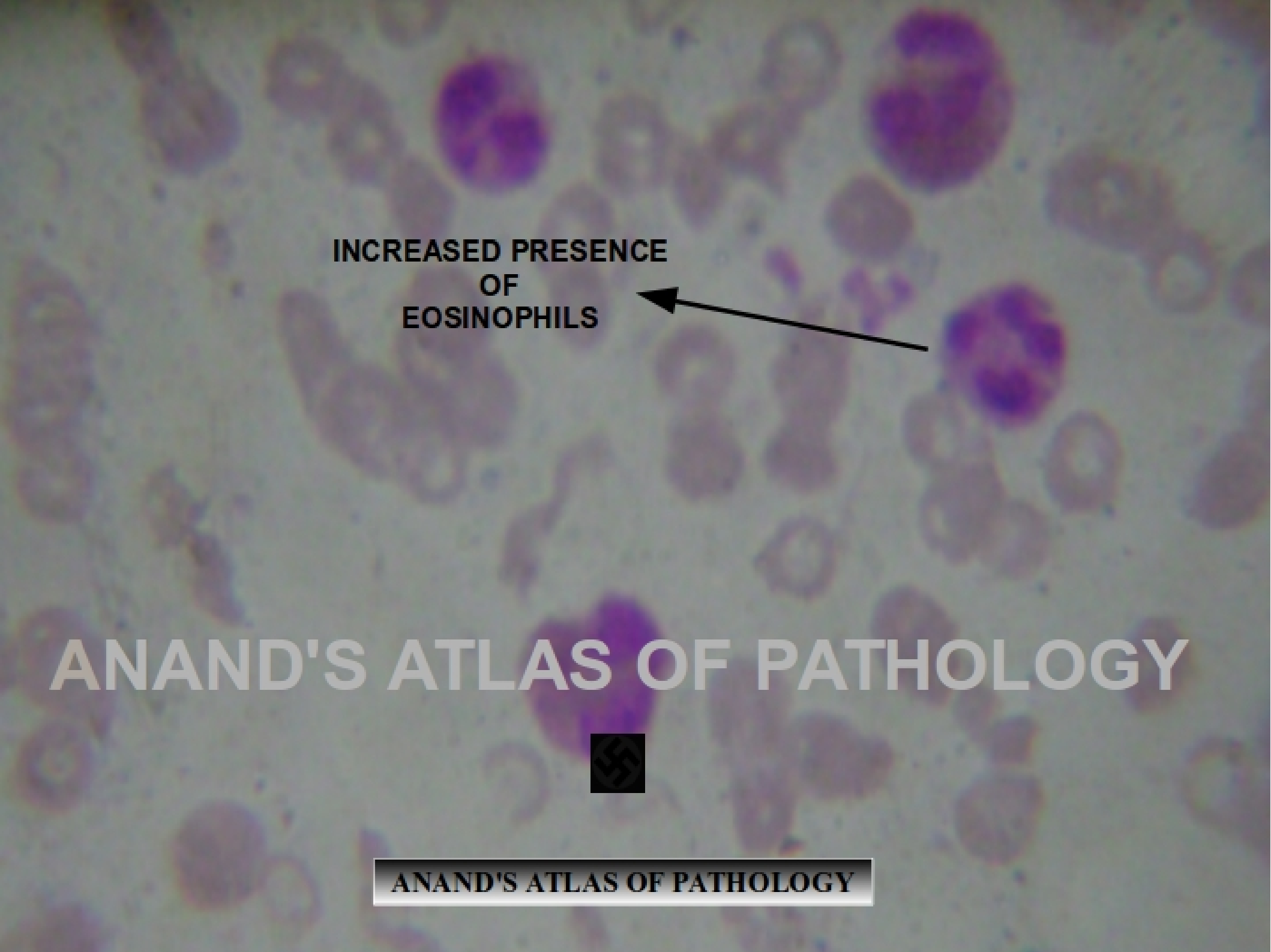
EOSINOPHILIA

OCCURS IN YOUNG INDIVIDUALS

PATIENTS PRESENT WITH FEVER AND ASSOCIATED RIGORS

THERE IS UNILATERAL PITTING OEDEMA IN THE LOWER LIMB

PERIPHERAL BLOOD SMEAR IS DONE


INCREASED PRESENCE
OF
EOSINOPHILS
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ANAND'S ATLAS OF PATHOLOGY

EOSINOPHILIA

IT IS AN INCREASED COUNT OF EOSINOPHILS IN BLOOD DUE TO PARASITIC INFECTIONS AND ALLERGIC RESPONSES

THEY MIGRATE INTO TISSUES DISEASED BY PARASITES

THE EOSINOPHILS MIGRATE TOWARDS INFECTED TISSUE BECAUSE OF EOSINOPHIL CHEMOTACTIC FACTOR SECRETED BY MAST CELLS AND BASOPHILS

EOSINOPHILS ALSO DETOXIFY INFLAMMATION INDUCING SUBSTANCES SECRETED BY THE MAST CELLS AND BASOPHILS

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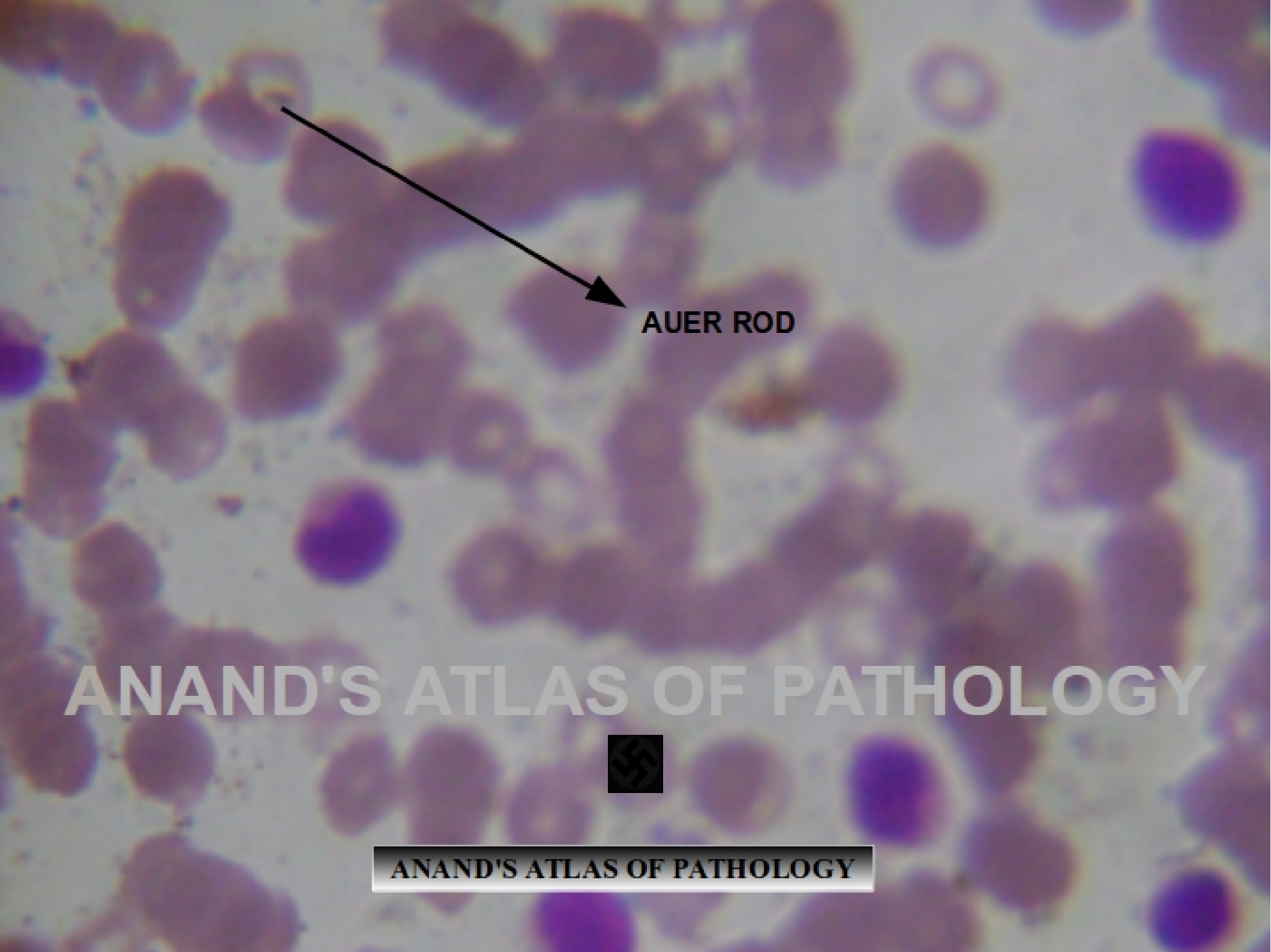
ACUTE MYELOID LEUKEMIA

AFFECTS YOUNG INDIVIDUALS

PRESENTS WITH HISTORY OF FEVER DURATION OF THREE MONTHS AND ABOVE

THERE IS PRESENCE OF SEVERE ANEMIA

PERIPHERAL BLOOD SMEAR IS DONE


AUER ROD
ANAND'S ATLAS OF PATHOLOGY
ANAND'S ATLAS OF PATHOLOGY

ACUTE MYELOID LEUKEMIA

MYELOBLASTS CAN BE DIFFERENTIATED FROM LYMPHOBLASTS BY GIEMSA STAIN

BLAST CELLS HAVE DELICATE NUCLEAR CHROMATIN

THREE TO FIVE NUCLEOLI ARE SEEN

FINE AZUROPHILIC GRANULES IN CYTOPLASM

DISTINCTIVE RED STAINING ROD LIKE STRUCTURES CALLED AS **AUER RODS** ARE PRESENT

AUER RODS ARE FOUND ONLY IN NEOPLASTIC MYELOBLASTS

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ACUTE LYMPHOCYTIC LEUKEMIA

SEEN IN ADOLOSCENTS

PRESENTS WITH GENERALISED LYMPHADENOPATHY

SPLENOMEGALY

HEPATOMEGALY

LOSS OF WEIGHT

PERIPHERAL BLOOD SMEAR IS DONE

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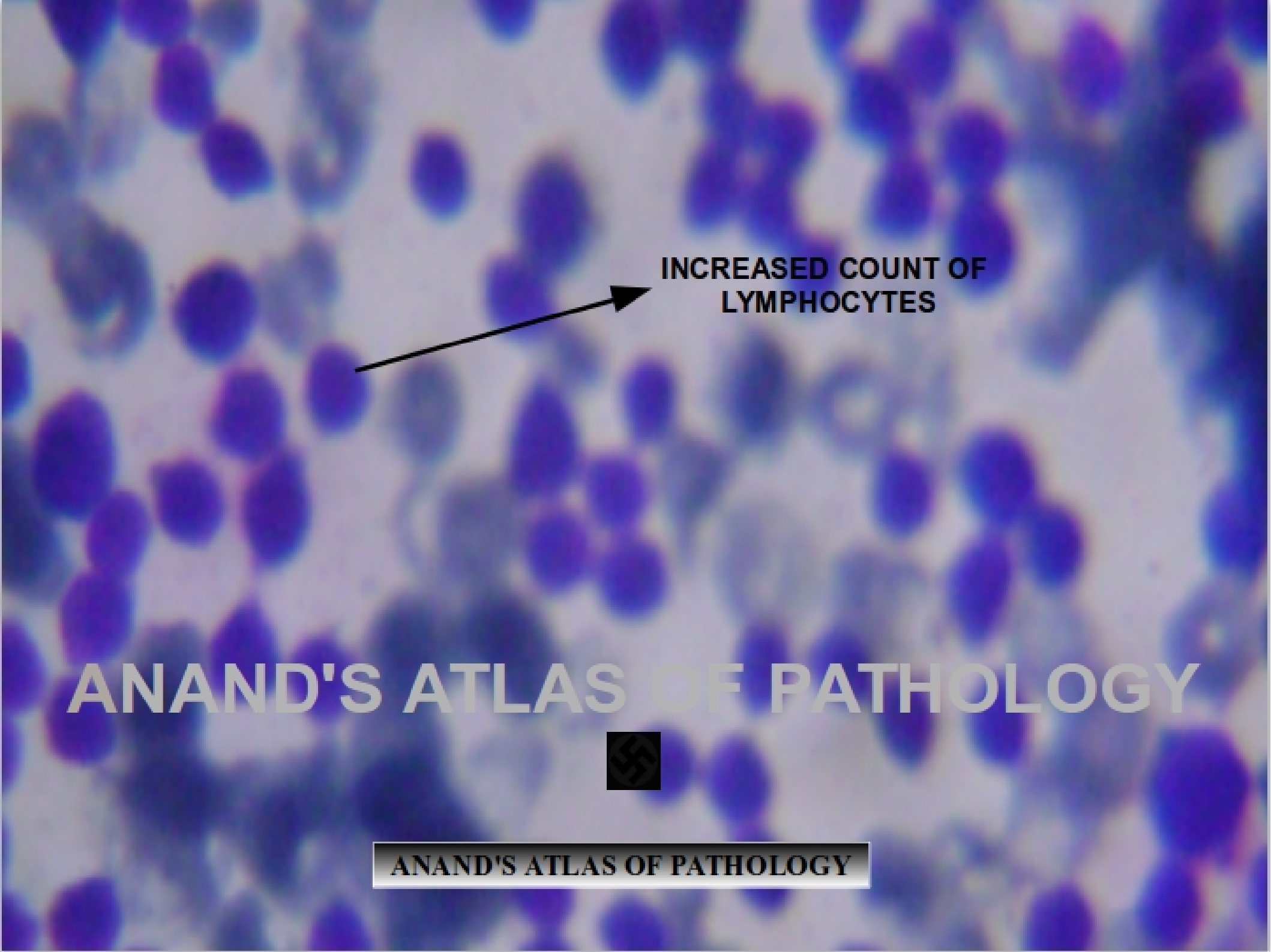

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ACUTE LYMPHOCYTIC LEUKEMIA

- LYMPHOCYTIC LEUKEMIAS ARE CAUSED BY INCREASED PRODUCTION OF LYMPHOID CELLS
- THE NUCLEI ARE COARSE AND HAVE CLUMPED CHROMATIN
- ONLY ONE OR TWO NUCLEOLI WILL BE PRESENT
- CYTOPLASM CONTAINS LARGE AGGREGATES OF PAS POSITIVE MATERIAL
- TO DIFFERENTIATE FROM AML – MYELOBLASTS ARE PEROXIDASE POSITIVE

CHRONIC MYELOID LEUKEMIA

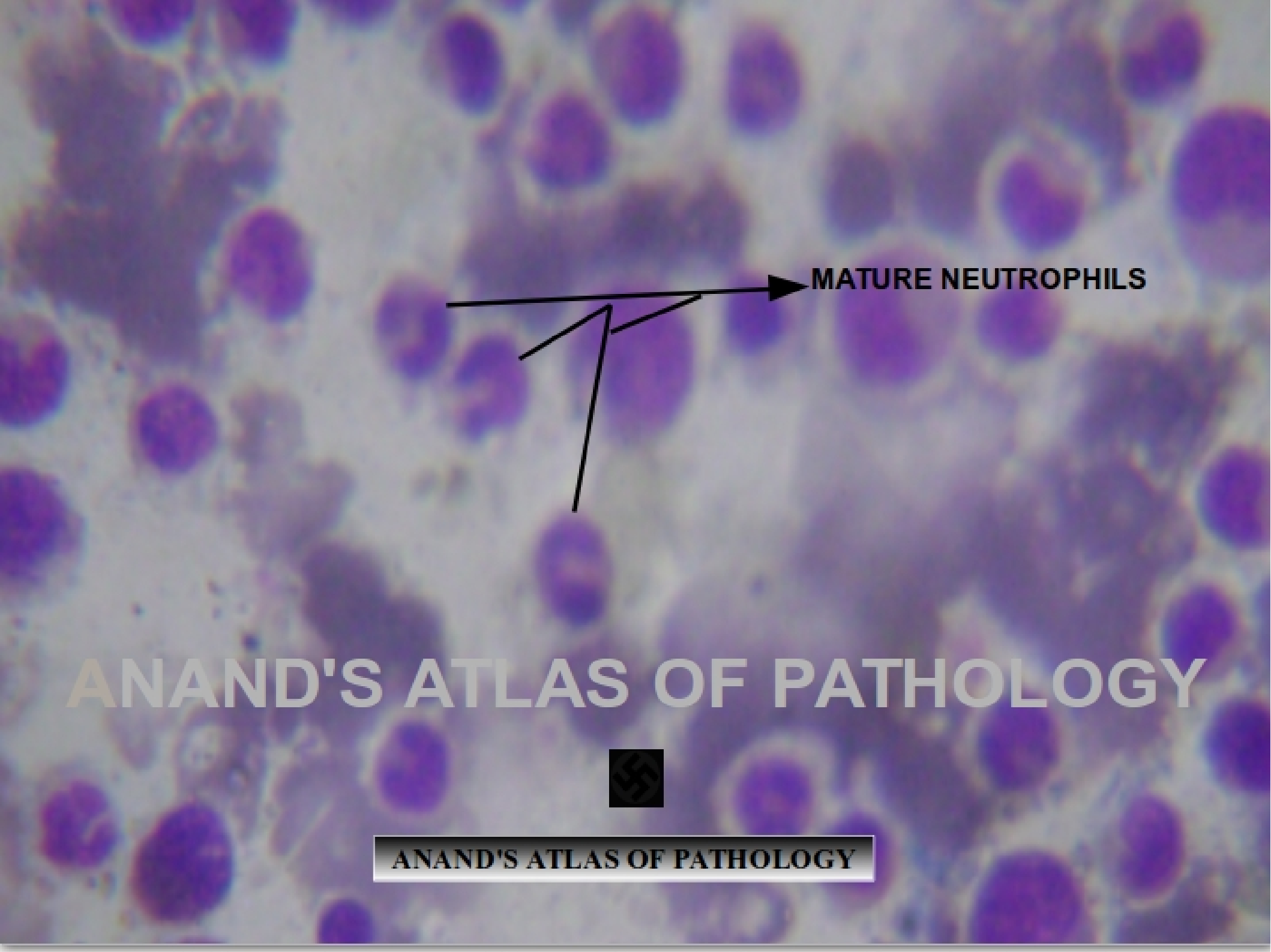
USUALLY OCCURS IN THE 5TH DECADE

PATIENT PRESENTS WITH FEVER AND MODERATE WEIGHT LOSS

MASSIVE SPLENOMEGALY

DRAGGING PAIN IN THE LEFT SIDE OF ABDOMEN

PERIPHERAL BLOOD SMEAR IS DONE



ANAND'S ATLAS OF PATHOLOGY

CHRONIC MYELOID LEUKEMIA

PERIPHERAL SMEAR WILL SHOW A LARGE NUMBER OF MATURE NEUTROPHILS

SOME METAMYELOCYTES AND MYELOCYTES

INCREASED EOSINOPHILS, BASOPHILS AND NUCLEATED RED CELLS WILL BE SEEN

THERE WILL A DRAMATIC INCREASE IN THE NUMBER OF MATURE CIRCULATING MYELOBLASTS

HISTOLOGICALLY THE PICTURE IS THAT OF NORMOCYTIC NORMOCHROMIC ANAEMIA

CHRONIC LYMPHOCYTIC LEUKEMIA

OCCURS IN THE 6TH DECADE

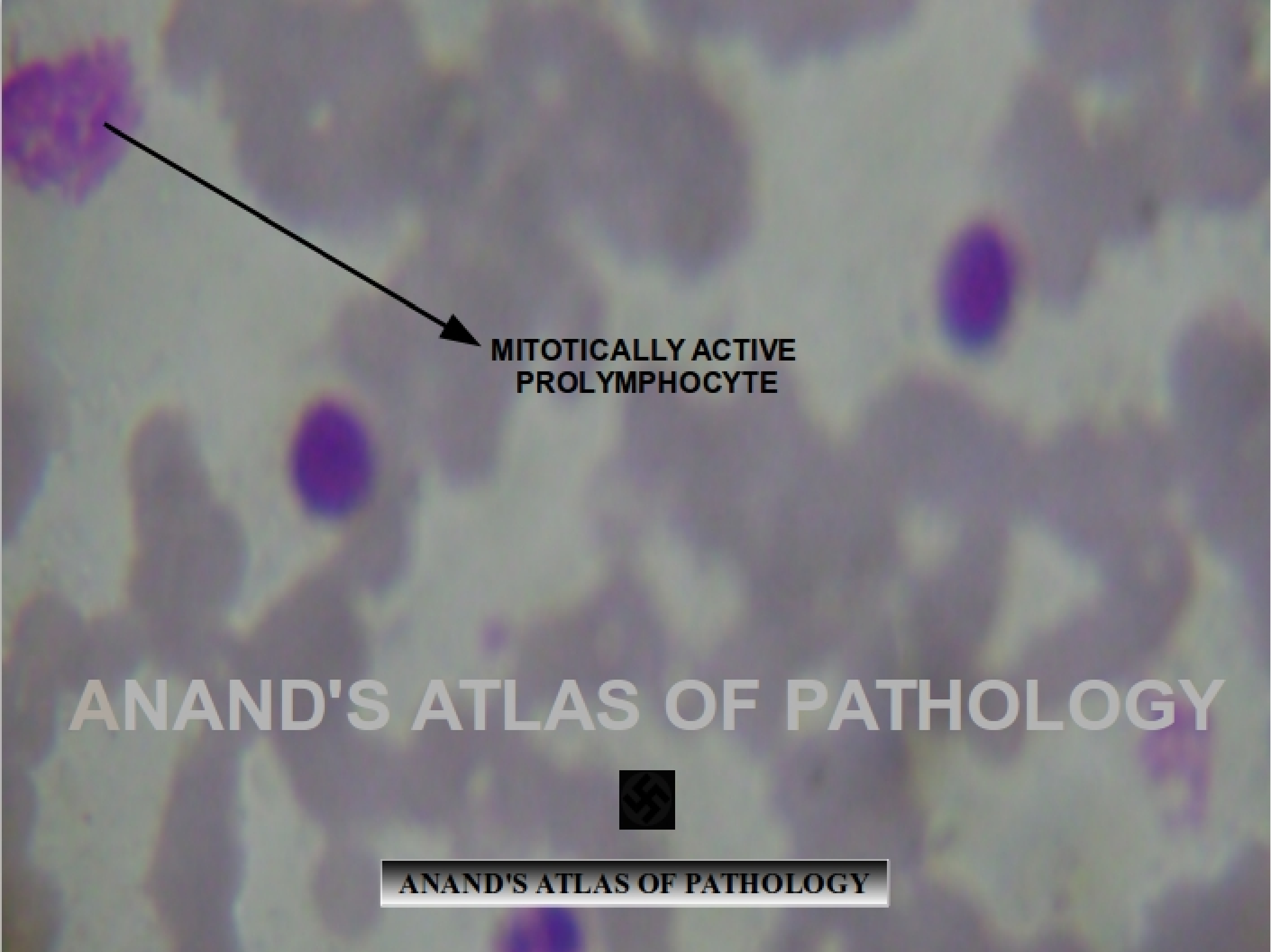
PATIENT PRESENTS WITH

FEVER, FATIGUE AND WEIGHT LOSS

GENERALISED LYMPHADENOPATHY IS PRESENT

DIFFERENTIAL COUNT SHOWS
ABNORMALLY HIGH LEUKOCYTOSIS

PERIPHERAL BLOOD SMEAR IS DONE


MITOTICALLY ACTIVE
PROLYMPHOCYTE
ANAND'S ATLAS OF PATHOLOGY
ANAND'S ATLAS OF PATHOLOGY

CHRONIC LYMPHOCYTIC LEUKEMIA

MILD TO GRADUALLY INCREASING ANAEMIA IS SEEN

THERE IS A MODERATE AMOUNT OF LEUKOCYTOSIS

95% OF THE CELLS ARE LYMPHOCYTES PREDOMINANTLY OF SMALL CELL TYPE

THE FOCI OF MITOTICALLY ACTIVE PROLYMPHOCYTES ARE CALLED AS PROLIFERATION CENTRES WHICH IS A THE DIAGNOSTIC FEATURE OF CHRONIC LYMPHOCYTIC LEUKEMIA

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MULTIPLE MYELOMA

OCCURS IN THE 6TH DECADE

PREPONDERANT IN MALES

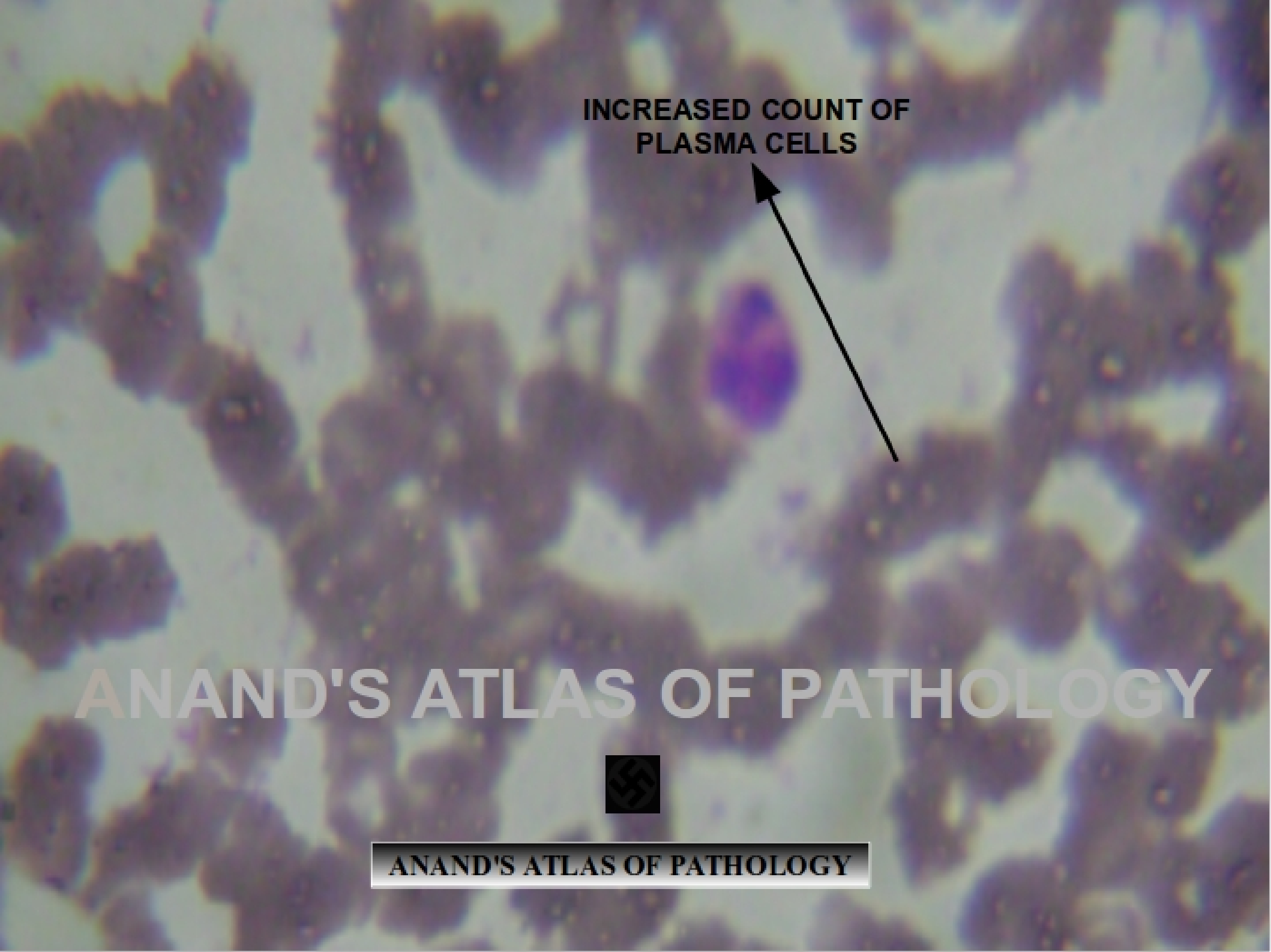
PATIENTS PRESENT WITH LOW BACK ACHE

ABNORMALLY ELEVATED ESR COUNT IS SEEN

PROTIENURIA IS PRESENT

XRAY OF SKULL REVEALS
PUNCHED OUT LESIONS

PERIPHERAL SMEAR IS DONE


INCREASED COUNT OF
PLASMA CELLS
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ANAND'S ATLAS OF PATHOLOGY

MULTIPLE MYELOMA

MULTIPLE MYELOMA CAUSES DESTRUCTIVE BONE LESIONS

MICROSCOPICALLY THERE IS AN INCREASE OF PLASMA CELLS

THE NEOPLASTIC PLASMA CELLS RESEMBLE NORMAL MATURE PLASMA CELLS

THESE CELLS SHOW ABNORMAL FEATURES SUCH AS PROMINENT NUCLEOLI, ABNORMAL CYTOPLASMIC INCLUSIONS WHICH CONTAIN IMMUNOGLOBULIN

ANAND'S ATLAS OF PATHOLOGY

SECTION - 4

HISTOPATHOLOGY
GROSS SPECIMENS

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LIST OF GROSS SPECIMENS

ACUTE APPENDICITIS

MUCINOUS CYSTADENOMA OF OVARY

DERMOID CYST

LEIOMYOMA

RENAL CELL CARCINOMA

OSTEOSARCOMA

LIST OF GROSS SPECIMENS

- OSTEOCLASTOMA
- TUBERCULOSIS OF LUNG
- INTESTINAL POLYPS
- CIRRHOSIS OF LIVER
- SECONDARIES OF LIVER
- CARCINOMA OF BREAST

LIST OF GROSS SPECIMENS

MULTINODULAR GOITRE

SQUAMOUS CELL CARCINOMA OF FOOT

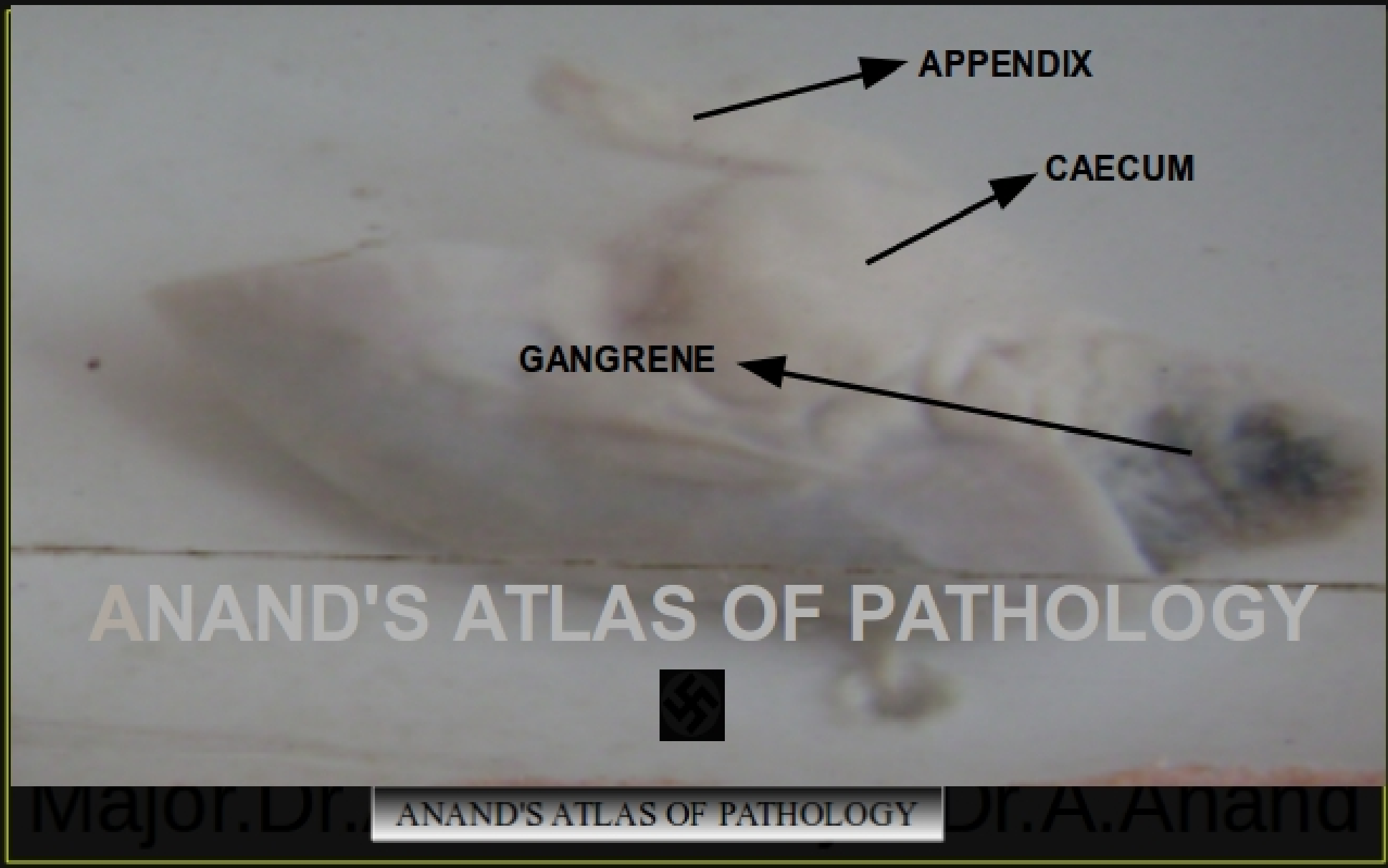
CARCINOMA OF STOMACH

CHOLELITHIASIS

RENAL CALCULII

TRICHOBEZOAR

ACUTE APPENDICITIS



ACUTE APPENDICITIS

THE ORGAN APPEARS TURGID AND DUSKY RED DUE TO INFLAMMATION AND HAEMORRHAGES IN THE MUCOUS MEMBRANE

IN ADVANCED CASES IT MIGHT APPEAR DARKISH GREEN TO BLACK BECAUSE OF GANGRENOUS CHANGE

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MUCINOUS CYSTADENOMA OF OVARY

MUCINOUS CYSTADENOMA OF OVARY

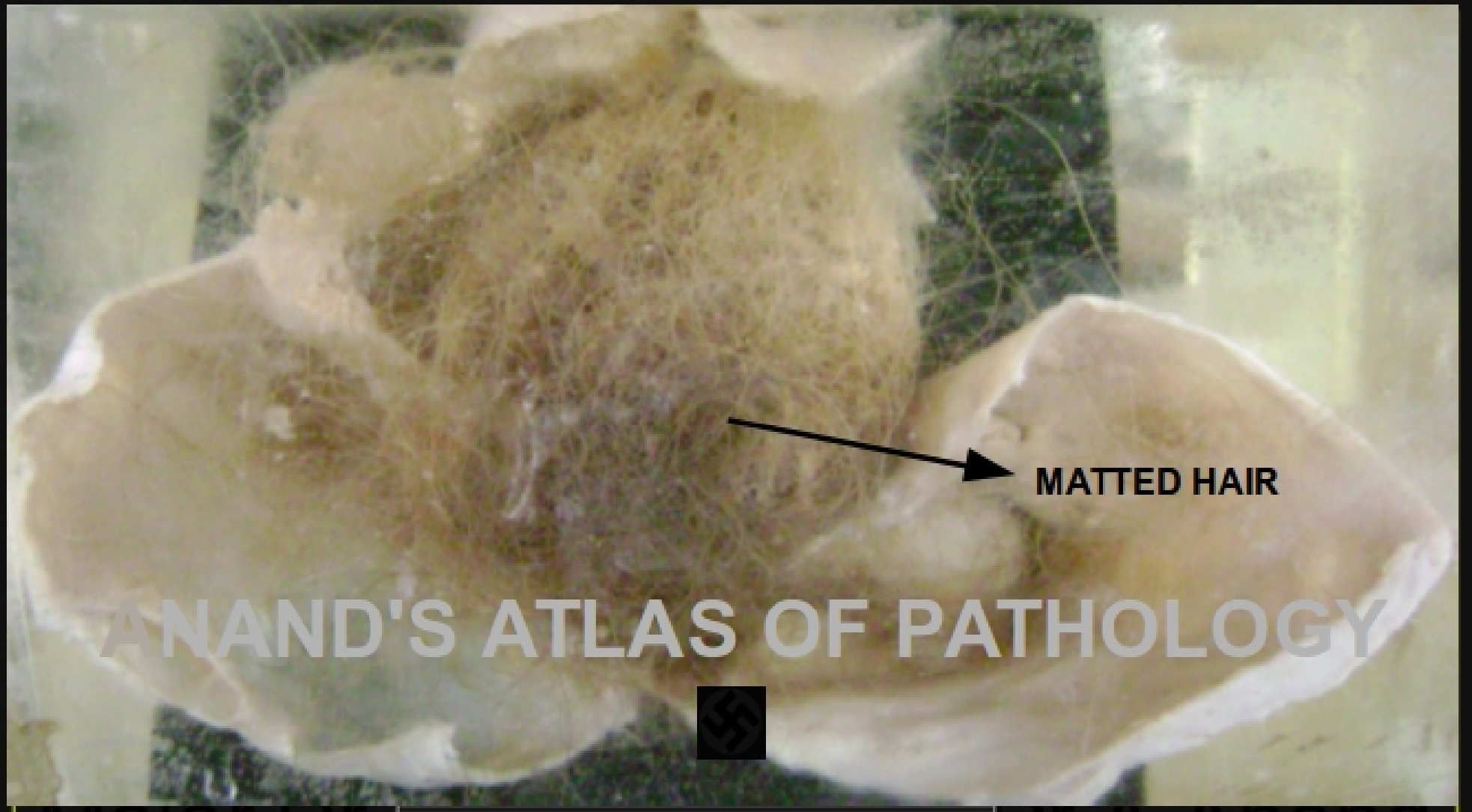
USUALLY A BENIGN TUMOUR

RARELY UNDERGOES MALIGNANT CHANGE

CYST CAVITIES ARE SEEN

DELICATE PAPILLARY TUMOUR GROWTHS CAN BE SEEN IN THE PERIPHERY

DERMOID CYST



DERMOID CYST

AFFECTED ORGAN IS OVARY

THESE NEOPLASMS ARE CAUSED BY ECTODERMAL DIFFERENTIATION OF TOTIPOTENT GERM CELLS

MATTED HAIR BEARING EPITHELIAL LINING IS SEEN

SOMETIMES IT CAN HAVE NODULAR PROJECTIONS FROM WHICH TEETH CAN PROTRUDE

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LEIOMYOMA OF UTERUS

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LEIOMYOMA OF UTERUS

TUMOUR IS A SHARPLY CIRCUMSCRIBED FIRM GRAY MASS

PRESENTS A CHARACTERISTIC WHORLED CUT SURFACE

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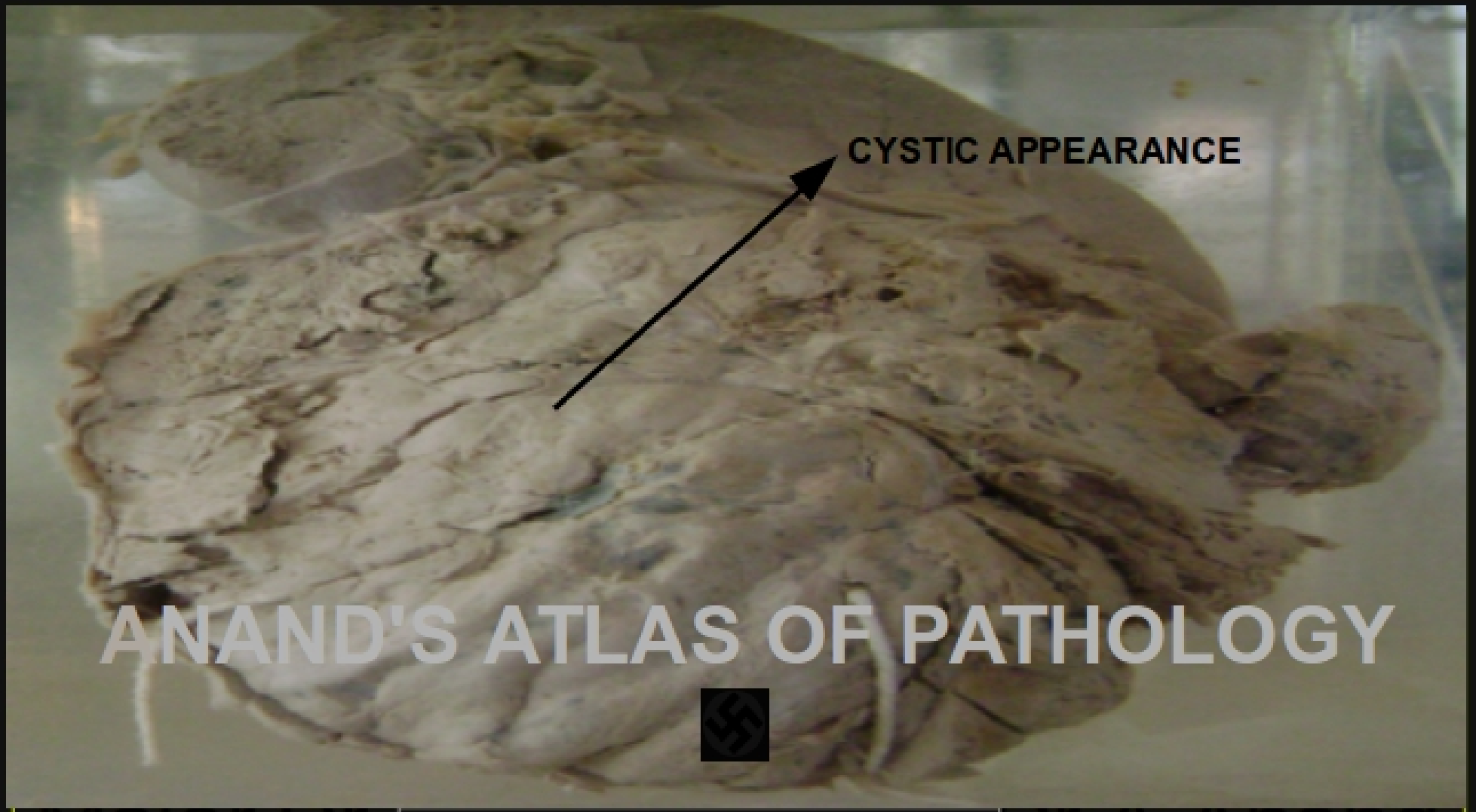
RENAL CELL CARCINOMA



RENAL CELL CARCINOMA

KIDNEY IS USUALLY SOLITARY AND LARGE

TUMOUR GROWTH IS USUALLY CONFINED TO THE CORTEX

PROMINENT AREAS OF CYSTIC SOFTENING OR HAEMORRHAGE ARE SEEN

THE MARGINS OF THE TUMOUR ARE WELL DEFINED

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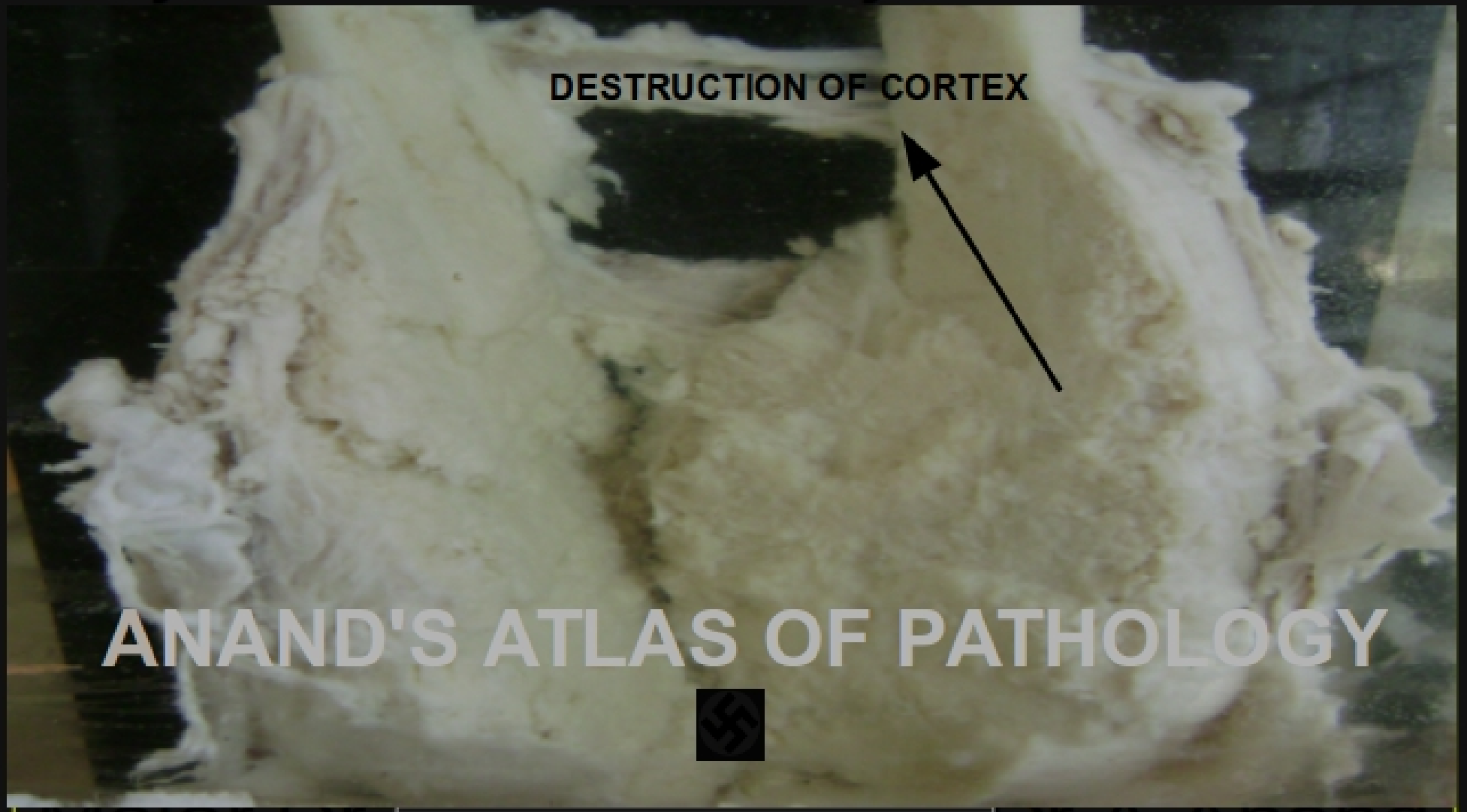
OSTEOSARCOMA



OSTEOSARCOMA

IT IS A LARGE ILL DEFINED LESION IN THE METAPHYSEAL REGION OF THE AFFECTED BONE

TUMOUR HAS DESTROYED THE CORTEX AND INVADED INTO THE MARROW CAVITY AND OUTWARD INTO ADJACENT SOFT TISSUES

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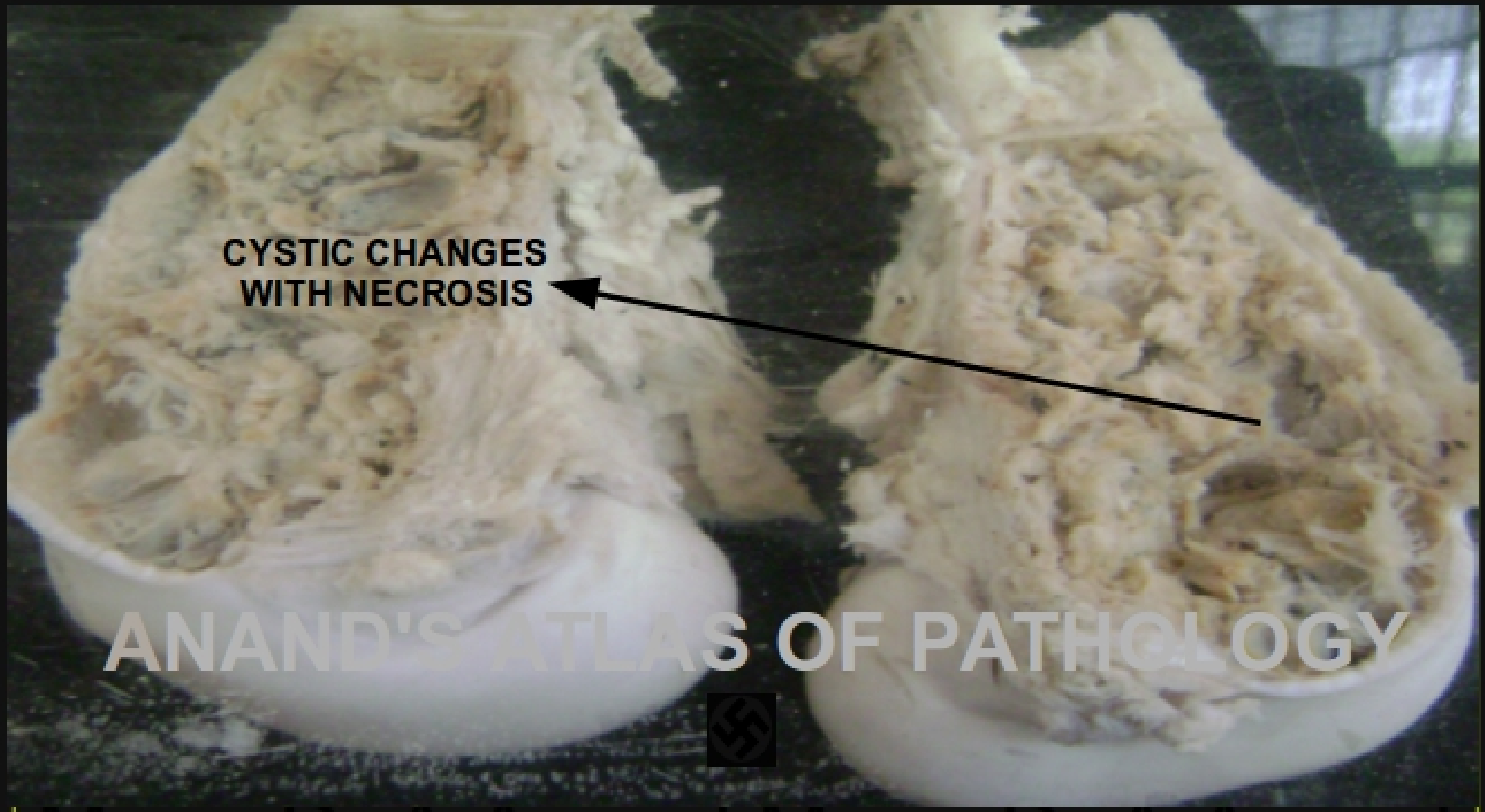
OSTEOCLASTOMA



OSTEOCLASTOMA

USUALLY ENDS OF LONG BONE ARE AFFECTED

TUMOUR IS ALWAYS SOLITARY

TUMOUR ERODES INTO THE CORTEX AND MAY EXTEND OUTSIDE THROUGH THE OVERLYING PERIOSTEUM

PRESENTS A DARK BROWN APPEARANCE DUE TO ABUNDANT VASCULARITY

AREAS OF NECROSIS AND CYSTIC CHANGES ARE SEEN

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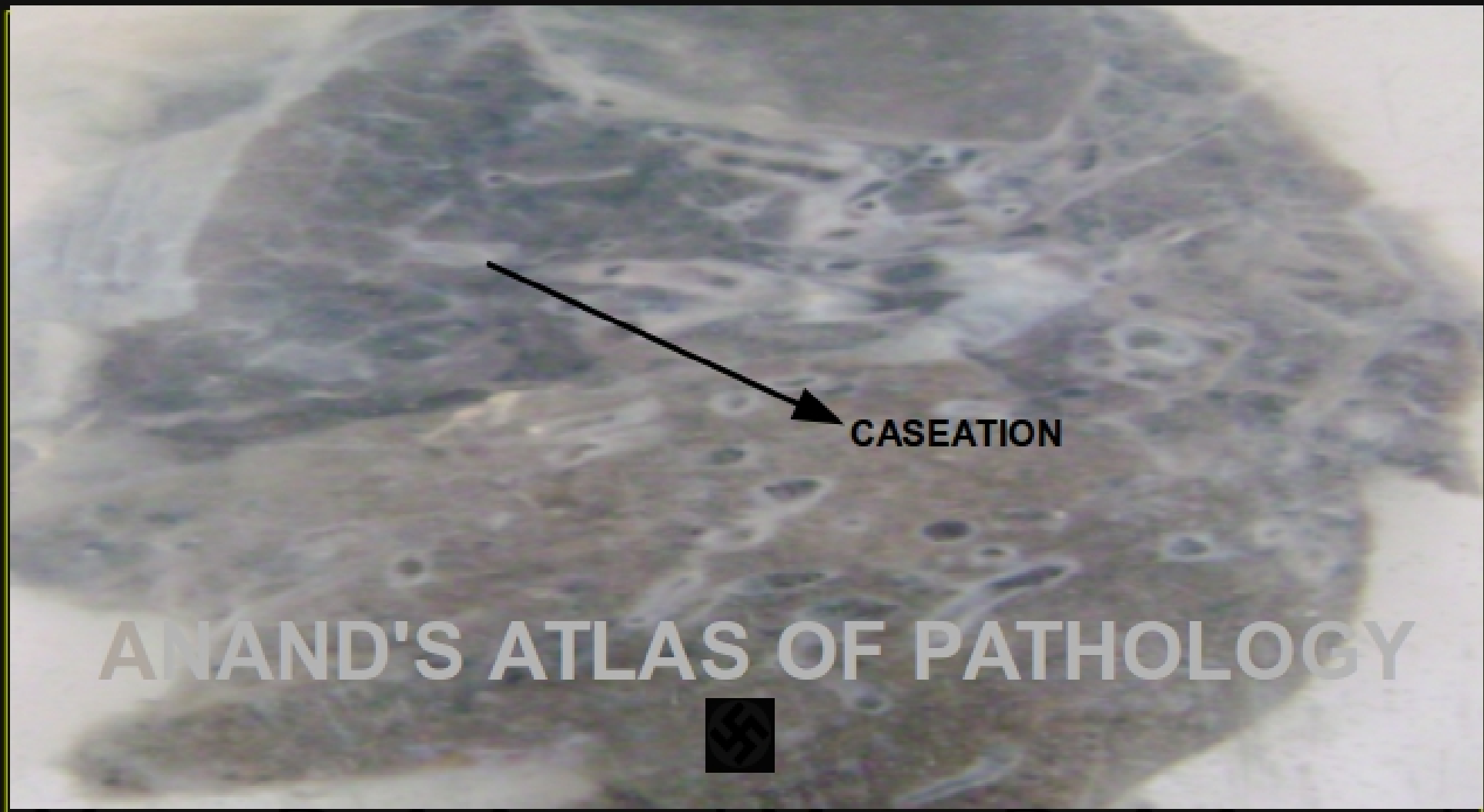
TUBERCULOSIS OF LUNG



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TUBERCULOSIS OF LUNG

LUNGS ARE RIDDLED WITH GRAY WHITE AREAS OF CASEATION

MULTIPLE AREAS OF SOFTENING AND CAVITATION ARE SEEN

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INTESTINAL POLYPS

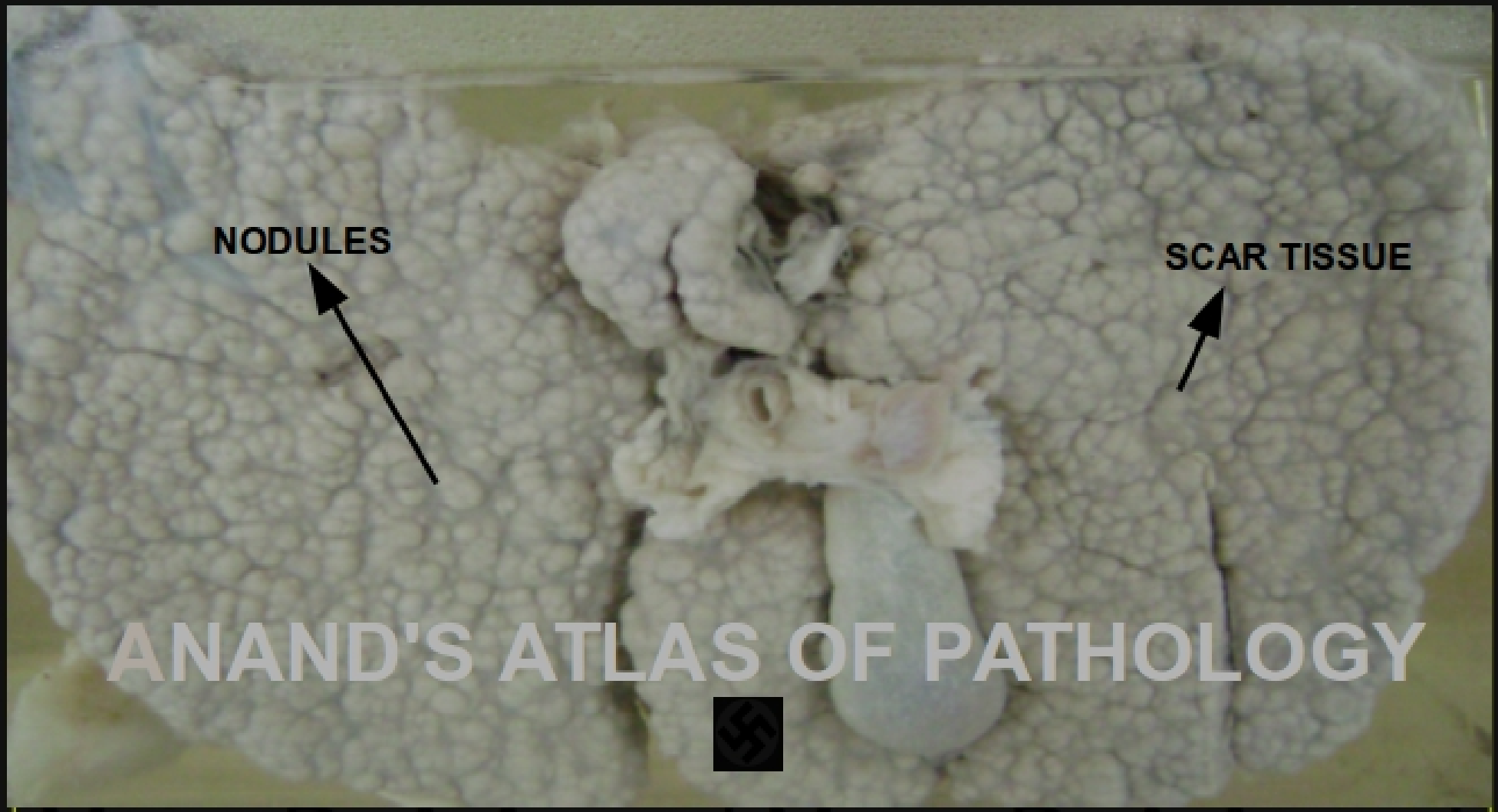
INTESTINAL POLYPS

MULTIPLE HEMISPHERICAL SMOOTH PROTRUSIONS ARE SEEN ON THE MUCOSA

THEY ARE NIPPLE LIKE

USUALLY AFFECTS THE RECTOSIGMOID JUNCTION

CIRRHOSIS OF LIVER



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CIRRHOSIS OF LIVER

SPECIMEN OF LIVER SHOWING IRREGULARLY SIZED NODULES PUNCTUATING THE SURFACE OF THE LIVER

THE NODULES ARE SEPARATED BY SCAR TISSUE

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SECONDARIES - LIVER

SECONDARIES - LIVER

WELL ROUNDED GROWTHS OF VARYING SIZES SEEN ON THE SURFACE OF THE LIVER

POSSIBLE PRIMARY SITES OF MALIGNANCY IS BY HAEMATOGENOUS ROUTE FROM ABDOMINAL ORGANS AS ALL PORTAL BLOOD IS DRAINED INTO THE LIVER

COMMONEST SITES OF METASTATIC SECONDARIES INTO THE LIVER ARE FROM COLON, LUNGS AND BREAST

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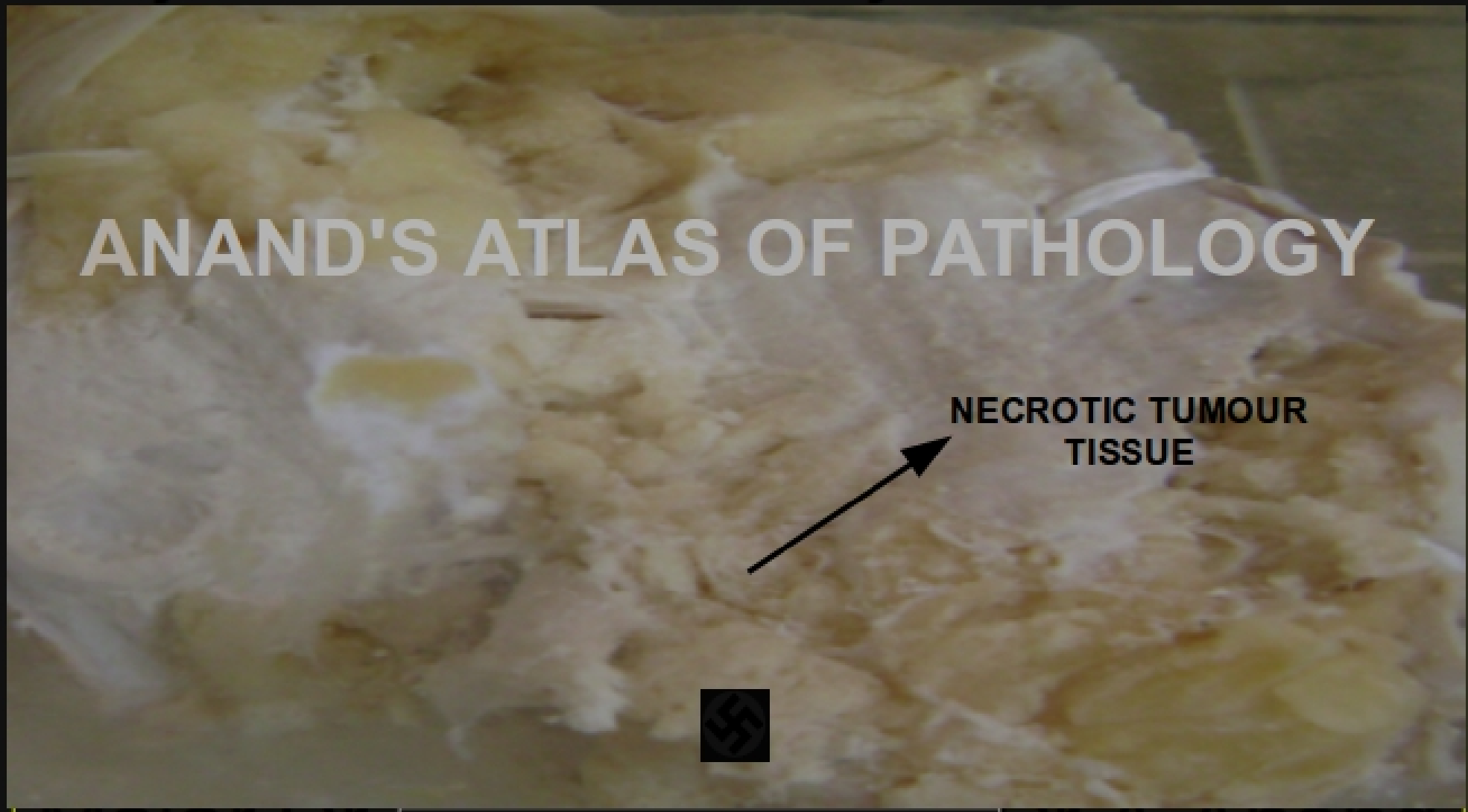
CARCINOMA OF BREAST



CARCINOMA OF BREAST

DUE TO DESMOPLASTIC RESPONSE, NORMAL BREAST FAT IS REPLACED AND FORMS A HARD PALPABLE MASS

DIMPLING OF SKIN IS SEEN

RETRACTION OF NIPPLE IS SEEN

FIXITY TO CHEST WALL IS SEEN IN INVASIVE CARCINOMA

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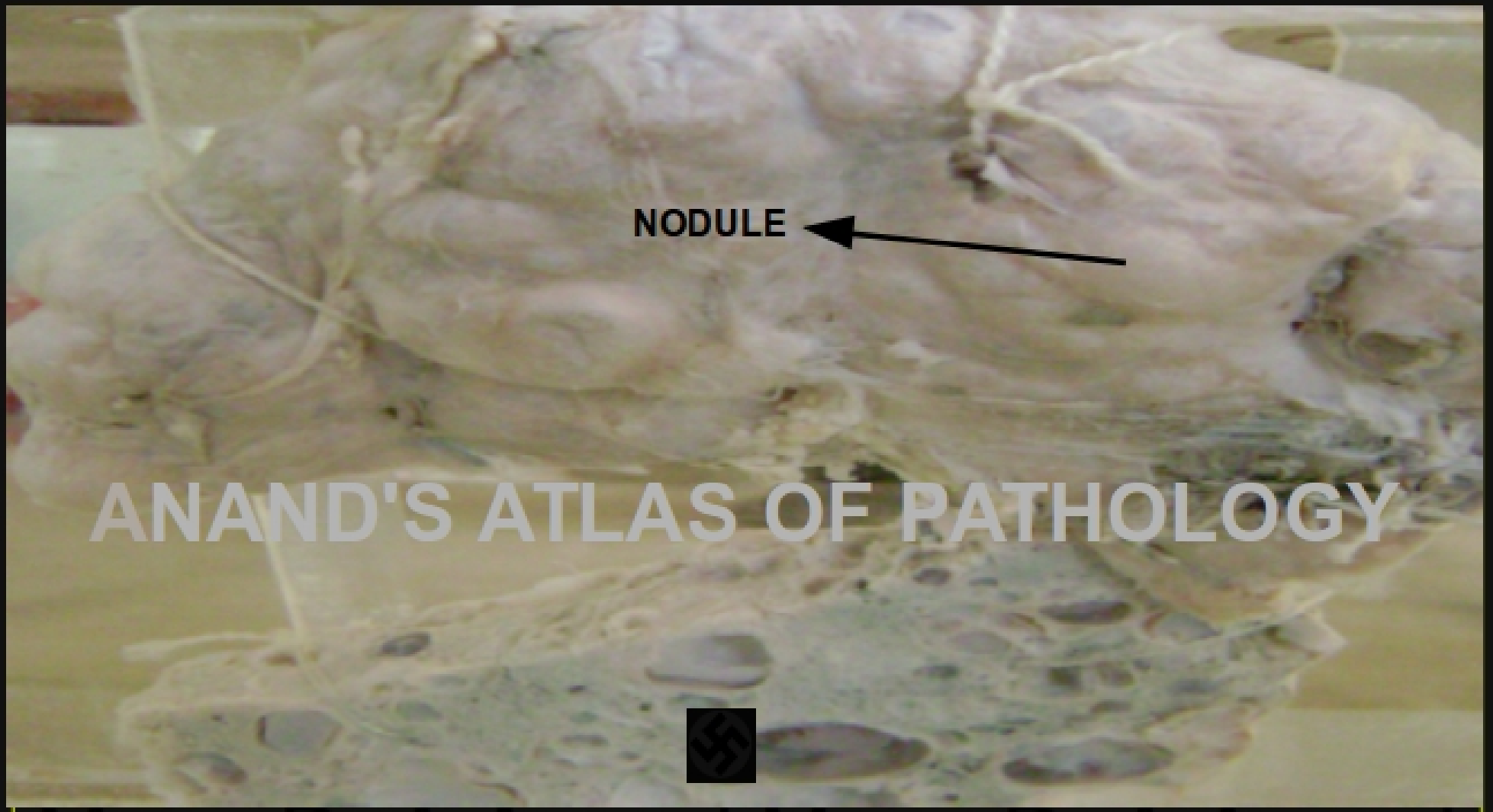
MULTINODULAR GOITRE



MULTINODULAR GOITRE

THYROID GLAND IS IRREGULARLY ENLARGED

MULTIPLE IRREGULARLY PLACED NODULES OF VARYING SIZES AND SHAPE ARE SEEN

THE GLAND APPEARS COARSE AND AREAS OF FIBROSIS AND CYSTIC CHANGES ARE SEEN

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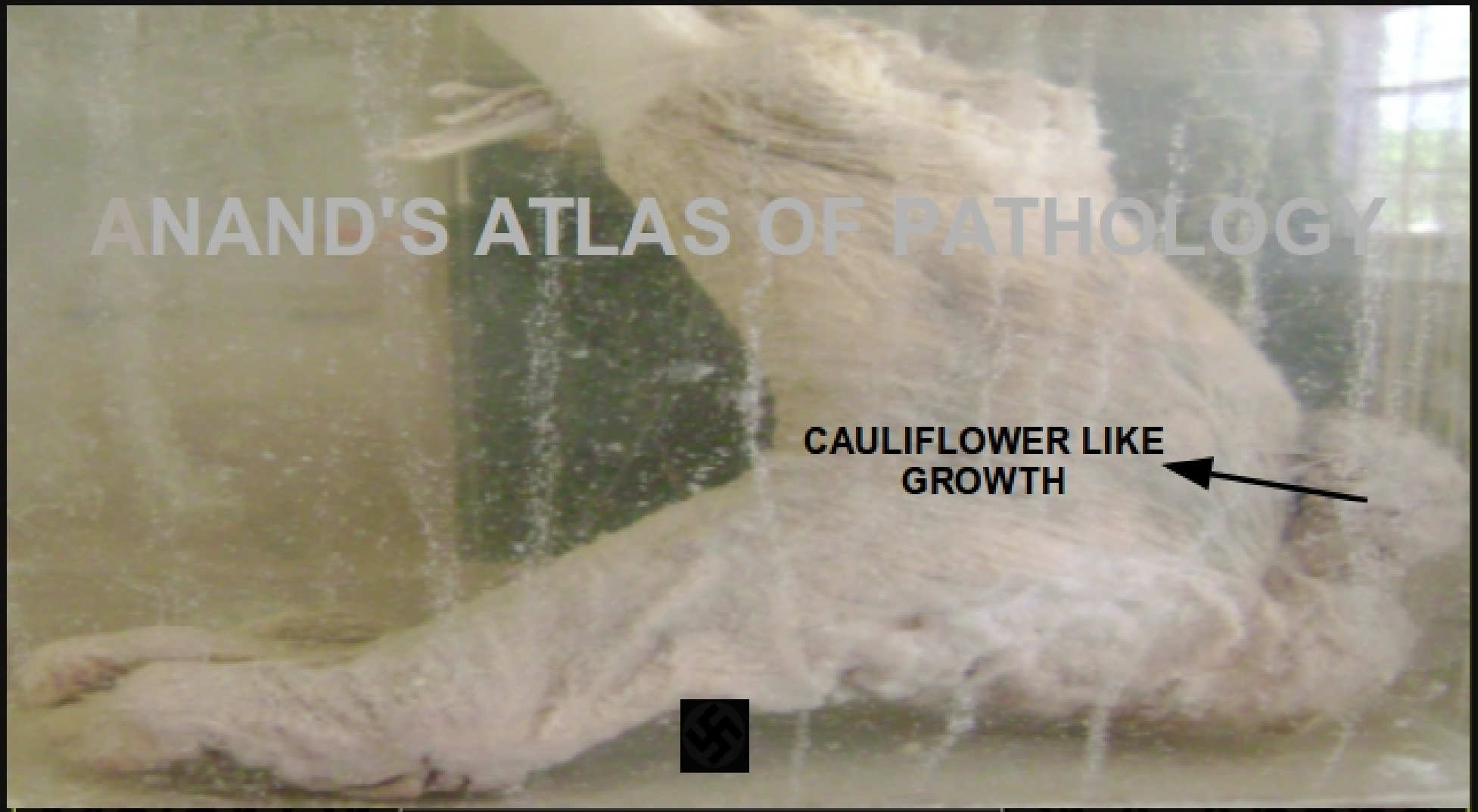
SQUAMOUS CELL CARCINOMA OF FOOT



SQUAMOUS CELL CARCINOMA OF FOOT

ARISES COMMONLY FROM SUNLIGHT EXPOSED SURFACES

FOOT IS A COMMON SITE

OLD BURNS SCAR IS A PREDISPOSING FACTOR

LESIONS ARE NODULAR, THE GROWTH IS LIKE THAT OF A CAULIFLOWER

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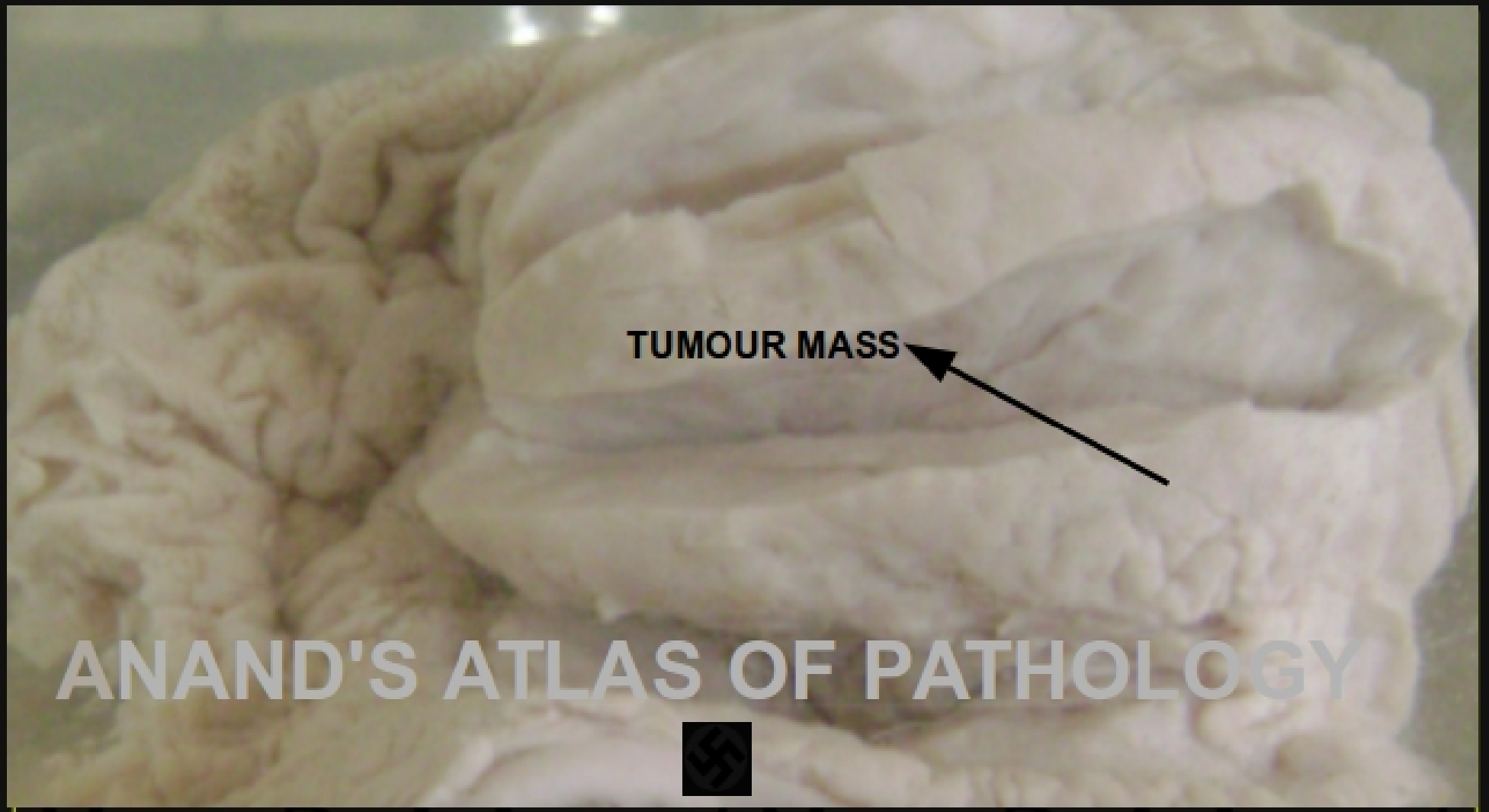
CARCINOMA OF STOMACH



CARCINOMA OF STOMACH

PYLORUS AND ANTRUM ARE THE COMMONLY AFFECTED SITES

THERE IS PROTRUSION OF TUMOUR MASS INTO THE LUMEN

IN EXCAVATED TYPE, A SHALLOW OR DEEPLY EROSIVE CRATER IS SEEN

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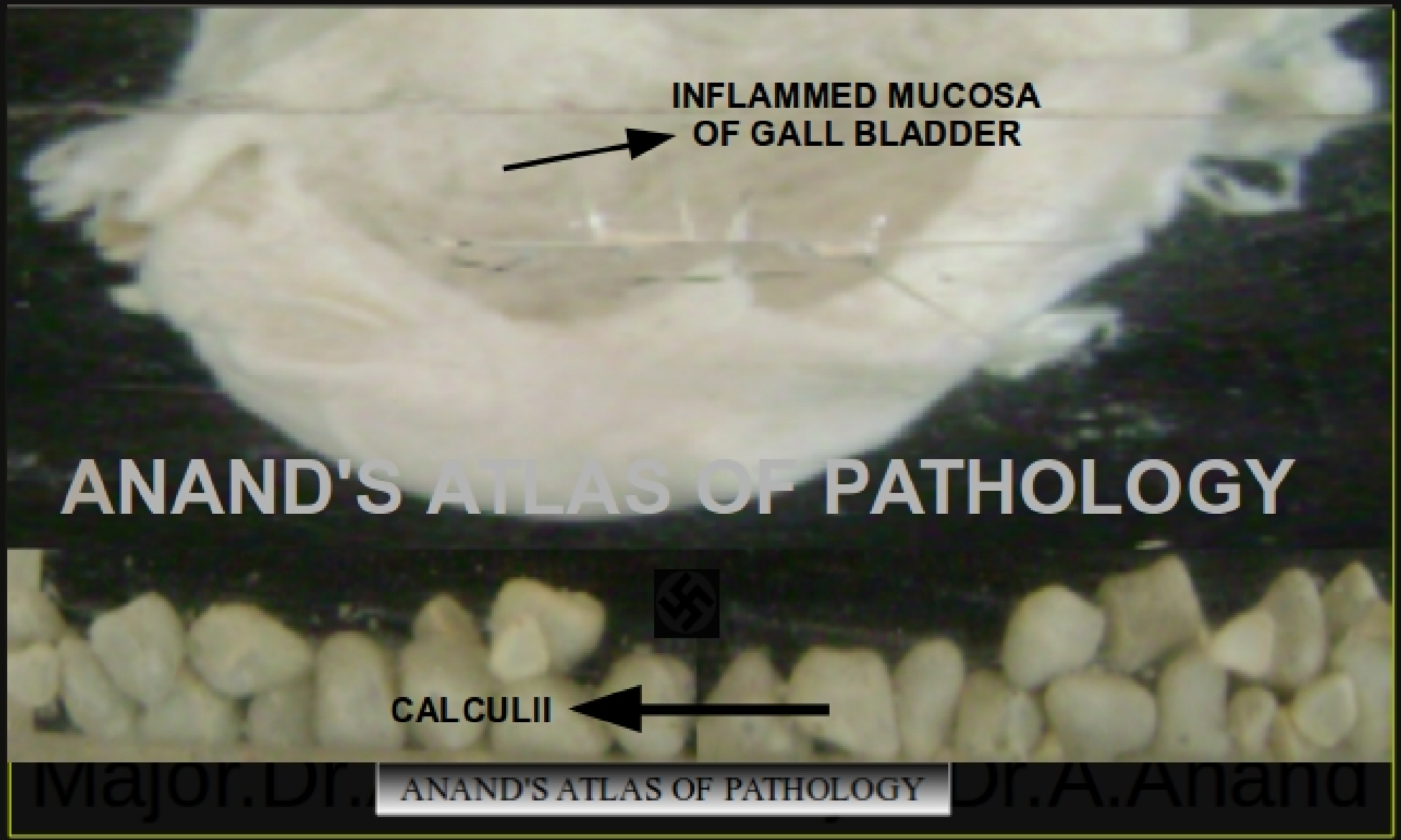
CHOLELITHIASIS



CHOLELITHIASIS

THE GALL BLADDER MUCOSA IS IRREGULAR DUE TO CHRONIC INFLAMMATION

MECHANICAL MANIPULATION OF GALL BLADDER CAUSES FRAGMENTATION OF GALL STONES

CALCULII ARE USUALLY CHOLESTEROL STONES

CHOLESTEROL STONES ARE USUALLY YELLOW, MULTIPLE AND HAVE FACETED SURFACES

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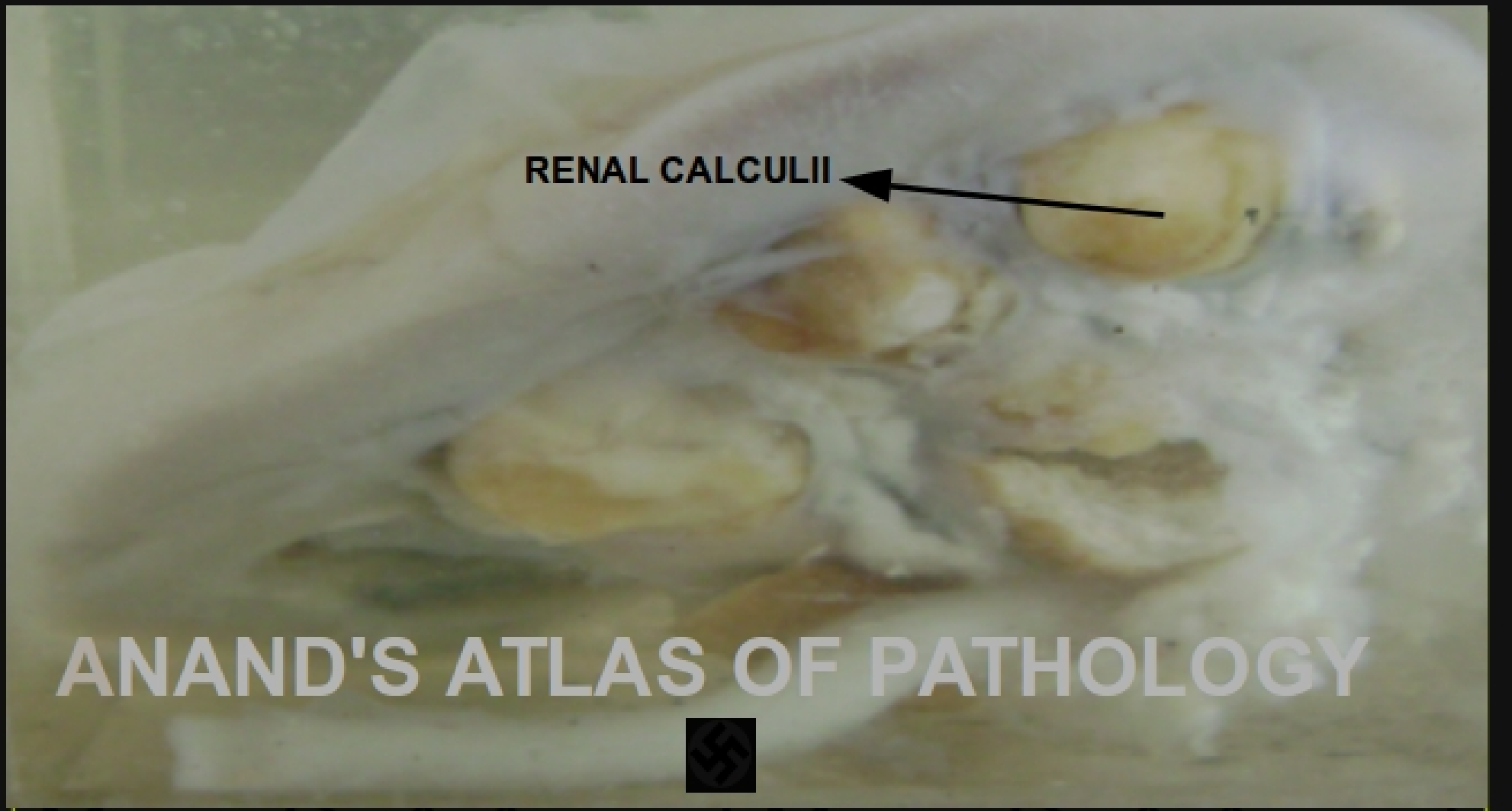
RENAL CALCULII



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RENAL CALCULII

ALSO CALLED AS UROLITHIASIS

RENAL CALCULII ARE USUALLY UNILATERAL

COMMONEST SITES OF CALCULII ARE RENAL PELVIS AND CALYCES

MANY STONES ARE FOUND

STAGHORN CALCULII IS DUE TO PROGRESSIVE ACCUMULATION OF SALTS

MASSIVE STONES ARE USUALLY COMPOSED OF MAGNESIUM AMMONIUM PHOSPHATE

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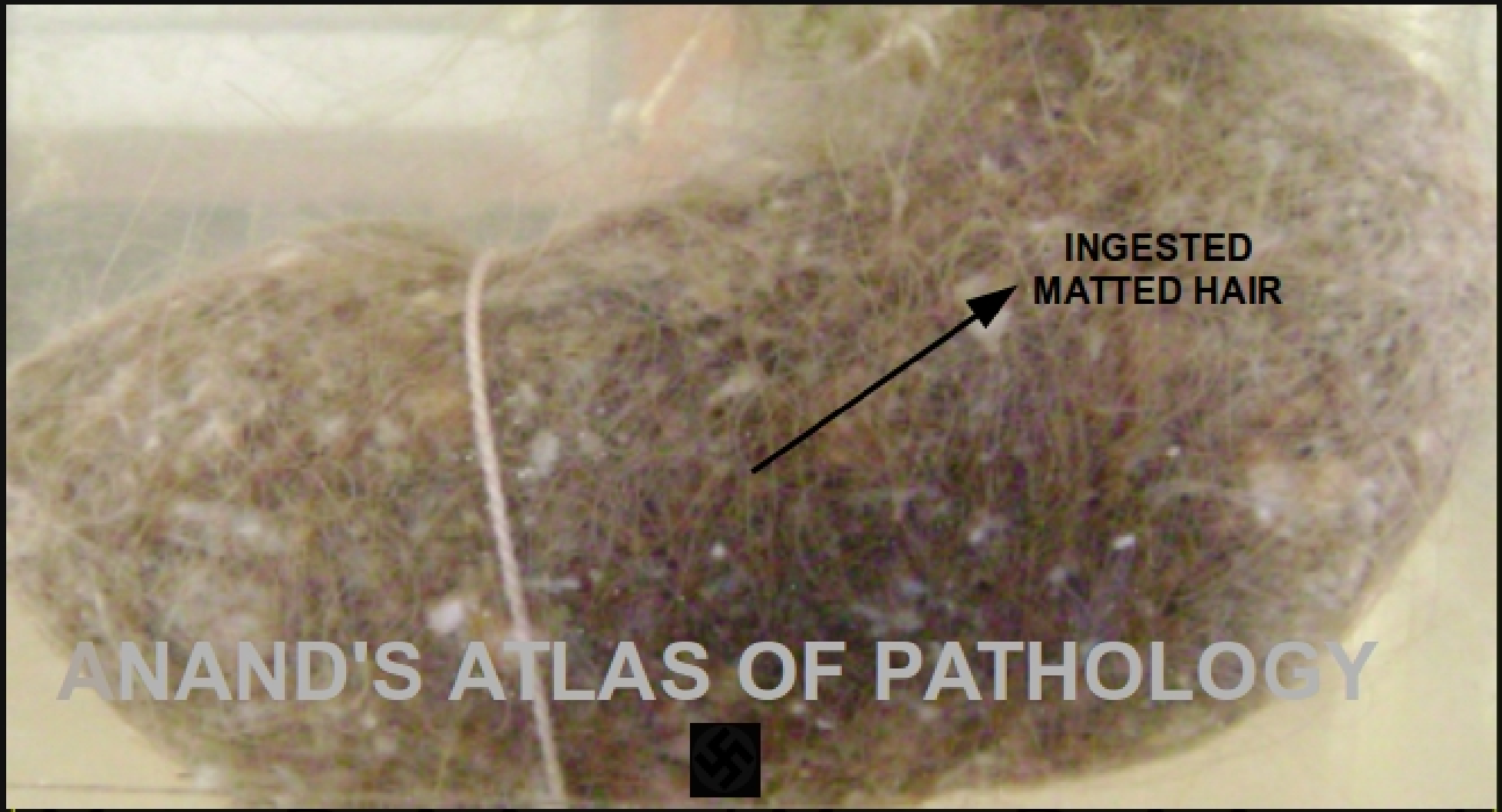
TRICHOBEZOAR



TRICHOBEZOAR

TRICHOBEZOAR OCCURS ALMOST EXCLUSIVELY IN FEMALES

80% OF THE PATIENTS SUFFER FROM PSYCHIATRIC DISORDERS

TRICHOBEZOAR RESULTS FROM INGESTION OF HAIR

PATHOLOGICALLY IT GIVES RISE TO GASTRODUODENAL ULCERATION

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THANK YOU

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