VOLUME II. ILLUSTRATIONS.

PAGE 1. Historical Sketch.

Fig.1. Sir James Paget's original cases of Paget's disease of bone.

Fig.2. Showing the characteristic deformities.

Fig.3. Packard & Steel's case of Paget's Disease of Bone.

Fig.4. " " "

Fig.5. " " "

Fig.6. Calvarium in Parkard & Steel's case showing marked increase in thickness.

Fig.7. Microscopic appearances of the bone (apart from the sarcomatous tumours) in Packard & Steel's case.

Historical Sketch.

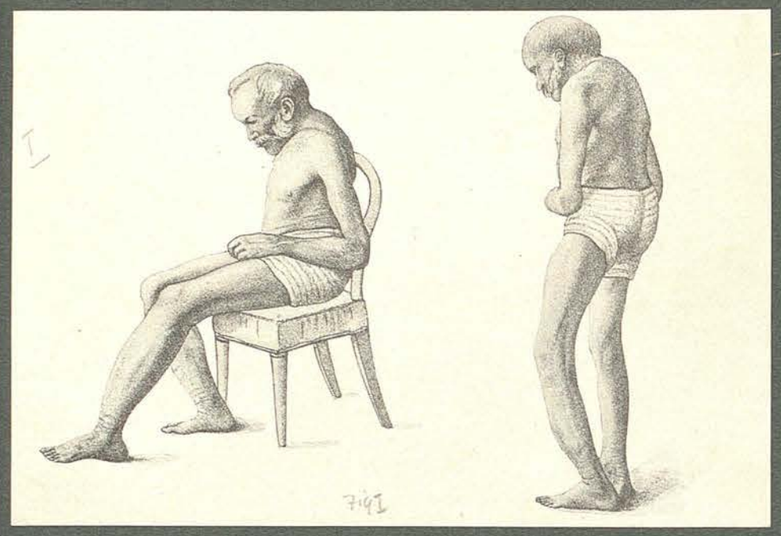
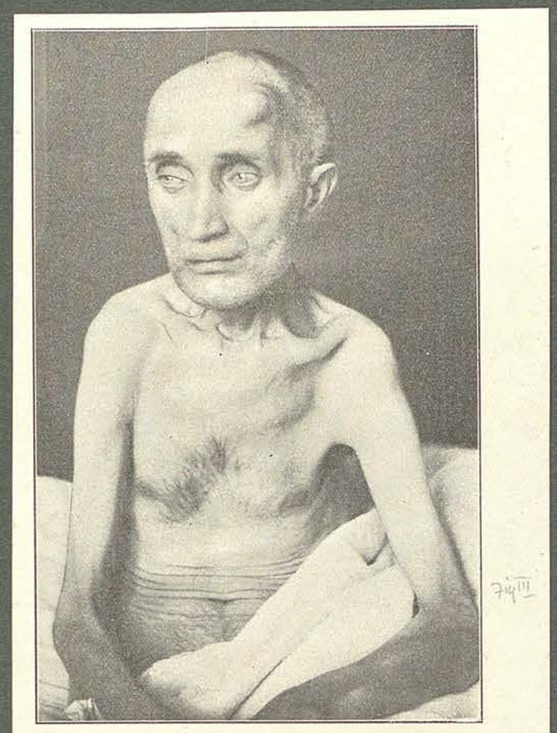


Fig. I.



of subject of report, showing size of head, frontal tumor, clavicle, and pe
shape of chest.

Figs. III & IV.

Fig. VI.

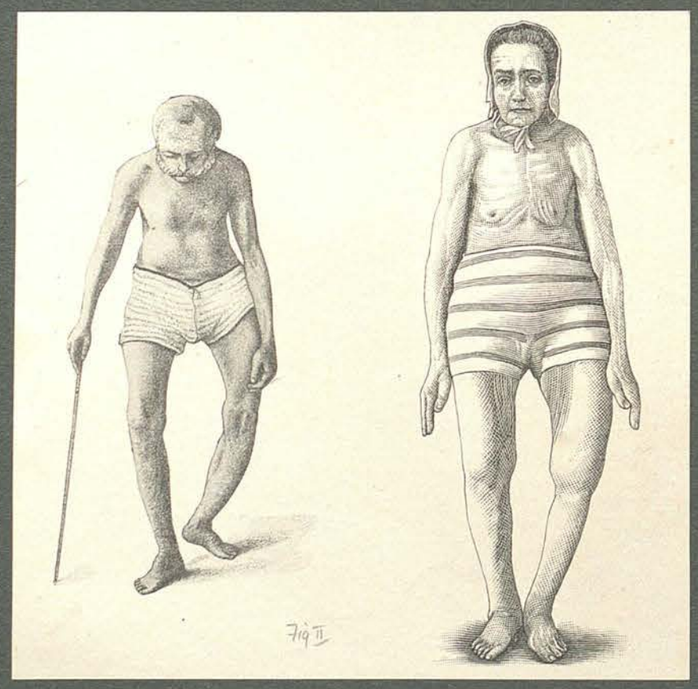


Fig. II.

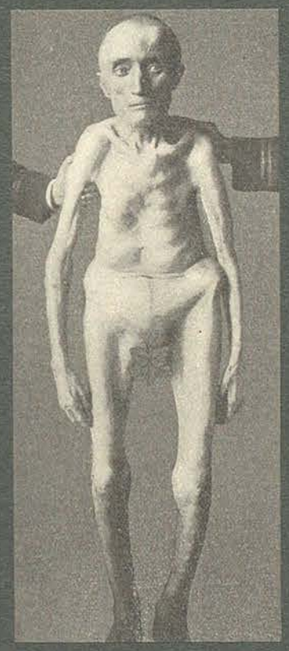


Fig. V.

Fig. VII.

PAGE 2.

Fig. VIII.

(1) & (2). Front and back view of subject of osteitis deformans. Taken five years before patient's death.

(3) Section of skull taken from anterior margin of calvarium (drawn in two parts). Maximum thickness, 1½ inches.

(4) Section of bone from skull; periosteal surface.

Fig IX.

(5) Section of bone from skull; area near dural surface.

(6) Section of femur near periosteum.

(7) Section of thyroid gland.

(8) Section of thyroid gland.

Fig.X. & XI. Clopton's case of Paget's disease of bone, showing typical Xray appearances.

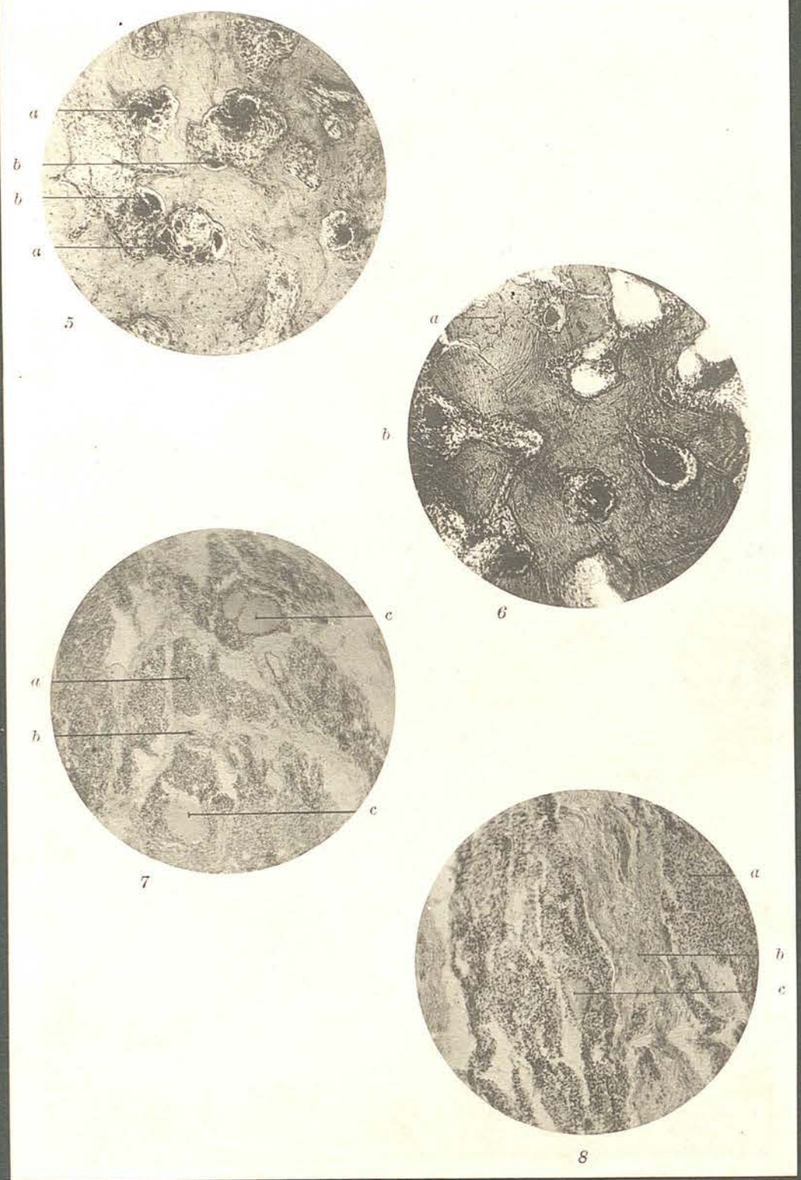
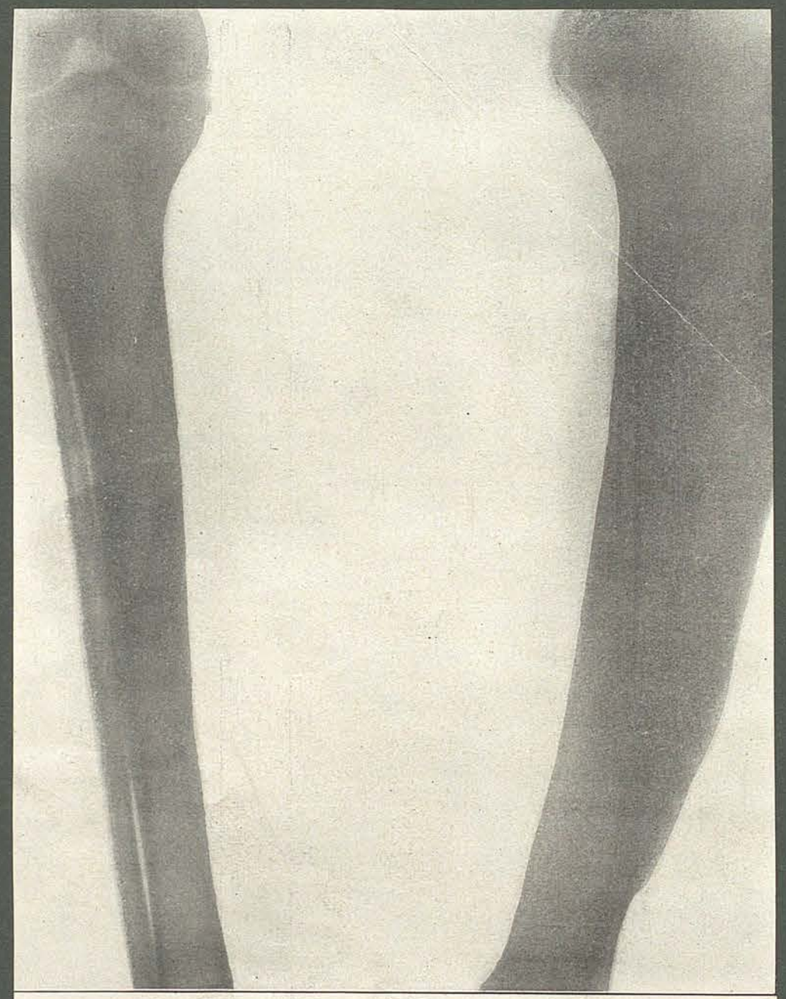


Fig ix



Case 1, Fig. 2.—Showing outward bowing of left tibia with extra deposit on the convexity. Practical disappearance of all old bone tissue in center and upper parts of tibia. Right tibia and fibula practically normal.

fig. x.

P.T.O = Fig XI

Fig X + XI

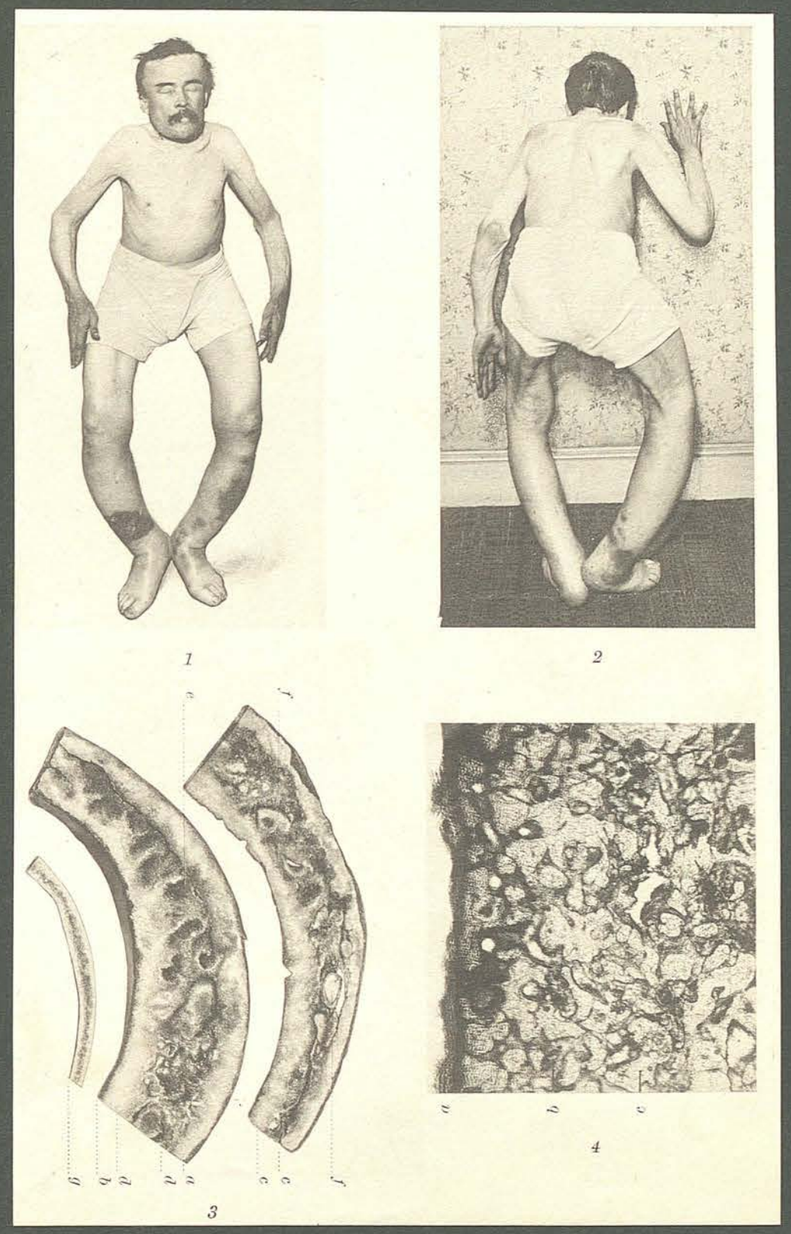


Fig VIII

My own case of Paget's Disease of Bone.

FIGS. I. & II. Photographs taken Nov.1910. showing
(1) bowing & thickening of Tibiae & Femora.
(2) bowing of right Radius.
(3) slightly increased size of skull.

(4). Slight Kyphosus. (Head projected forwards).

My Own Case.

Fig. I.

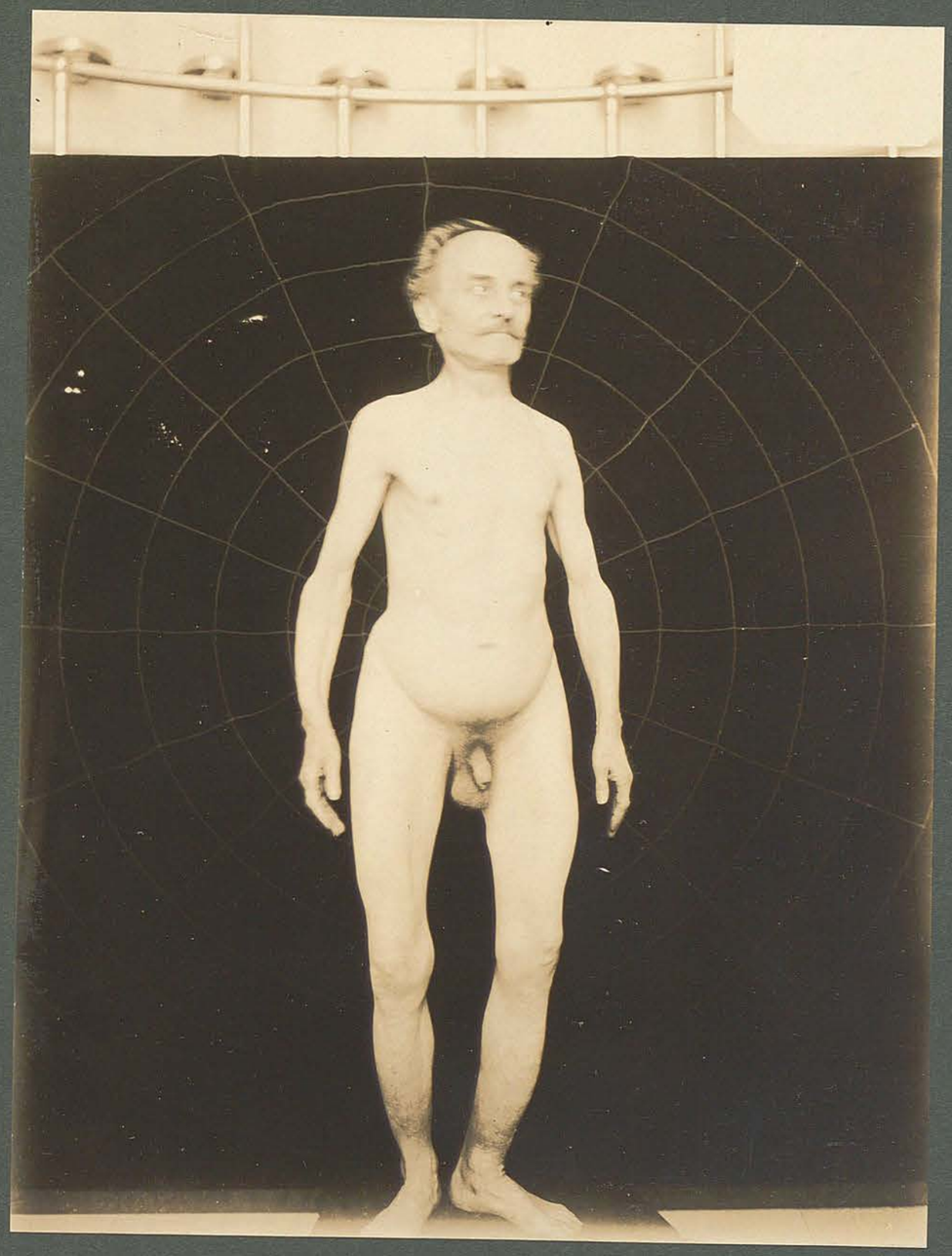


Fig. II.

 (My own case continued).

FIG. III. Taken 10 days after amputation
" IV. of right arm

" V. (1). Shows the good operation scar.
" VI. (2) Small tumour on right Frontal eminence.

" VII &VIII Photographs taken 14 days later than III to VI

" VII (1) Shows rapidly growing tumour on distal end of cut Right Clavicle -

(2) Increase in size of tumour of Right Frontal base.

(3) One small tumour over left Frontal eminence.

(4) Two small tumours in left Parietal region

(5) Exopthalmos.

The progressive emaciation of the patient is also well shown.-

" VIII Shows the tumours at lower end of femora and upper end of tibia.-

Fig. III.

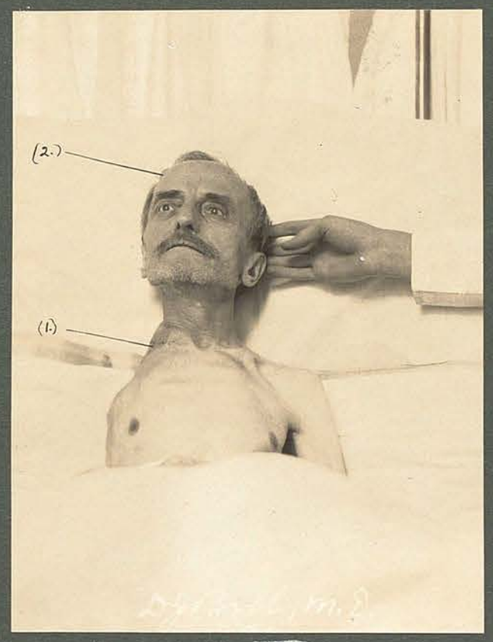


Fig. IV.

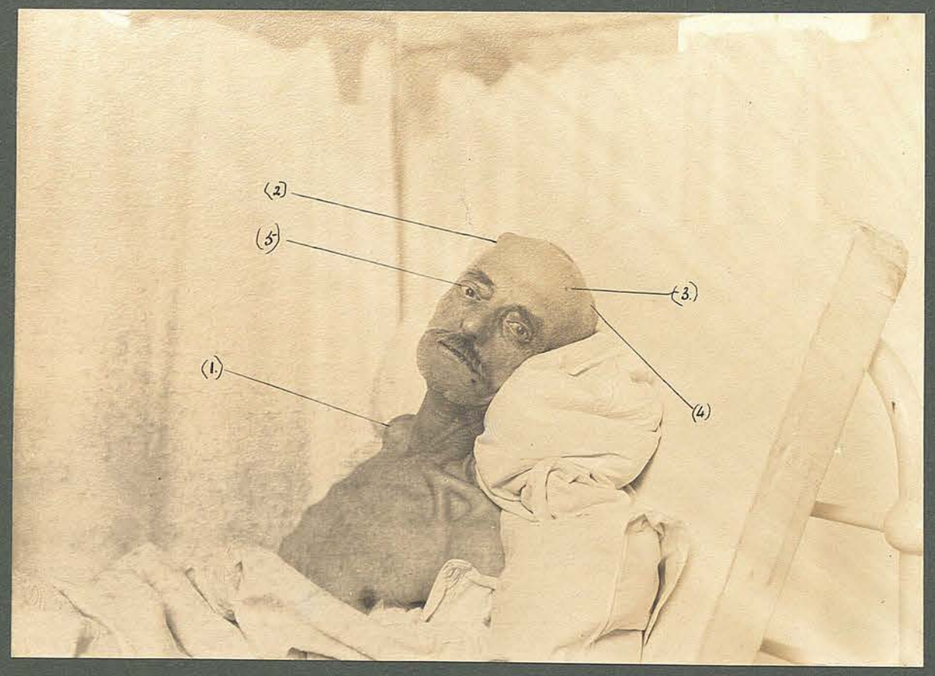


Fig. VII.

Fig. V.

Fig. VI.

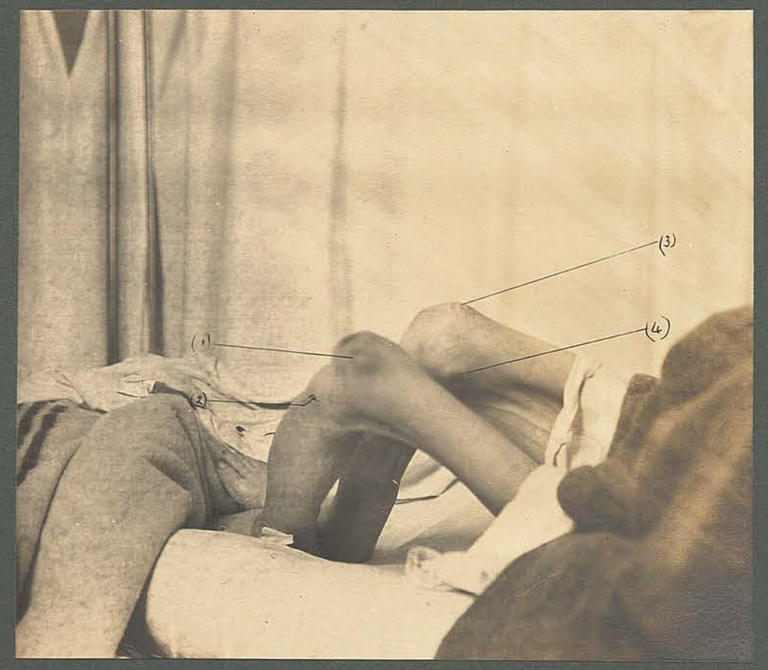


Fig. VIII.

Radiograph of my own case.

FIG. I. Taken Nov.25th 1910.

Skull showing great increase in thickness.

Radiographs of my own Case.

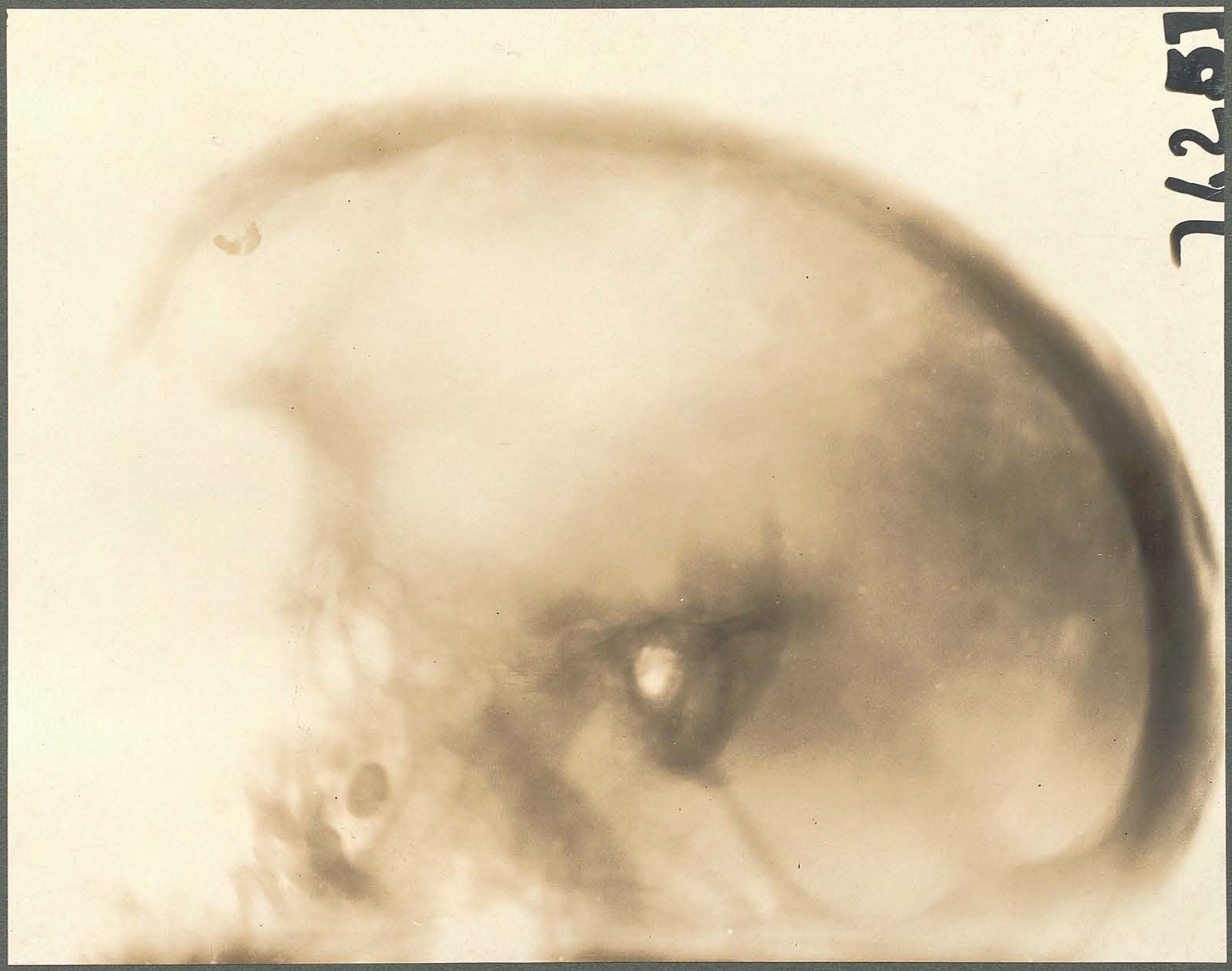


Fig I.

FIG.II. Radiograph of both Femora taken Nov.25,1910.
showing antero-external bowing also
increased thickness of the bones.

FIG.III. Right and left Tibiae taken Nov.25.1910.

(1). marked deformity antero-posterior bowing.

(2). Right Tibia. Showing advanced stage of Paget's Disease of bone.

Note.(a) the loss of medullary canal. The increased thickness of the bone.
(b) the areas of rarefaction and condensation of bone.

(3). Left Tibia showing early stage of Paget's Disease of bone.

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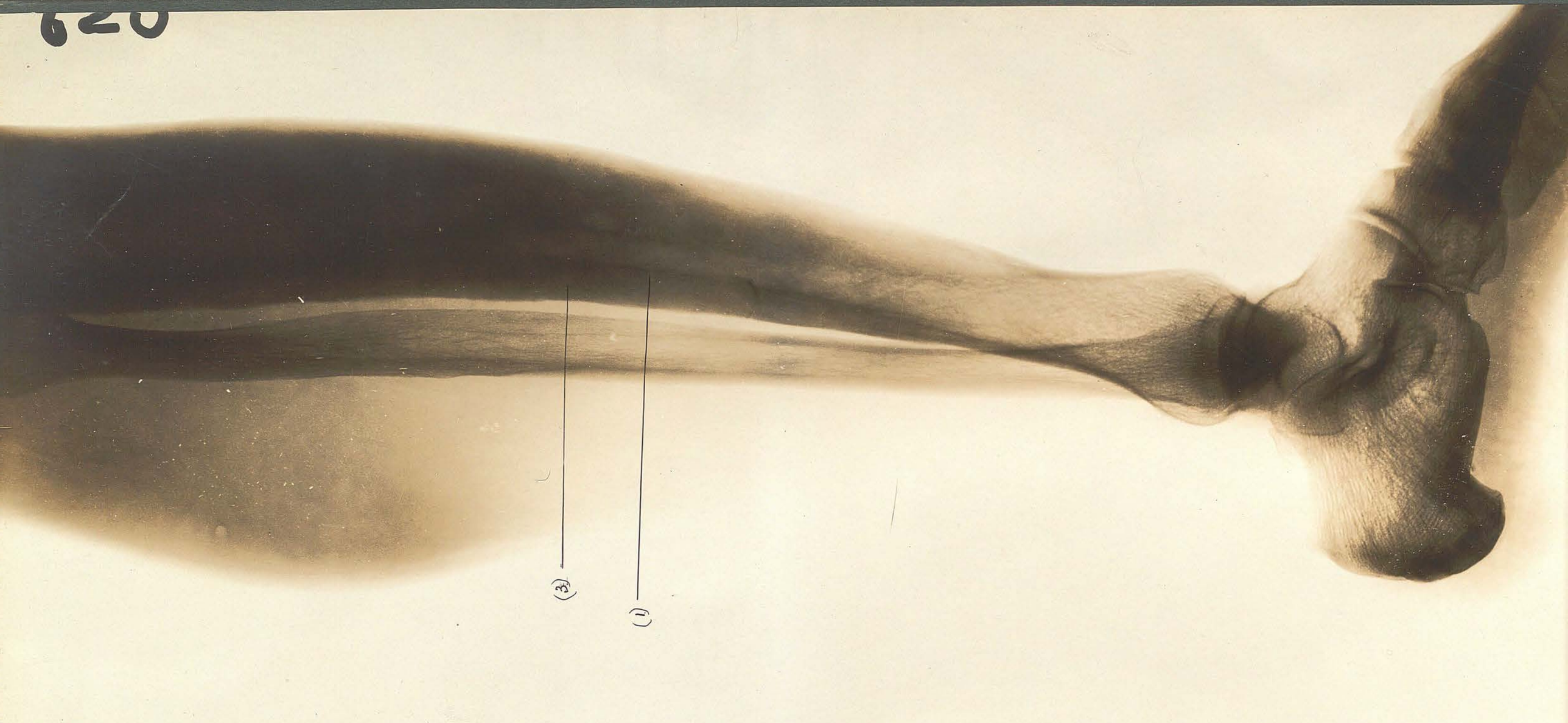

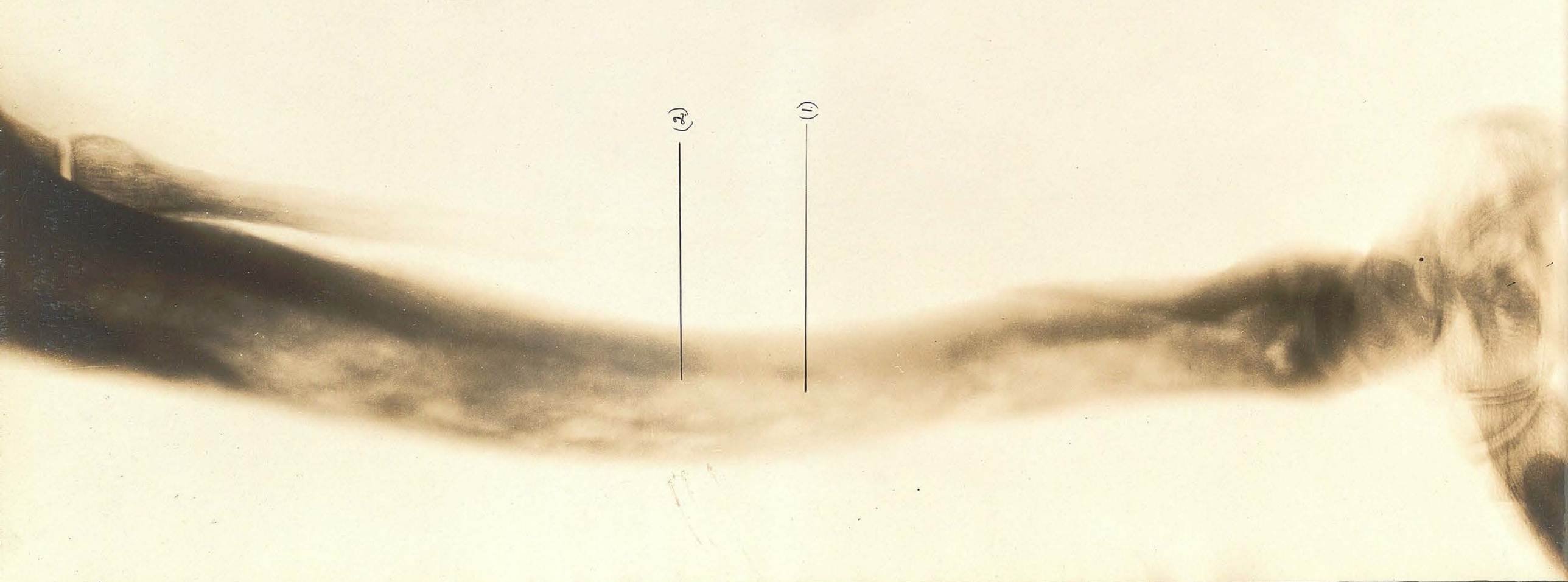

FIG. IV. Right Humerus. Nov.25 1910.

Showing increase in thickness of the bone

and some bending.

Fig IV.

FIG.V. to IX. Show the various stages of Paget's disease of bone and tumour formation in the Right radius.

FIG. V. Right Radius taken Nov. 25th 1910 showing evidence of Paget's disease but no definite tumour formation.

Fig. V.

FIG. V1. Right Radius taken Dec. 10th 1910
evidence of a tumour of bone can now be seen
in the middle third of the bone. =(1.)

Fig VI

FIG. V11. Right Radius taken Dec. 19th 1910 notice increase in size of tumour also increased bowing of the bone

Fig VII.

FIG, V111. Right Radius taken Jan. 7th 1911.
Large size of tumour of radius with
with spontaneous fracture.

Fig VIII.

FIG. 1X. Right Radius taken Jan. 27th 1911.
Note increase in size of tumour.

Fig IX.

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PAGE 14 & 15.

FIG.X & XI. Show the rate of growth of tumour in the head of the Right Humerus.

Fig X. Nov. 25th 1910.

Fig X.

Fig XI Jan. 27th 1911.

Fig XI.

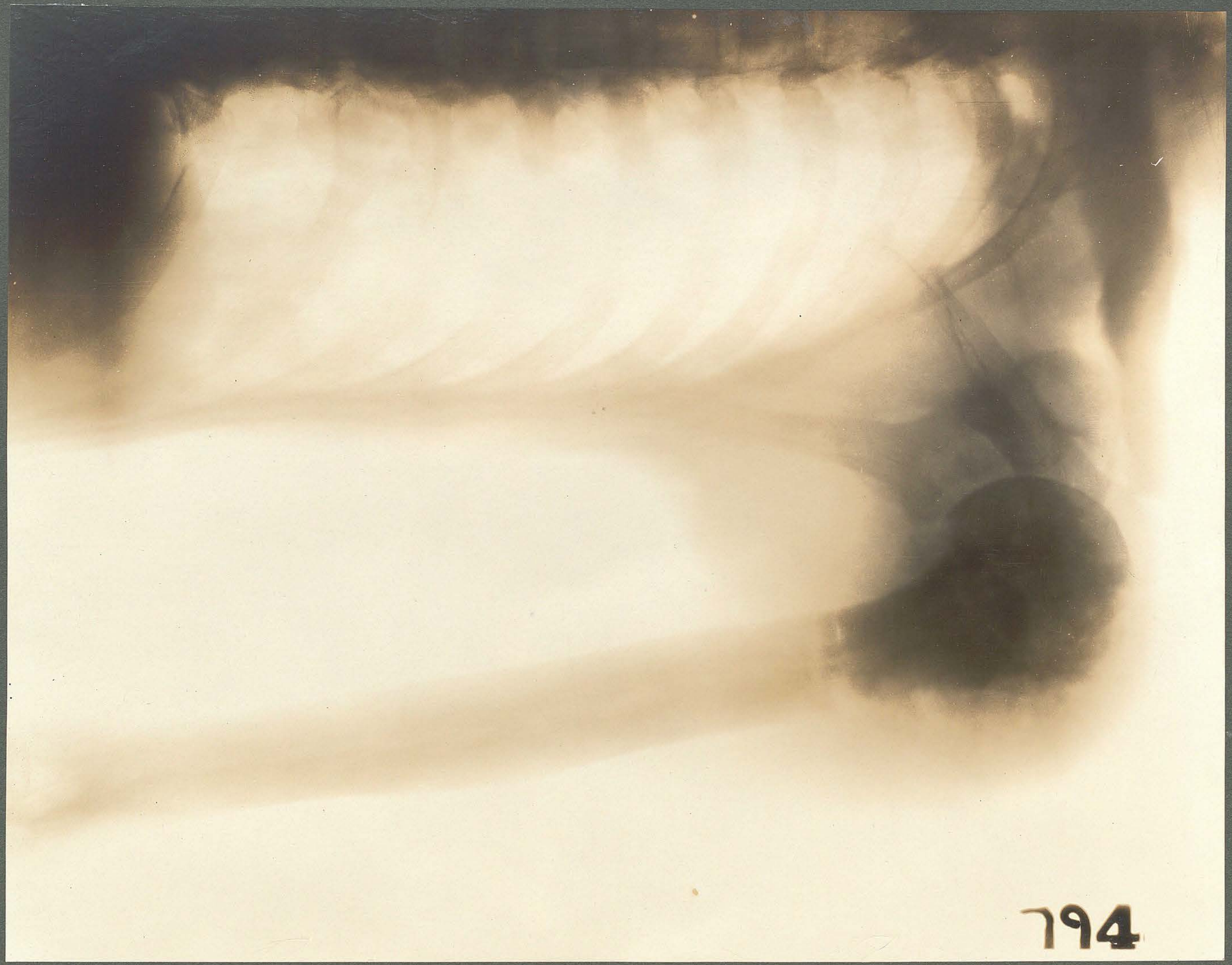

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Fig XI.

PAGE 16a. D. Histological considerations.

FIG.I. Section of Metacarpal Bone. (Zeiss camera lucido at table level Reichart Oc.2.obj.3)

1. Periosteum.
2. Compact surface bone - diminished in amount.
3. " " " - absent in places.
4. Marrow consisted of fat cells - other cell elements are strikingly absent.

FIG.II. Section of shaft of Humerus showing "Fasermark" (Stained van Giesen) Zeiss camera lucida, Reichart oc.2 obj.3.

1. Atrophied outer bone.
2. Periosteum.
3. Accessory bone formation in periosteum.
4. Accessory nutrient vessels with loss of bone.
5. "Fasermark" relatively acellular.
6. Layer of osteoblasts arouns the bone trabeculae.
7. Irregular clusters of cells of the same order as osteoblasts.
8. Fibril formation originating from these osteo-blasts.

PAGE 16b.

FIG.III. Section of clavicle to show osteoblastic activity. (Zeiss camera lucida at table level. Reichart oc.4.obj.3.)

1. Fibrous marrow.
2. Rows of osteo-blasts
3. Osteoclast.

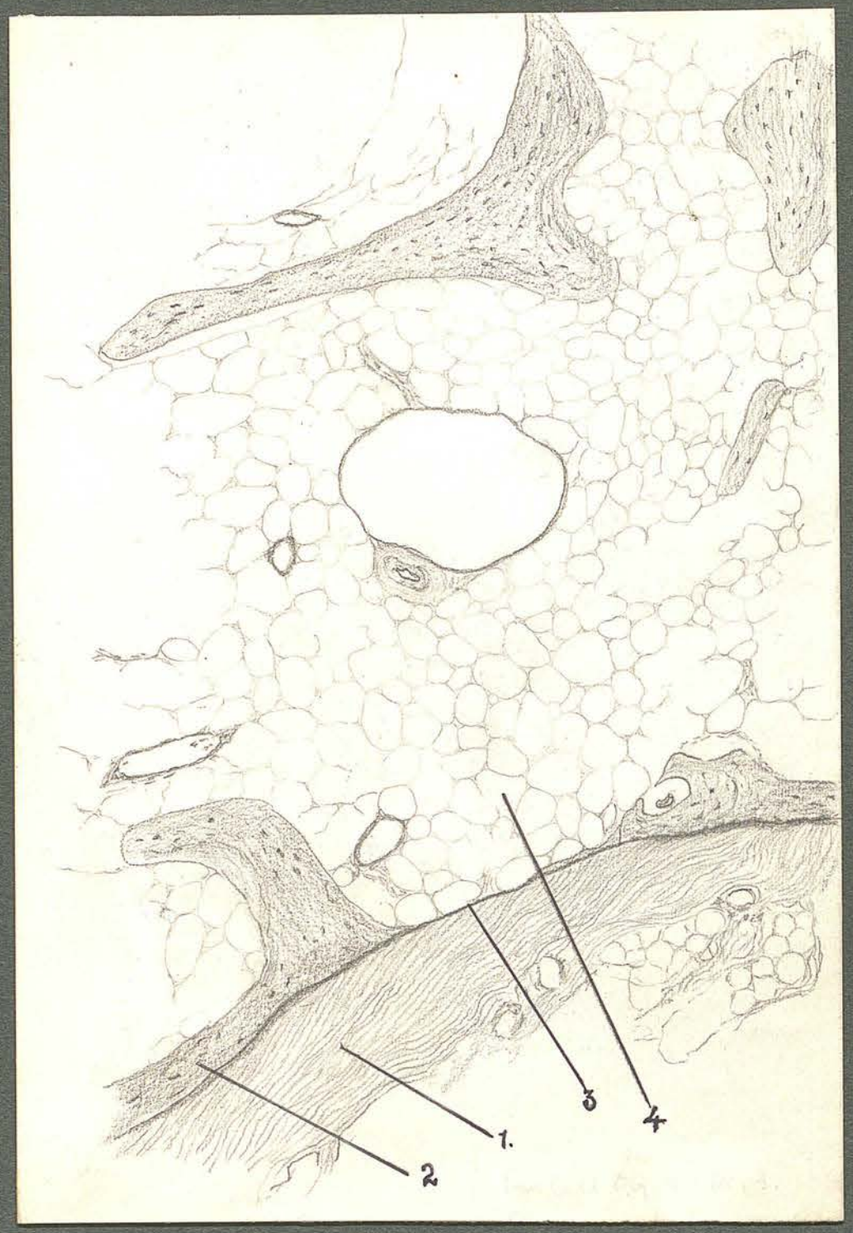

Fig. I

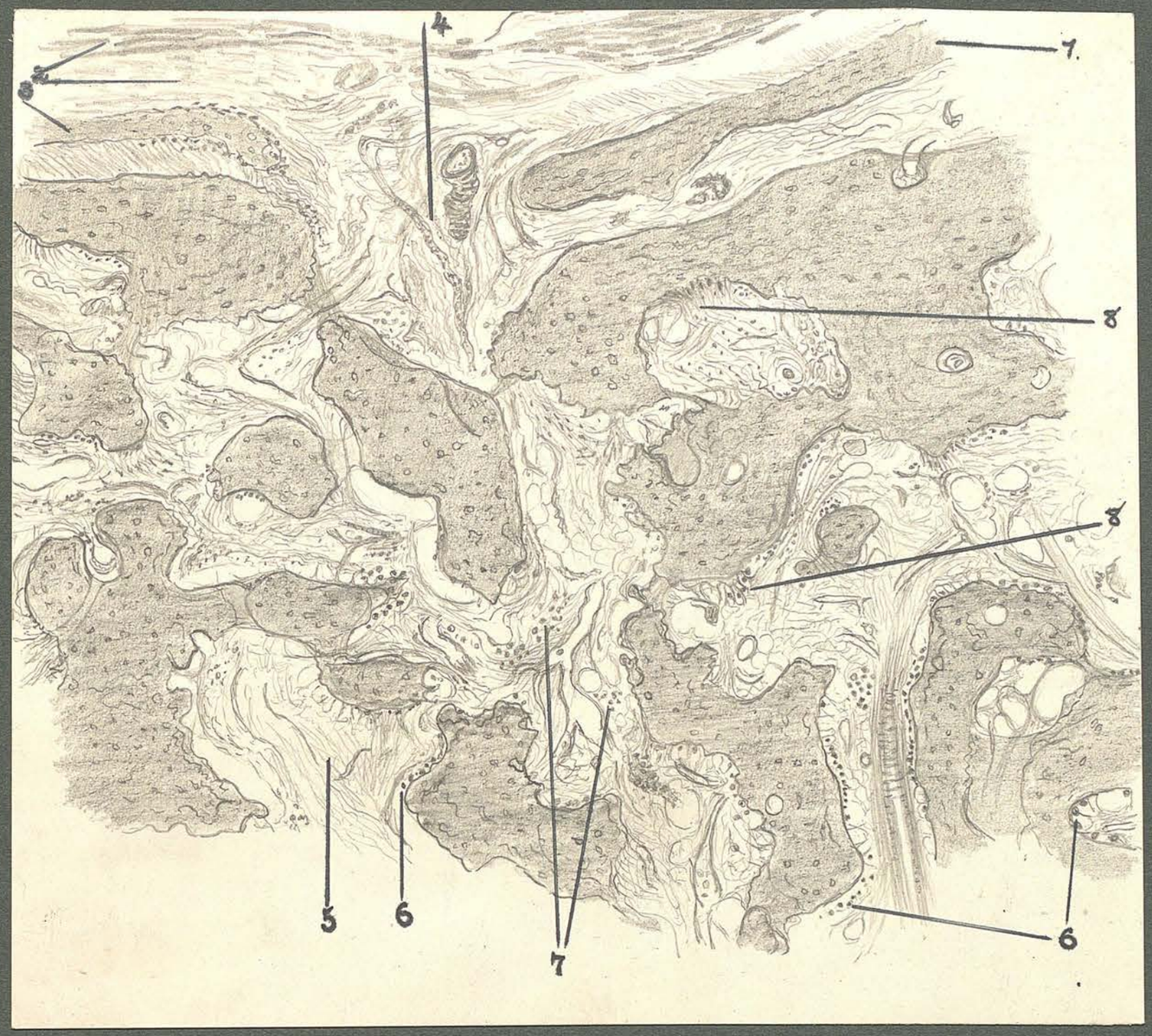

Fig. II

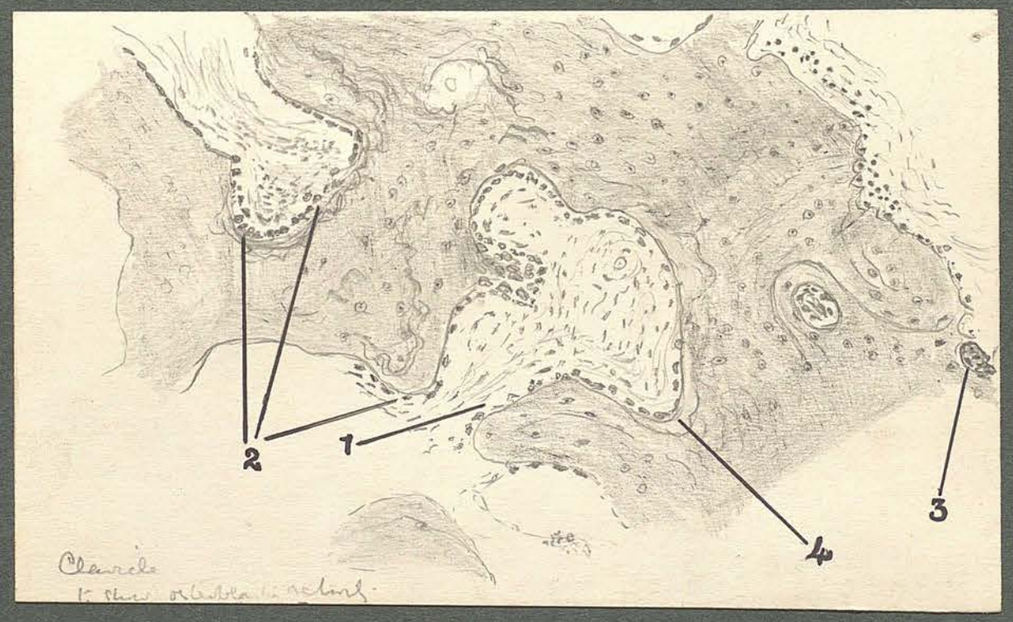

Fig. III

FIG.IV. Section from neck of Rt.humerus stained Van Giesen.(Zeiss camera lucida. Reichert oc.2. obj.3)

To show transition of fibrous marrow to osteoid marrow in direct connection with pre-existing bony lamellae, but also free deposit of osteoid interstitial substances in the middle of the marrow spaces.

1. = "Fasermark"
2. = Osteoid tissue developed in connecting with bony lamellae.
3. = Osteoid tissue developed in marrow spaces.
4. = fat cells.

FIG.V. Photograph of amputated arm showing

1. Tumour of Radius
2. Spontaneous fracture of radius.
3. Tumour of upper end of Humerus.
4. Spontaneous fracture of neck of Humerus.

FIG. VI. Humerus (tumour.) Inner aspect (stained Mallory) (Zeiss Camera lucida at table level. Reichert. oc.2. obj.7a.)

1. Network of hyaline bars.
2. Osteoid tissue.
3. Cellular proliferation.

FIG. VII. Section from humerus stained Mallory. (Zeiss camera lucida at table level Reichert oc.4 obj.3)

1. Showing hyaline matrix enclosing osteoblasts.
2. In places note the imperfect calcification. i.e. formation of osteoid trabeculae.

Fig. IV.

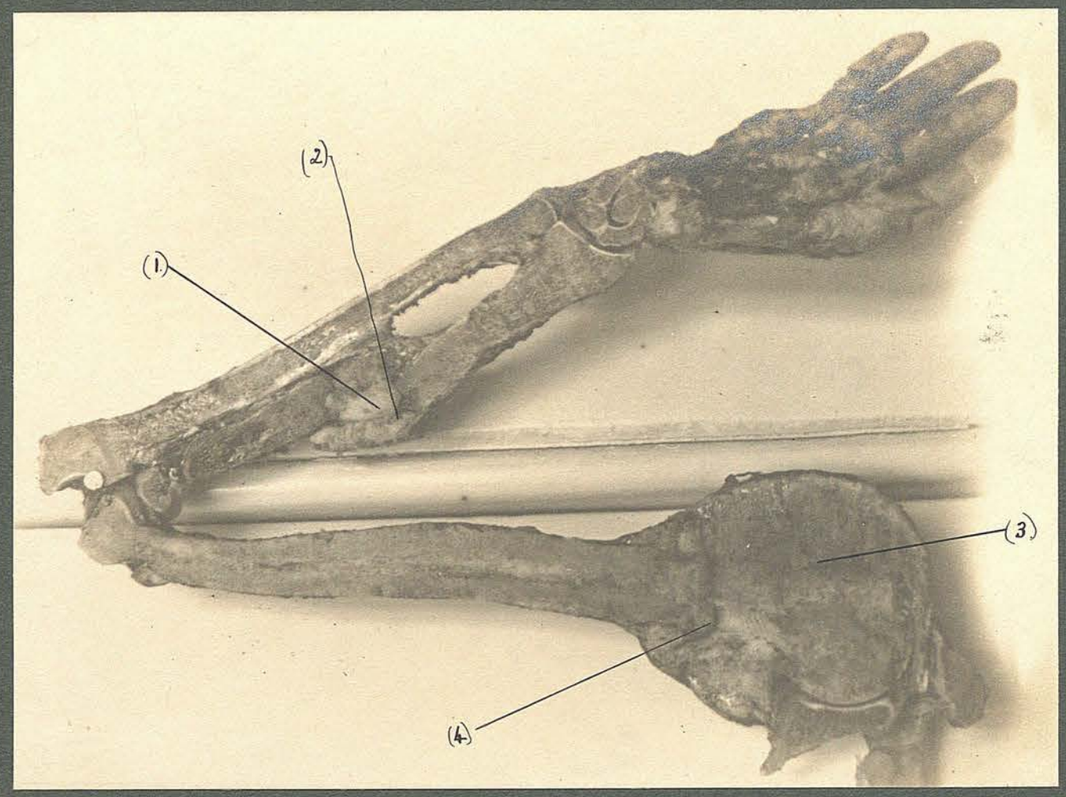

Fig. V.

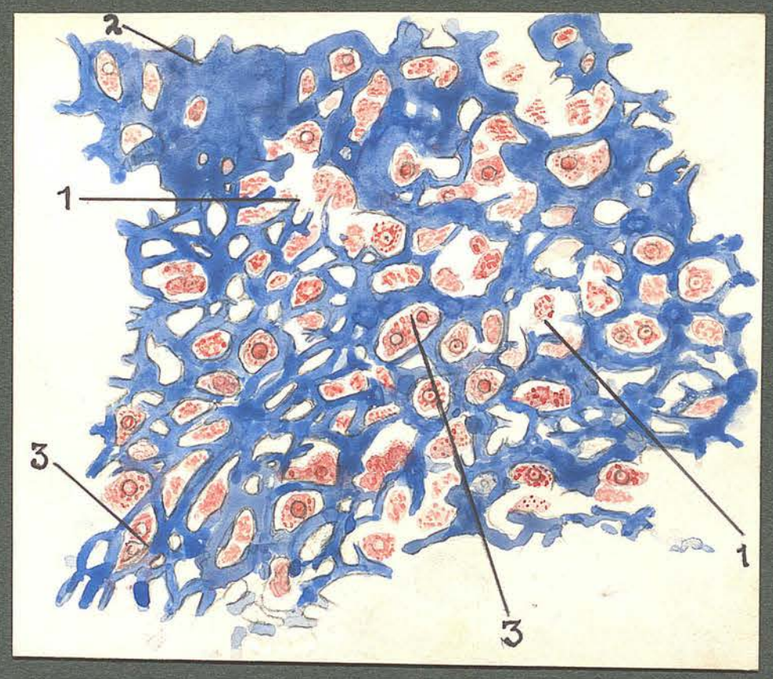

Fig. VI.

Fig. VII.

FIGS.VIII.,IX. & X.:- illustrate the successive changes in the development of the truly sarcomatous areas.

FIG.VIII. Section from Head of Humerus. (stained van Giesen) Zeiss camera lucida at table level. Reichert oc.2 obj.7a.)

1. Outlying osteoid trabeculae with imperfect calcareous deposit.
2. Fibrillar framework of above.
3. Transition from fibro-hyaline to purely fibrillar matrix.
4.
5. Islands of hyaline deposit.
6. Cells showing fibrillar processes.

FIG.IX. Note absence of hyaline osteoid matrix. Note richly cellular growth - the cells being irregular but chiefly of short spindle celled type. Note loose irregular fibrillar stroma.

FIG.X. From Periosteal boundary of neoplasm.

1. Periosteal bands of connective tissue.
2. Tumour cells infiltrating periosteum.
3. Tumour outside periosteum. Note its purely cellular nature.

With little or no fibrillar matrix - mixed celled sarcoma.

Fig. VIII.

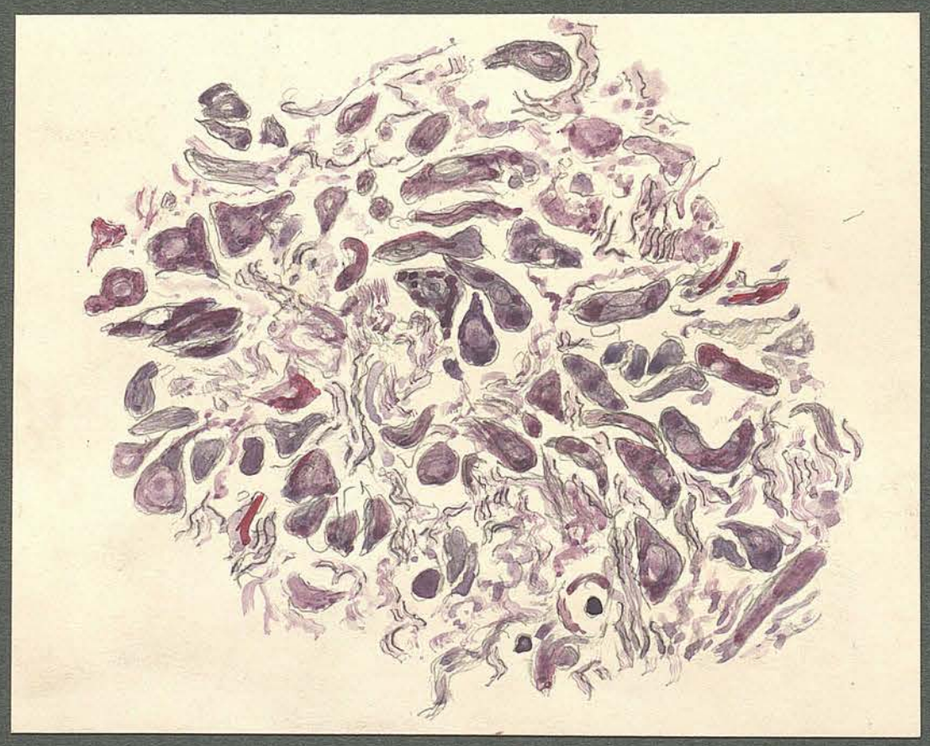

Fig. IX.

Fig. X.

MICROPHOTOGRAPHS.

Section of Upper end of Rt.humerus bordering on the tumour.

Fig. XI. Low power showing the gradual transition from the (1) typical Paget's Bone
(2) to the sarcomatous tumour.
Low power.

FIG.XII. Section from Rt. Humerus - Shaft - showing
(1)"Fasermark" note the striking paucity of cellular marrow elements.
(2) Osteoclast.

FIG.XIII. Low power Section taken from borderland zone of the tumour of right radius.

(1). Bone trabeculae
(2). Osteoid tissue (cellular)
(3) " "
(4). Cellular sarcomatous tissue.

Fig. XI.

Fig XII.

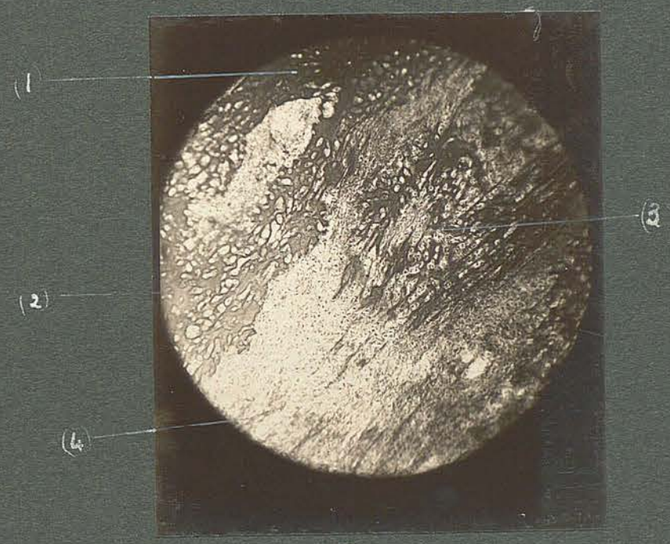

Fig XIII.