Figure 30. Vessel wall apparently formed by stroma - at one part see wholesale detachment of supporting cells followed by displacement of intima.

Figure 31. Doc.

Figure 32. Blood Sinus ("distended capillary") in premenstrual mucosa.

Figure 33. Space formed in stroma by displacement of tissues.
Plate III. Uterine Mucous Membrane (X1000). showing oedematous opening out of, and blood escape into, stroma (premenstrual). In lower part see fine vessel with wall formed by stroma protoplasm - no evidence of differentiation. Note evidence of active fluid imbibition in shape of bulging spaces enclosed by fine protoplasmic films, some of which (in larger) have been torn across. Same evidence of fluid accumulation throughout vessel wall and surrounding stroma. Appearances indicate that intercellular spaces and spaces of intricate "network" of other writers correspond each to fluid chamber walled in on every side.
Plate IV. Uterine Mucous Membrane (Premenstrual). (X 1000). Small vessel with wall formed by cells identical with those of surrounding stroma. Note oedematous opening up of stroma and detachment of cells from vessel wall. In some regions blood cells lying free in clear spaces. To show especially minute structure of stroma. See that intercellular spaces enclosed by complete films and that intricate tissue network of other writers formed by fine protoplasmic pellicles separating spaces containing fluid actively imbibed.
Plate V. Structure of Uterine Mucous Membrane (X 1000).
Section showing fine vessel from which two red cells have escaped and are lying in adjoining clear space. Note fluid accumulation in spaces on inner aspect of vessel wall, and similar appearances, scattered throughout the stroma protoplasm.
Plate VI (a) Figure 1. shows vessel in normal mucosa with only slight opening out of stroma.

Figure 2. Opening out of stroma in menstrual condition by oedematous accumulation. Note how concentric layer of supporting stroma cells have been stripped from intima. There is some expansion of lumen.
Plate VII. Pregnant Tube. Below intervillous space into which vessel on right opening by wide mouth. Epithelium - lined spaces below this correspond to projections of tubal lumen. In centre of field see another vessel opening into intervillous space. Above this large blood track separated in section from intervillous only by thin film, through which, however, can see blood leaking. Note that blood not confined to lumen of this vessel but infiltrating degenerating tissues all round its circumference. To left of this see more regularly expanded vessel. No foetal elements detected in proximity of any vessels. Above tubal lumen, below decidual cells.
Plate VIII. Section of Pregnant Tube. In lower portion see part of inter villous space with villi. To left lower side see necrotic zone with decidual cells. Note especially the marked haemorrhagic infiltration of the tubal wall extending for long distance from inter villous space. Thicker vessel in this region surrounded by blood. In upper part see sinus-like vessels. Upper edge of tube covered with blood which was oozing from fine vessels in this region. The epithelium lined spaces correspond to projections of tubal lumen.
Plate IX. Pregnant Tube. Vessel in degenerating muscular coat of tube at distance from foetal elements. Note fluid accumulation in and under endothelial cells, leading to bulging of affected regions into lumen. Surrounding tissues beset with fluid spaces of varying sizes.
Plate X. Pregnant Tube.

showing vacuolation of connective tissue and Endothelial cells. Note Capillary budding at several parts of circumference of fine-walled sinus.
Plate XI. Pregnant Tube. Portion of tubal wall showing changes in connective tissue cells. Note marked vacuolation. Mode of formation of New Vessels and of expansion of sinus well shown.
Plate XII. Pregnant Tube. In upper part see mucous rugae exhibiting well marked decidual change in stroma cells. Note absence of oedema and haemorrhage here. In lower part see muscular wall with absence of decidual change and excessive oedema and in places haemorrhage. Whilst fine-walled vessels in decidua well supported, wall of thick vein seen to be ploughed up by fluid escape. This section corresponds to portion of tube at long distance from foetal elements.
Plate XIII. Uterine Wall in Retention of Placental Fragments. Below see degenerated Villi imbedded in blood clot. Above see uterine wall with marked leucocytic increase. Note enormous Vascular expansion and leakage of red cells into surrounding tissues round the vessel circumference.
Plate XIV. Chorion-epithelioma. Portion of uterine wall with mass of tumour cells in upper part. Below this and still at distance see fine-walled vessel surrounded by copious haemorrhagic escape. Note especially that blood leakage has occurred whilst wall apparently intact and certainly before it has been directly invaded by tumour cells. In lower part see thicker vessel showing marked fluid imbibition by tissues of the wall, which have become bulged into lumen. Throughout section oedema and degeneration of muscular tissues.
Plate XV. Chorion-epithelioma. To right and below see mass of tumour cells. Above and to left see mode in which vessels open up before invading cells. Below see well-marked evidence of endothelial vacuolation, which precedes expansion of vessel wall.
Plate XVI. Chorion-epithelioma. Vessels in uterine wall at distance from foetal cells. See opening out of wall by fluid actively imbibed and in places leakage of red cells into spaces thus formed. In some regions see red cells in endothelial vacuoles, in others in spaces in media. Note surrounding oedema.
Plate XVII. Chorion-epithelioma. Portion of the Uterine Wall showing stages in disintegration of muscular tissue. In most places see vacuolation of muscle fibre - fluid spaces vary greatly in size. This change has led in many regions to swelling of substance. In some parts muscle is represented by homogeneous lightly staining material, which in still later stage of process disappears altogether. Nuclei disintegrating. (X 1000).
Plate XIX. Early Ovum. Vessels at distance from implantation chamber showing fluid spaces in wall similar to condition seen in menstruating mucosa.
Plate XX. Early Ovum lent by Dr. Teacher. Vessels in decidua some distance from implantation chamber. In upper vessel see marked fluid imbibition by endothelial cells and by connective tissue cells of stroma. Note passage of red cell into inner part of wall of vessel. In lower vessel distinct evidence of fluid imbibition by tissues of wall and in some places see red cells being dragged out. Below this see fine vessel surrounded by blood extravasation.
Figure 1. Stroma of mucosa showing stellate cells with communicating processes.

Figure 2. Stroma cells somewhat enlarged - note fine vessel and oedema and blood corpuscles scattered about (1st. day of menstruation.)
Figure 5. Showing flattened cells forming basement membrane of glands.

Figure 6. Showing that the flattened cells are indistinguishable from the surrounding stroma elements.

Figure 7. "Lymphoid nodule" in the uterine stroma
Figure 11. Straight vessel in premenstrual stroma. Note flattened intimal cells and opening cut of surrounding intercellular spaces by oedema. No blood escape at this part of vessel.

Figure 12. Finer vessel showing same conditions. Here surrounding oedema more marked and some red corpuscles have leaked out.
Figure 13. Mucous membrane in fourth day of menstruation. Showing opening-out of superficial layers of mucosa, formation of blood sinuses and blood accumulations under epithelium. Folding of surface. Note that epithelium detached at only one place.
Figure 14. "Compact" and "Spongy" layers in premenstrual mucosa. In this case increase in interglandular stroma in surface layers due to oedema. Muscular coat below.

Figure 15. Mucosa in first day of menstruation. Note dilatation of glands and scattered haemorrhages. Surface Epithelium intact.

Figure 16. Opening out of superficial stroma. Epithelium retained and at one part carried across as bridge (fourth day of menstruation.)
Figure 19. Leakage of red cells through vessel wall into edematous stroma. In upper part see displacement of lining cells. Near centre of field see enlarged intercellular space round which several red cells are lying - they have not passed into space.

Figure 20. Wholesale escape of blood into edematous stroma — diapedesis.

Figure 21. Diapedesis of red blood cells.
Figure 22. Diagram to explain marked straightening out of vessels in the premenstrual mucosa.

Figure 23. Haemorrhage from vessel with displacement of surrounding stroma.
Figure 24. Vessel in oedematous stroma lined on lower aspect by flattened cells. On upper aspect shows process of expansion by displacement of supporting and intimal cells. Latter indistinguishable from former.

Figure 25. Dc.
Figure 26. Uterine stroma cell in resting state. Simple branching processes uniting it to its neighbours.

Figure 27. Do. Showing active fluid imbibition by protoplasm and appearance of intricate "network", which is seen to correspond in reality to fine films separating adjacent fluid spaces.
Stroma Cell - Resting

Stroma Cell - Premenstrual
Figure 28. On upper aspect vessel with ordinary flattened intima. The other vessel wall apparently formed by stroma - due to detachment and opening - cut of intima and supporting cells.

Figure 29. Vessel in menstruating mucosa - on left side wall well supported, on right side becoming opened - cut by wholesale detachment and displacement of intimal and supporting cells. Note the blood escape from this part.
Figure 30. Vessel wall apparently formed by stroma - at one part see wholesale detachment of supporting cells followed by displacement of intima.

Figure 31. No.

Figure 32. Blood Sinus ("distended capillary") in premenstrual mucosa.

Figure 33. Space formed in stroma by displacement of tissues.
Figure 30  Vessel wall apparently formed by stroma - at one part see wholesale detachment of supporting cells followed by displacement of intima.

Figure 31.  Do.

Figure 32.  Blood Sinus ("distended capillary") in premenstrual mucosa.

Figure 33.  Space formed in stroma by displacement of tissues.
Figure 34. Hyaline change in vessel wall and surrounding stroma occasionally seen in menstruating mucosa.
Figure 36. Menorrhagic Mucosa - note dilatation of glands, marked teasing out of stroma, in which thick-walled vessels are present. Epithelium of surface detached in places.

Figure 37. Thick-walled vessel opened out at one part by fluid track leading to oedematous stroma. Note enlargement of intimal cells.
Figure 38. Thick-walled vessel in oedematous and haemorrhagic stroma. Note concentric arrangement of stroma cells.

Figure 39. Oedematous and Haemorrhagic Stroma. Note the stripping off of supporting cells from vessels.
Figure 40. Thick-walled vessel with wall opened cut by fluid track. Note bulging of intimal cells.

Figure 41. Dc.
Figure 42. Thick-walled vessel in oedematous and haemorrhagic stroma.

Figure 43. Note especially changes in intimal cells—marked bulging into lumen due to intracellular fluid accumulation.
Figure 44. Note swelling of intimal cells and wholesale gap in vessel produced by escaping fluid.

Figure 45. (Drawing of lower part of vessel in fig. 37.) To show intimal changes. In lower part see marked intracellular accumulation of imbibed fluid. On left side note fluid accumulation in, and bulging of, inner part of vessel wall. On right side same condition but here bulging not so evident because fluid escaping freely into surrounding stroma.
Figure 46. Thick-walled vessels. Note oedematous opening-out of wall. On right side track leads right from swollen intimal cell. Note that it is interrupted by fine films.

Figure 47. Vessel showing intracellular fluid collections in intima. On left side wall opened out and see leakage of a red corpuscle.