HGVT

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PARAFFINALIA NEWSLETTER

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September 2021

The HGVT aims to provide a dynamic continuing education program in which all persons with an interest in Histology and Histotechnology are freely invited to participate.

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Committee Page

The members of the Histology Group of Victoria and Tasmania 2020 are:

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President's Report – Behind the Bench

Dear Histo-Lovers

There is a real sense of déjà vu when writing my quarterly report. Once again, we find ourselves in a covid lockdown here in Victoria. I remember the good old days when the only Delta that sent a shiver down your spine was Delta Goodrem. Delta was 'Born to Try' our resilience.

The HGVT scientific meetings continue to be held virtually and we continue to have superb attendances. I would like to think that it reflects the histo content that appeals to our members, rather than just a lack of viable alternatives through lockdown. Either way, I think our Sept meeting should have a big audience as the topic of immunohistochemistry is always evolving. We have a forum-based troubleshooting IHC panel, that will help us with insight into troubleshooting staining and the trade will have an opportunity to show us what is new. Mark the 9th Sept in your calendars.

Stay safe and fingers crossed 🤞 I can send my next report from somewhere more exotic than Mitcham. Meanwhile hugging a puppy is a great stress reliever.

Kerrie Scott
(Leica/ Dorevitch Pathology)
HGVT President

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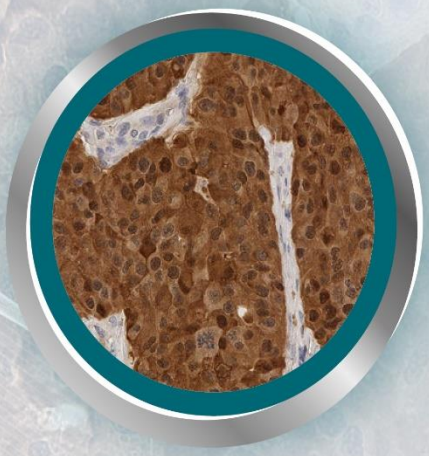

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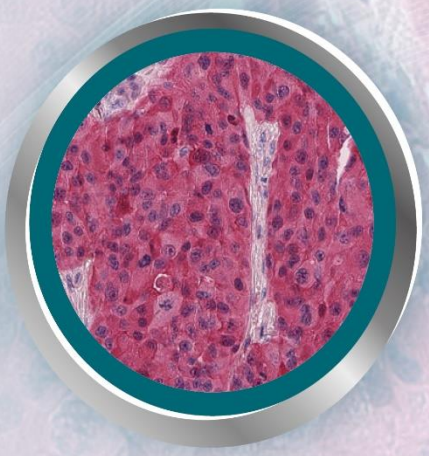

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UNDER THE MICROSCOPE WITH KITTY FENG

What was your first part-time job?
I was a tutor at Kumon, where I would spend a couple of hours after school helping kids out with their assigned homework. I also used to study there when I was younger, so I feel like I completed the full 'circle of life' of Kumon.

How long have you worked in histology?
I have been working in histology for a little more than 5 years now.

When people ask, "So, what do you do?" How do you explain Histology?
I find that if I just say I work in pathology, the assumption is that I work in microbiology or haematology. I usually explain that I deal with the bigger, 'chunkier' pathology specimens that may require slicing and dicing.

What is a skill you'd like to learn and why?
I would love to further develop my immunohistochemistry skills, especially in problem solving staining issues and troubleshooting instrumental problems. I also want to master the Spanish language. I have attempted to learn but my annunciation is quite rubbish. Doesn't stop me from trying though!

If money was no object, what would you do all day?
I think I would probably drop to part time, may be take up studies again but in a totally different field just to try something new. Alternatively, I'd like to start an oyster farm.

What's an ideal weekend for you?
With the current situation we are all in right now, the best weekend would consist of seeing family and friends, go out for meals and maybe a movie to top it off with.

If you could take only THREE items with you to a deserted island, what would they be?
My three items would have to be my phone, a box of matches and sunscreen. All I need is entertainment, a way of cooking and sun protection.

What's on your bucket list this year?
I would love to go to the Treasures of the Natural World exhibition at the Melbourne museum this year. I have tried to go a few times but lockdown always got in the way. I would also like to visit Tasmania in the near future.

Where do you most want to travel, but have never been?
I have always wanted to travel to Europe, particularly Spain. Iceland is also on the top of my list.

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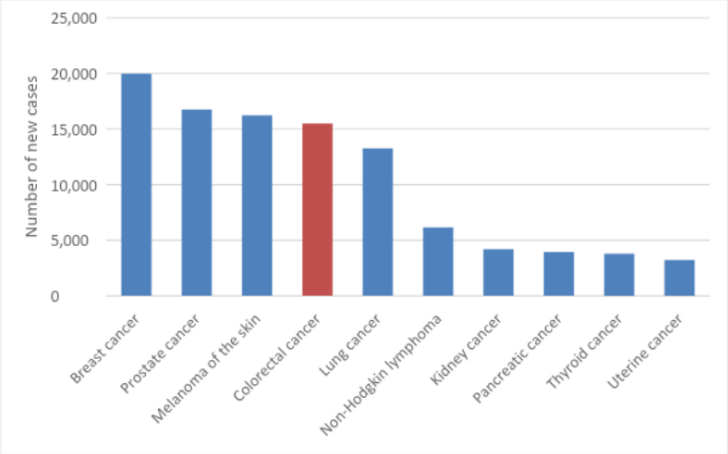
ONLINE SCIENTIFIC MEETING REVIEW

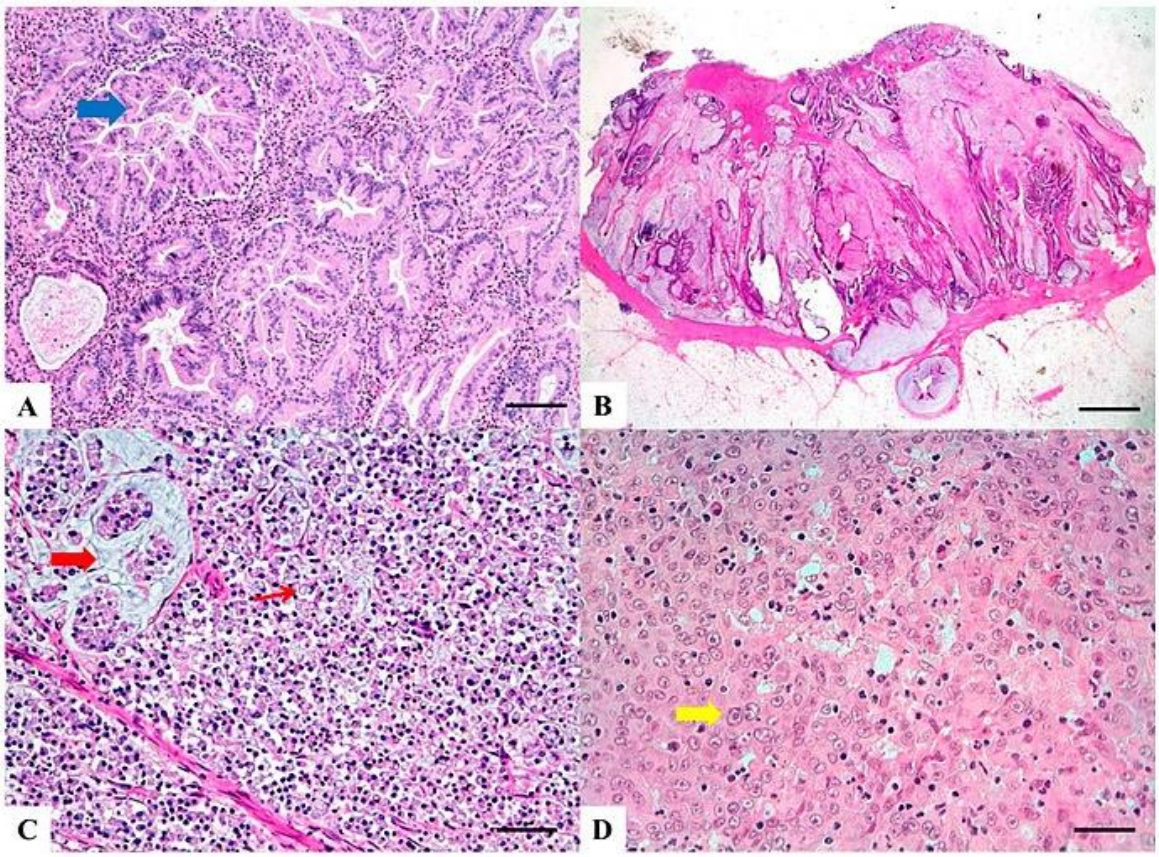
24th of June, 2021

By Yvette Baeber

Andrea Whiteside from Cabrini and Melbourne Pathology spoke first on Large Bowel Cut-up. Colorectal cancer was the 4th most common cancer in 2020 with 15,632 cases. It is 2nd most common cause of death from cancer but has a 70% 5 year survival rate. In 2006 the National Bowel Cancer Screening (NBCS) program was introduced and the faecal immunochemical test kit is sent out every 2 year for people aged between 50-74. Large bowel dissection is not performed solely for cancer but also for example perforation from diverticulitis, Crohn's disease or twisted bowel obstructions. There are many different types of resection that can be received based on which section of the bowel is removed. Freshing and inking of the bowel is performed when the specimen



Estimated most common cancers diagnosed, 2020
Image credit: https://www.canceraustralia.gov.au/cancer-types/bowel-cancer/statistics



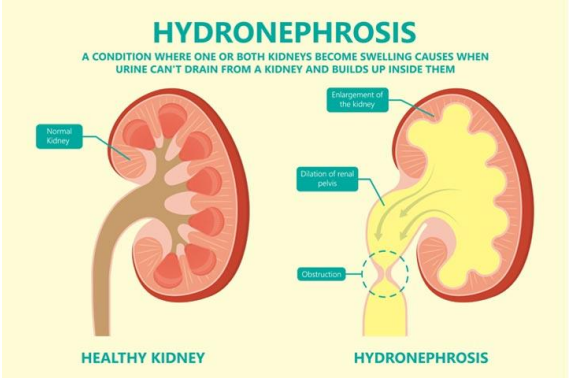
(A) Serrated adenocarcinoma: epithelial serrations or tufts (thick blue arrow), abundant eosinophilic or clear cytoplasm, vesicular basal nuclei with preserved polarity.
(B) Mucinous carcinoma: Presence of extracellular mucin (>50%) associated with ribbons or tubular structures of neoplastic epithelium.
(C) Signet ring carcinoma: More than 50% of signet cells with infiltrative growth pattern (thin red arrow) or floating in large pools of mucin (thick red arrow).
(D) Medullary carcinoma: Neoplastic cells with syncytial appearance (thick yellow arrow) and eosinophilic cytoplasm associated with abundant peritumoral and intratumoral lymphocytes

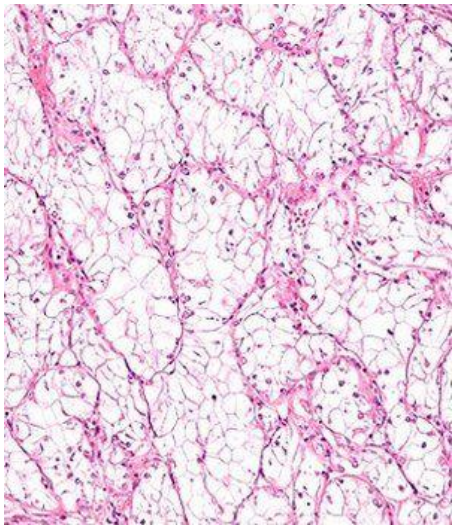
Image Credit: Remo A, Fassan M, Vanoli A, Bonetti LR, Barresi V, Tatangelo F, et al. Morphology and Molecular Features of Rare Colorectal Carcinoma Histotypes. Cancers [Internet]. MDPI AG; 2019 Jul 23;11(7):1036. Available from: http://dx.doi.org/10.3390/cancers11071036

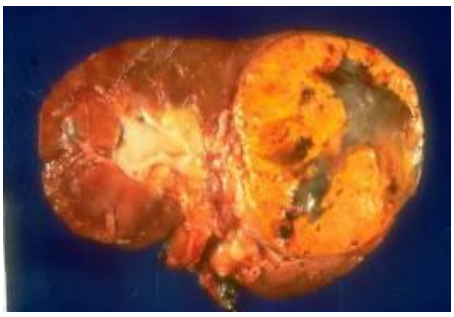
arrives in the laboratory. Commonly the bowel is opened along the teniae coli avoiding the tumour if possible and the anterior mesorectal margin is inked.

The macro description describes the specimen's components and size including the mesorectum as well as denoting any inking that has been performed. Describe the tumour size and form as well as the cut surface and measure any distances to margins before any sections are taken. Practical points of the macro descriptions is to also describe ant measurable distances after cutting including the mesocolic/mesorectal margin. If there are any polyps, diverticula or deposits present before ending with the block notation. The cut-up performed should also be done with consideration of the staging of the patient if dealing with a tumour. Blocking of the bowel includes the apical node, Proximal and distal margins, tumour involved mucosa (suitable block for MMR), tumour to the propria, fat, serosa, meocholic/mesorectal margin, other features (appendix, polyp, omentum) and the lymph nodes.

Edward Kwan from Monash Health spoke next on kidney cut-up. The kidney can be removed for non-neoplastic conditions such as; Xanthogranulomatous pyelonephritis, Hydronephrosis, renal calculi or explant kidney or for Neoplastic conditions such as; renal parenchymal tumours or tumours of the renal pelvis.







Macroscopic and microscopic presentations of renal cell carcinoma (RCC)

Types of specimens may include a simple, partial or radical nephrectomy. Opening the kidney specimen consists of identifying the hilum and inking the external surface with silver nitrate. The ureter and vessel margins are sampled and then the kidney is bivalved opposite the hilum. Multiple parallel cuts may be made if necessary in larger specimens to aide in fixation. It is essential to look carefully at the kidney in case there are multiple different areas of tumour. The specimen is weighed and measured giving the size in three dimensions. Internal examination of the kidney is performed and a description of the tumour, its size, location and distance from margins is dictated for the macro. These macroscopic assessments are key for the staging of the tumour which is dependent on involvement of areas such as the renal sinus, perinephric fat or vessels. Different areas of the tumour are sampled for example classic yellow tumour, haemorrhagic areas and areas of necrosis. Blocking of the kidney includes the ureter and vascular margins, 4 blocks of tumour; interface with renal sinus, interface with renal vein, interface with perinephric fat/fascia, heterogeneous areas, background renal cortex, adrenal gland and any lymph nodes.

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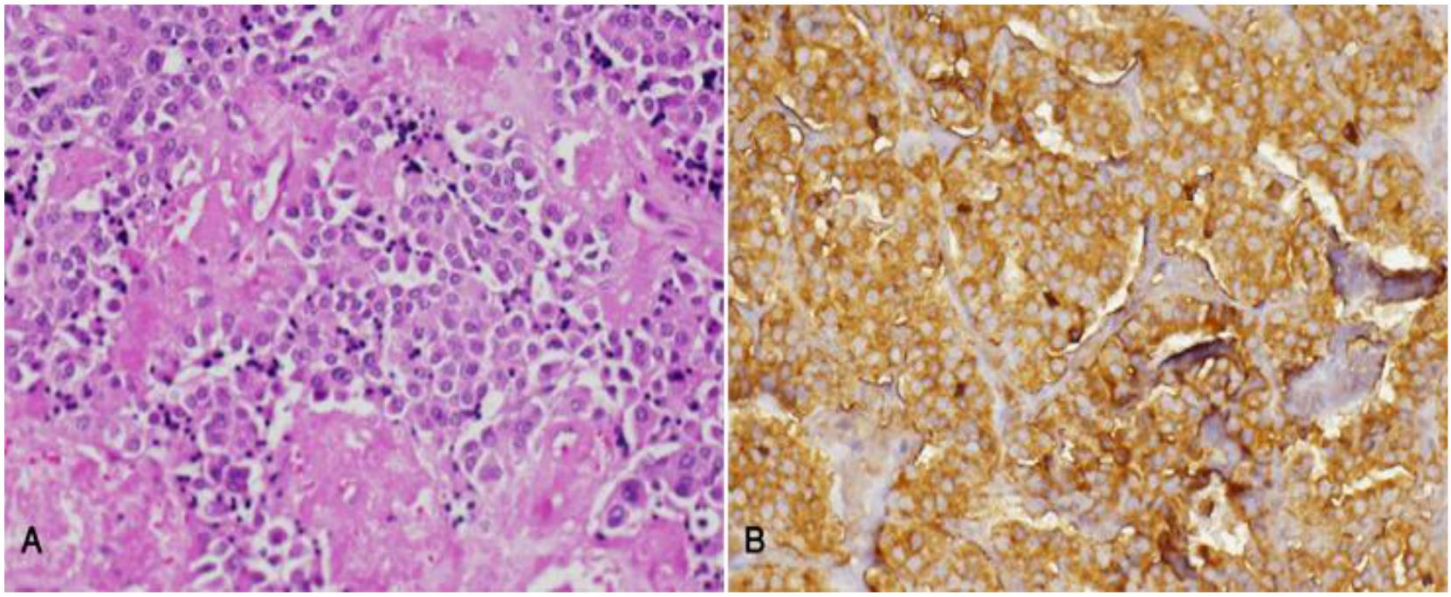

A. Medullary thyroid carcinoma featuring groups of cells with polygonal to elongated cytoplasm, round-to-oval nuclei with indistinct nucleoli. Note, amyloid deposition in the stroma (H&E, x200).
B. Strong immunopositivity for calcitonin in all tumor cells (immunoperoxidase staining, x200).
Source: http://atlasgeneticsoncology.org/Tumors/MedullaryThyroidCarcID5080.html

References

1. Felsenfeld AJ, Levine BS. Calcitonin, the forgotten hormone: does it deserve to be forgotten? [Internet]. NCBI 2021. [cited 29 August 2021]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4370311/
2. RM L, AG R, GJ t, JM S, MJ B, RA G et al. The clinical implications of a positive calcitonin test for C-cell hyperplasia in genetically unaffected members of an MEN2A kindred [Internet]. PubMed. 2021 [cited 29 August 2021]. Available from: https://pubmed.ncbi.nlm.nih.gov/8094268/
3. Calcitonin [Internet]. Pathologyoutlines.com. 2021 [cited 29 August 2021]. Available from: https://www.pathologyoutlines.com/topic/stainscalcitonin.html

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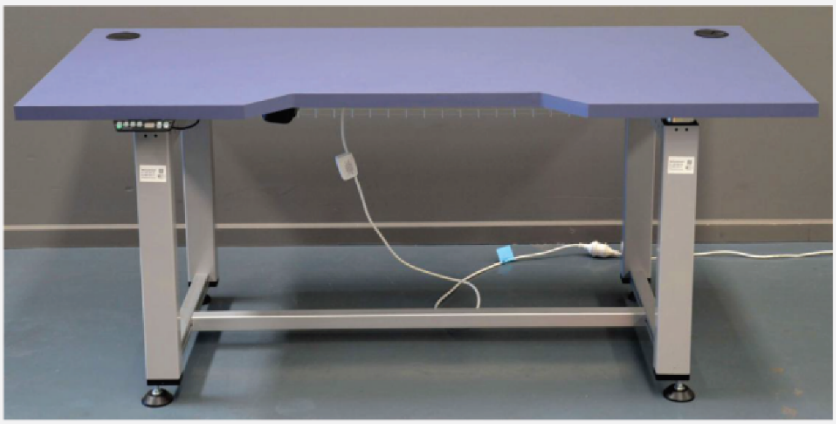

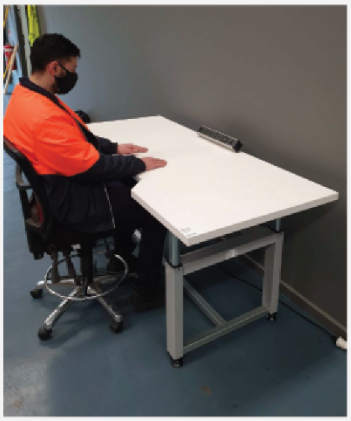

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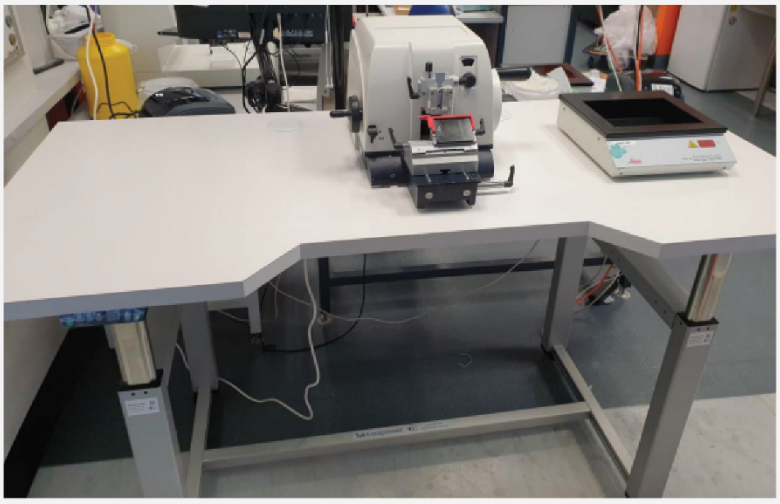

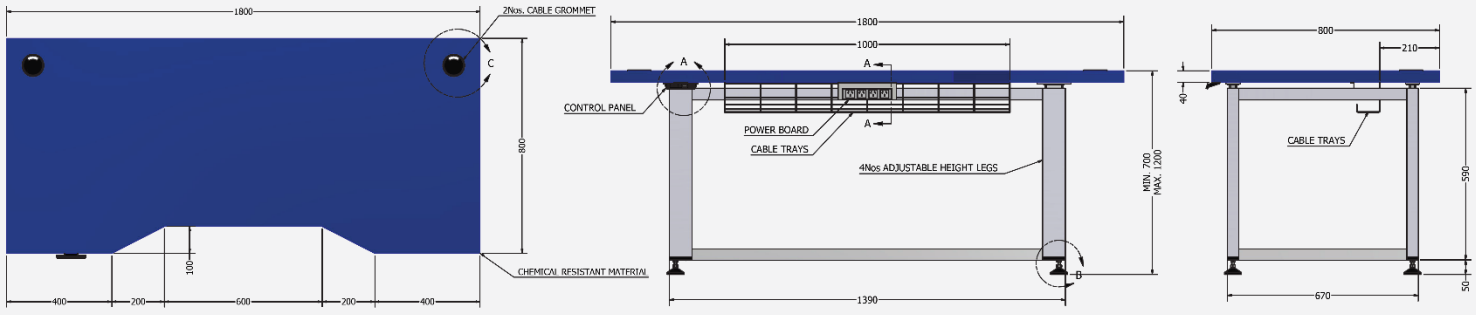

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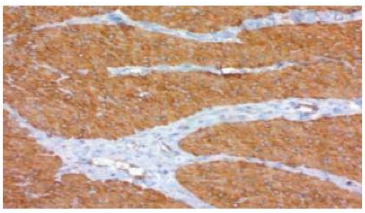

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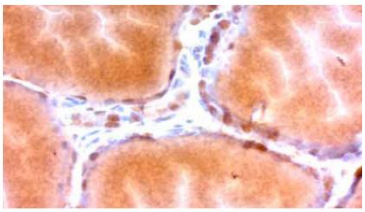

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Histology History: Small Beginnings with the Microscope and Marcello Malpighi

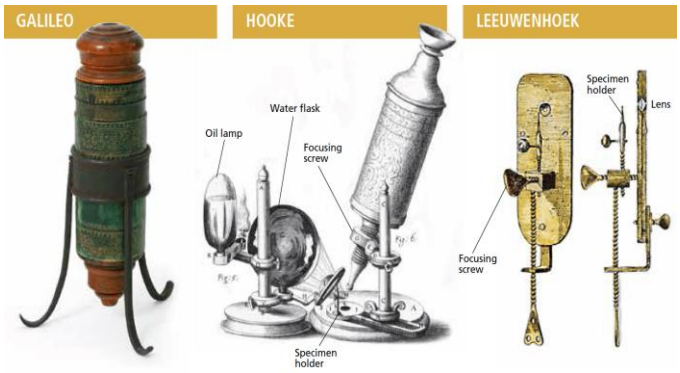
By Alex Johnston

There are few things that can better epitomize histology and public perception of science better than the image of the humble microscope. It offers a window into the world of the small that anyone, from children to adults; amateurs to professionals, can engage with easily. It is an ideal scientific vehicle; one that inspires awe with education.

The discovery of the tiny, has continued to lead to large implications for histological science and medicine. While we have all interacted with at least one microscope professionally, their origin is less steeped in the clean, fine tune engineering we are used to in the present and instead, went through periods as both the 'tortoise' and 'hare' in the race to modern microscopy. For this reason it is best to distinguish between the beginning and renewed innovation that followed microscopy's 'dark ages' (no pun intended)

Reproduction of first compound microscope made by Hans and Zacharias Janssen, circa 1590. From the National Museum of Health and Medicine, Washington, D.C. (Image credit: Public domain.)

The earliest example of the compound microscope was over 400 years ago in the 1590's, credited to the father-son duo of Hans and Zaccharias Janssen. Their creation was a tube design that was only able to accomplish a 9x magnification. [1]

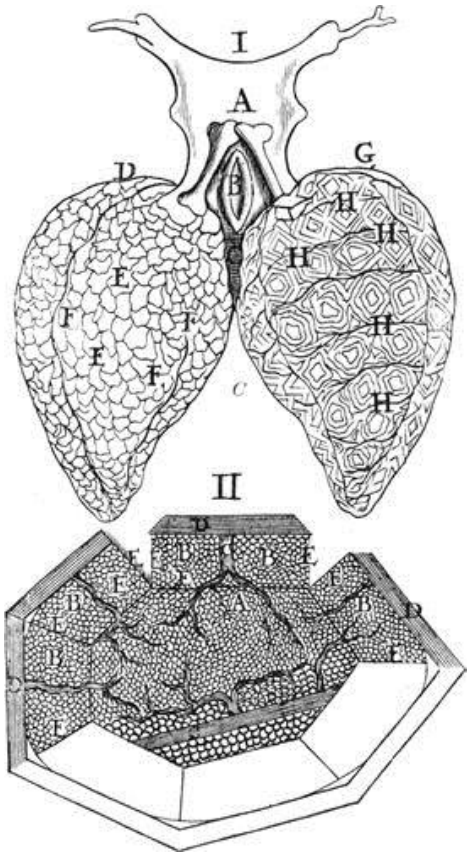


While this may seem inconsequential given the feats we can achieve nowadays; it was truly exciting for the time and laid the foundation for other scientific visionaries to improve on the design. Galileo Galilei's own take; dubbed the 'little eye', or 'occhiolino' in Italian, was responsible for the coining of the term 'microscope'. This naming was provided by botanist and friend Giovanni Faber, combining the Greek words 'micron' and 'skopein' meaning 'small' and 'to look at' respectively. [2]
However, in regards to innovations within the biological sciences, three important minds were Marcello Malpighi, Antonie van Leeuwenhoek and Robert Hooke.

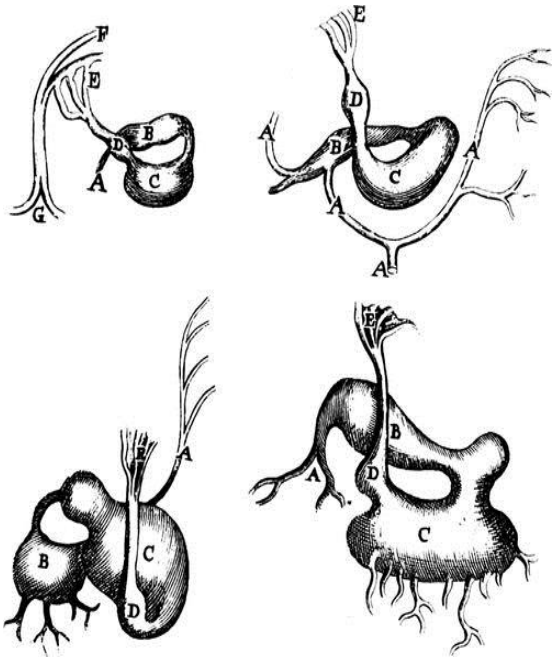
Leeuwenhoek (considered the Father of Microbiology) developed incredibly capable lenses for the time, able to magnify over 200 times the true size using only a single lense, enabling him to observe red blood cells and to famously discover both bacteria and spermatozoa. [3]
Hooke produced a beautiful series of microscopic drawings in his book 'Micrographia', the first book published in English on microscopy (check it out, it's amazing!). He also famously attributed the word 'cell' to the biological sciences, to describe the 'tissue compartments' he observed microscopically and the term clearly took hold. [4]

While much more could be said for the work of the former candidates, where histology is concerned, the title of most influential figure from this era arguably goes to Marcello Malpighi, regarded as the father of modern pathology.

Malpighi's microscopic investigations began observing the lungs of frogs where he was able to describe a network of small blood vessels intermingled with very narrow air spaces throughout the organ. This discovery offered the explanation to how oxygen was able to diffuse into blood vessels, a key to understanding process of respiration. It also provided the one missing piece of evidence to confirm William Harvey's revolutionary theory of blood circulation. Malpighi had discovered the capillaries, the microscopic connecting link between the veins and arteries. [5]
This triumph was arguably one of his greatest contributions to the understanding of human biology however, he continued to pursue other avenues of research delving into embryonic development.



Malpighi's drawing of the pulmonary capillaries and alveoli. *I*: 2 lungs with the alveoli on the left and the capillaries on the right. *II*: pulmonary capillaries in a diagram of an alveolus that has been opened.



Drawings of the developing heart in the chick embryo. The blood comes from the veins *A* and passes into the auricle (atrium) *B*. Sometimes there is a brief intermediate channel as the blood is pushed into the right ventricle *C* and from there into the left ventricle *D*. Finally the blood enters the arteries *E* and from them moves either to the head *F* or to the umbilical vessels *G*. [6]

In studying the development of chicken embryos, Malpighi had a keen interest in the development of the heart observing it within 30 hours of incubation and noting that it began to beat before the blood became red. Similarly to his work with frogs, his drawings aimed to transfer the visceral into static stages of development. [6]

From his investigation of the human body, he made accounts on the liver, spleen, tongue, skin and nervous system as well as jumping into an intense pursuit of botanical studies. The 'Malpighian layer' of the skin is a name that perseveres to the modern day, referring to a specific layer of cells he discovered. Furthermore, he was the first to describe the glomeruli of the kidney however, referred to them as 'Malpighian bodies', not realizing at the time, that they were formations of capillaries which he was also responsible for identifying previously. To describe all his contributions to science is something others have acknowledged previously and for those interested in learning more, the five-volume work by Adelmann, *Marcello Malpighi and the Evolution of Embryology* is a good starting point. (And there are more pictures because he was a pretty good artist)

This account is an abbreviation of some of the discoveries Malpighi made that laid the foundation for all the work we do today. While modern advances can be equally fascinating, in the context of his time, the discoveries he made are both incredible and inspiring. Moreover, he continued to explore and suggest more novel ideas for biological systems between humans and plants.
Collectively, it is a humble reminder of the power of a curious mind and also a testament to how far histology has come and offers an exciting prospect for where our discipline may be in another 400 years.

References

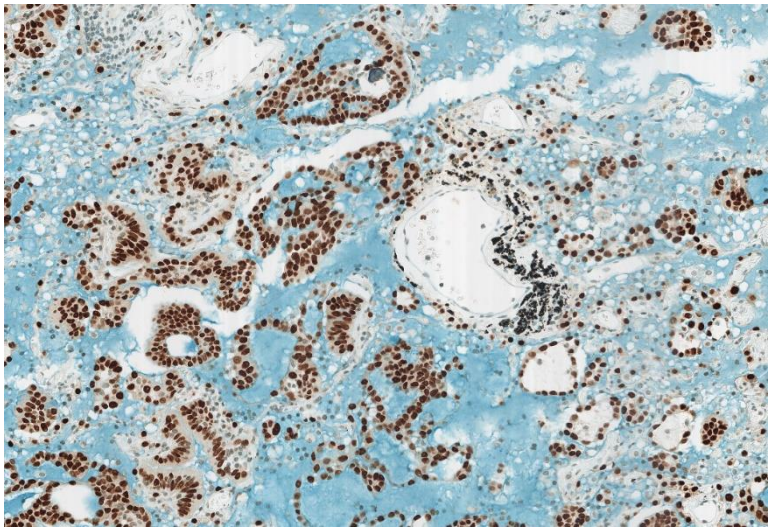
1. Who Invented the Microscope? [Internet]. livescience.com. 2021 [cited 31 August 2021]. Available from: https://www.livescience.com/39649-who-invented-the-microscope.html
2. 2. How History Shaped Modern Optical Microscopes, Part One: Simple and Compound Microscopes [Internet]. Bitesize Bio. 2021 [cited 31 August 2021]. Available from: https://bitesizebio.com/43796/simple-and-compound-microscopes/
3. 3. The unseen world: reflections on Leeuwenhoek (1677) 'Concerning little animals' | Philosophical Transactions of the Royal Society B: Biological Sciences [Internet]. Royalsocietypublishing.org. 2021 [cited 31 August 2021]. Available from: https://royalsocietypublishing.org/doi/10.1098/rstb.2014.0344#RSTB20140344C1R
4. 4. Collections T, Hooke M. Micrographia by Robert Hooke : Teaching with Unique Collections [Internet]. Teaching with Unique Collections. 2021 [cited 31 August 2021]. Available from: https://library.unimelb.edu.au/teachingobjects/objects/micrographia-by-robert-hooke
5. Lyons A, Petrucelli J. History of Medicine. Mosby, Mexico: Doymma Libros; 1994.
6. Adelmann HB. Marcello Malpighi and the Evolution of Embryology, 5 vols; 199

HGVT

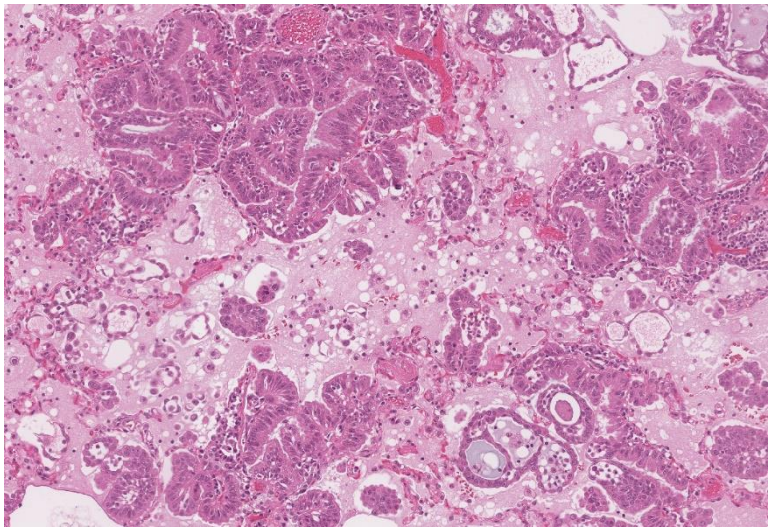
'Slice of Life'

What tissue, disease or other process are we looking at?

Time to test your Histology knowledge. Note, one of these is not like the others. Answers on back page.



A.



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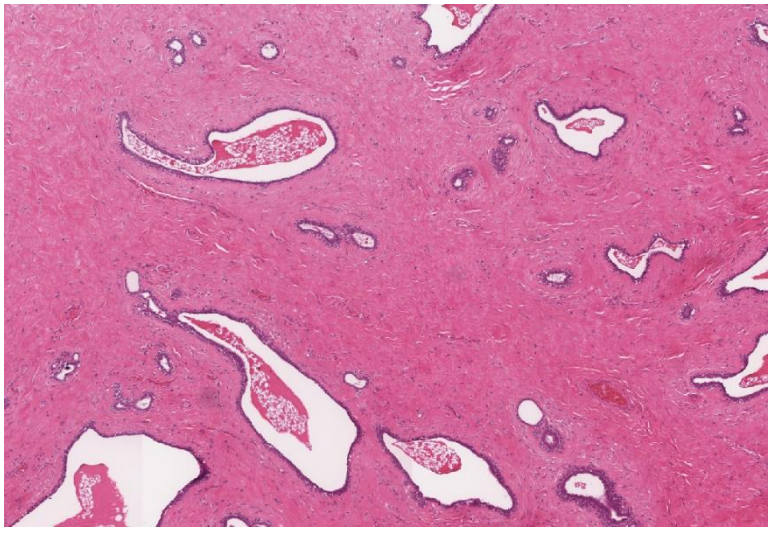
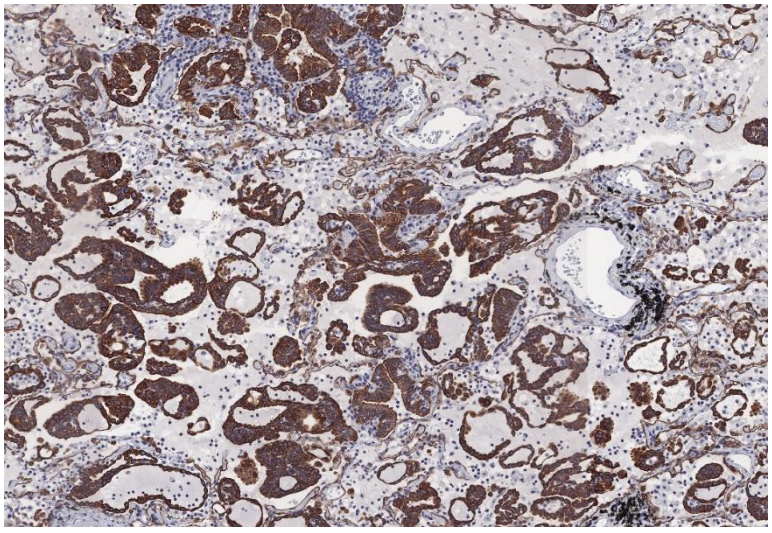


C.



D.

E.

Future Events: 2021

Org. No. A0035235F

Date: September 9th

Scientific Meeting

Topic: IHC Problems, New antibodies – panel discussion

Venue: Streamed live and recorded using Zoom

Date: October 14th

AGM/Scientific Meeting

Topic: TBA

Venue: Streamed live and recorded using Zoom

Date: November (date TBA)

Tasmanian Meeting

Topic: TBA

Venue: Streamed live and recorded using Zoom

A. Lung Adenocarcinoma (TTF-1 and Alcian Blue staining)
B. Lung Adenocarcinoma (51 year old male)
C. Lactating Adenoma
D. Lung CK7 stain
E. Lice on eyelashes