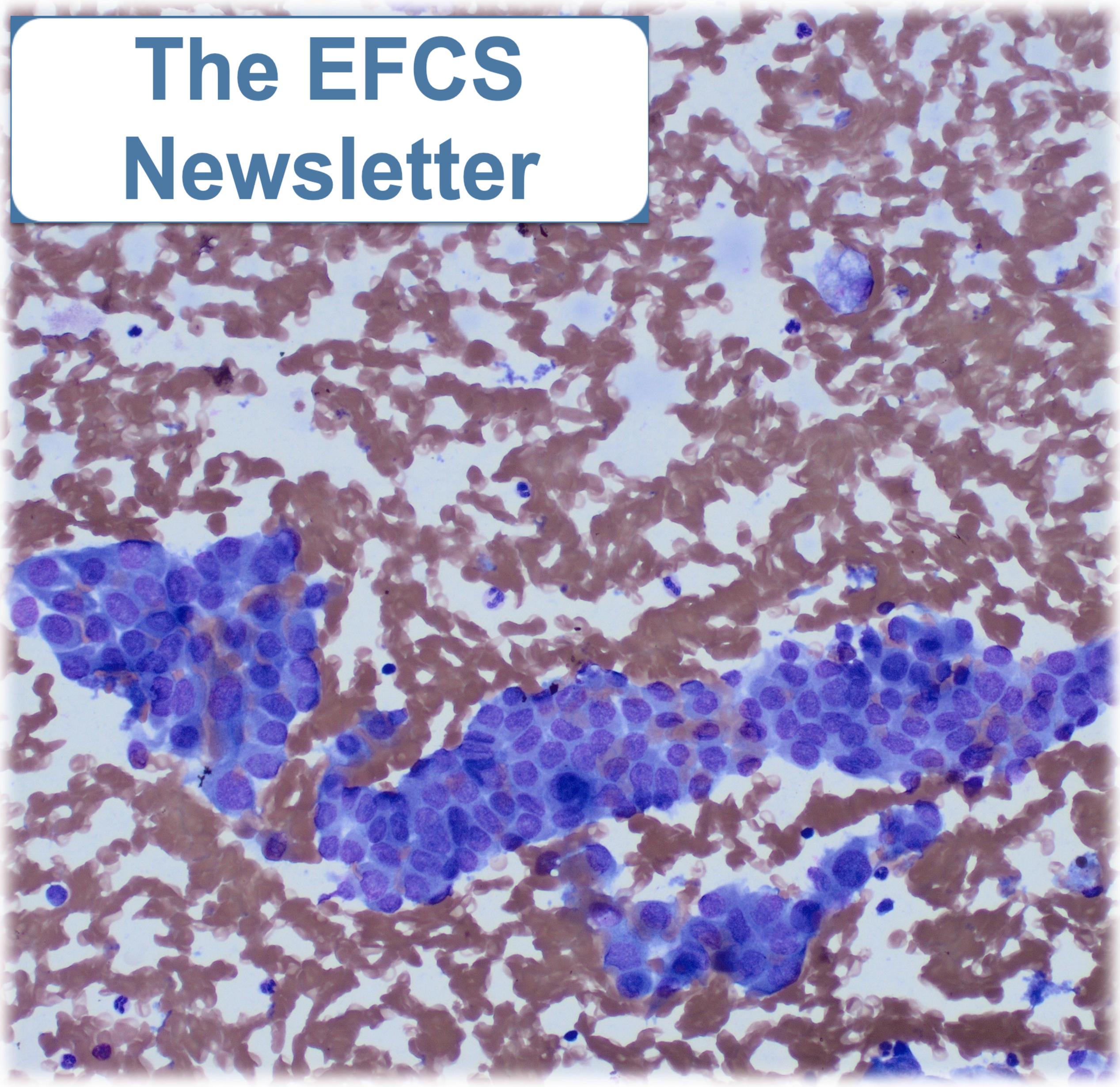
EFCS
European Federation of Cytology Societies

The EFCS Newsletter



Issue 4/2022

EFCS NEWSLETTER
ISSUE 4/2022

Dear Friends and Colleagues,

First of all, I would like to wish everyone: Happy New Year! I hope the last days of the previous year were peaceful and you could take a break from your everyday hard work.

Last year was full of great cytological events and 2023 seems to have even more in store for us with the most important EFCS event – European Congress of Cytology in Budapest. In this issue you can read in more details about the 2022 in cytology and plans for the future provided by the EFCS Secretary General, Danijela Vrdoljak-Mozetič and the new EFCS President, Laszlo Vass. You can also find an extensive report from the remarkably successful and fruitful IAC/ASC joint meeting in Baltimore and announcements of upcoming EFCS events – the 2nd EFCS Joint Webinar and the 14th EFCS Annual Tutorial; registrations are still open!

In this issue we are back to our series of interviews with famous European cytologists. This time we would like to welcome Luigi di Bonito with his very inspiring thoughts about the past and future of cytology. About the future, we should not forget that the new edition of The Milan System for Reporting Salivary Gland Cytopathology will be published soon and for that occasion Esther Diana Rossi together with William C. Faquin present history of this classification and updates in the second edition. And at the end you can test yourself in our Case Challenges.

Enjoy reading!

Pawel Gajdzis
Residents and YEFCS Committee

EFCS NEWSLETTER
ISSUE 4/2022

EFCS European Federation of Cytology Societies

In this issue:

- ❖ **Letter from the EFCS President** (page 4)

László Vass

- ❖ **Message from the EFCS Secretary General** (page 5)

Danijela Vrdoljak-Mozetič

- ❖ **Save the Date! 2nd EFCS Joint Webinar** (page 7)
- ❖ **Save the Date! 14th Annual EFCS Tutorial** (page 8)
- ❖ **Next Generation Cytology! Report from Baltimore 2022** (page 9)

Fernando C. Schmitt, Martha B. Pitman

- ❖ **Interview with Prof. Luigi di Bonito** (page 14)

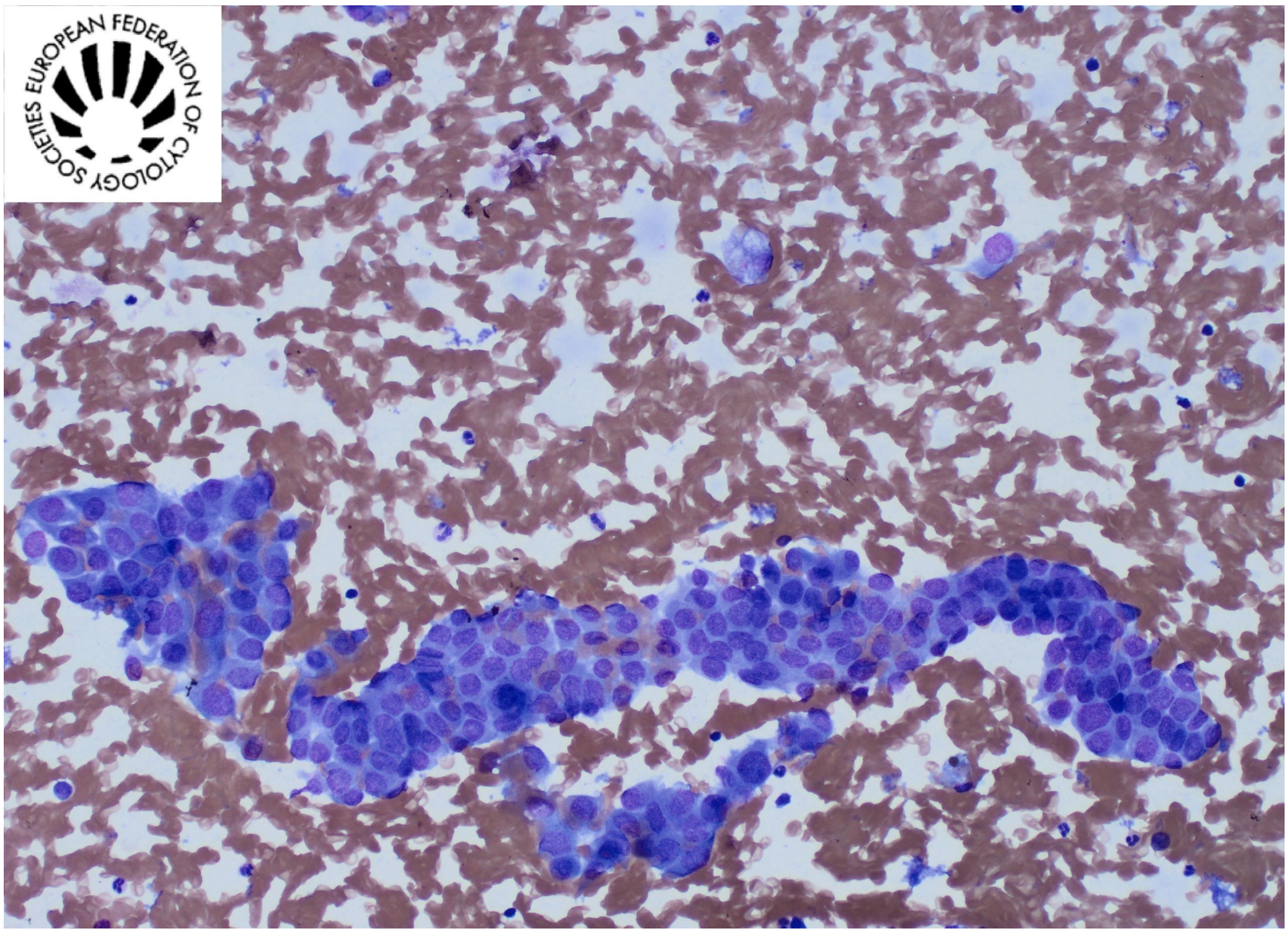
Despina Argyropoulou

- ❖ **The second edition of the Milan System for Reporting Salivary Gland Cytopathology. Updates and changes** (page 17)

Esther Diana Rossi, William C. Faquin

- ❖ **Case challenges!** (page 18)

Danijela Vrdoljak-Mozetič, Tajana Štoos-Veić



Cover photo:
Papillary Thyroid Carcinoma (MGG)

Letter from the President of EFCS

I am honored and privileged having become the President of this old, historic organization of cytology, the EFCS.

I promise to do my best in serving the EFCS. Me - as a cytopathologist - have grown up together with this Society which always have been as important professionally in developing European Cytology as in offering the mutual interacting development of European cell-understanding people during recent times even beyond the borders of Europe. There are for sure cytopathologists who would be able to fulfill the expectations of what a President should be like, me however, taking the responsibility of the organization of the forthcoming European Cytology Congress as a non-withdrawable, particularly important event of the EFCS promise to be ready bringing the international project to a fruitful end. We need to bind together the free ends of human goodwill threads present in the field. I was incredibly happy to meet excellent cytopathologists from Europe and from all around the world in Baltimore.

The beginning of the present century is again very turbulent. Our commitment is to mitigate down turbidity by means of the science. Science needs and offers all the time endless number of opportunities, sharp vision resulting in clean thoughts. Meetings, discussions in the field of the science should show us how to behave using the tools of the ordinary instead of that of the uncertain. I am extraordinarily thankful for the Council Board, for the Committees for their unbelievable challenging work in maintaining and developing further the goals of the EFCS - again in an unhappy historical period of Europe. Extra thanks go to Danijela, Giovanni, Pavel, Giancarlo, furthermore to Fernando and Philippe!

I am busy like all of you. The Budapest EFCS Congress needs both knowledge and wisdom, for without of your help any of our efforts would be in vain. *“The saddest aspect of life right now is that science gathers knowledge faster than society gathers wisdom.”* (*Isaac Asimov)* Let us translate the science of a Congress to wisdom of the Society, via open, straight communication and debates!

Having enjoyed all the physical and mental „presents” - the all-round meetings of families and friends, reaping the happiness and joy of those days - new enthusiastic strength appeared for all of us to be able fulfill the forthcoming tasks of 2023! I wish to all of you a fruitful hard working and successful new year, with an active, scientific, friendly European Cytology Congress in it!

László Vass, MD PhD, FIAC
EFCS President

Message from the EFCS Secretary General

Dear colleagues, dear friends

The past year for EFCS was a year of reunion and return to normal. We started with a successful Joint webinar of Greece and Croatia, continued with an excellent and very attractive EFCS Annual Tutorial in Trieste and QUATE exam, and ended with a significant and active presence at the IAC/ASC Congress in Baltimore with EFCS as a partner. Our scientific committee is already famous for its very fruitful activity which resulted in a significant publication in Cancer Cytopathology. Numerous other projects are continuing, including a project on the use of standardized terminologies in cytology. Special thanks to Prof. Ivana Kholová for her selfless contribution and activities. The project on training in cytopathology in Europe has entered its first phase, and I believe it will continue to raise awareness of the role of education for the future of cytopathology. The renovation project of the Eurocytology.eu educational website is on its way, for which I would like to thank Prof. Beatrix Cochand-Priollet and Dr Arrigo Capitanio, leaders of the project. The tutorial in Trieste would not be what it is without Dr Giovanni Negri, the heart and soul of the Tutorial. The local organizers led by Fabrizio Zanconati were fantastic hosts assuring perfect set up and friendly atmosphere. Thank you all! Prof. Luigi di Bonito received the EFCS Lifetime Achievement Award on that occasion. He is an incredible person, dedicated to cytology prosperity on so many levels. You will have an opportunity to get to know him better in the interview in this Newsletter issue. The EFCS Newsletter is one of the most important EFCS projects, it is published regularly, enriched with interesting new contents. I would like to thank the editor-in-chief Dr Pawel Gajdzis for his creativity and persistence, and the other co-editors, members of Young EFCS. This year we have a new EFCS member society, the Ukrainian Association of Cytopathology, and the Association of Pathologists and Cytologists of Serbia has renewed its membership. Welcome!

(continues on the next page)

Message from the EFCS Secretary General

International Academy of Cytology (IAC) is our sister organization. We work together and complement each other in so many ways. This year, the IAC has elected a new president, Prof. Fernando Schmitt. Congratulations, on behalf of myself and EFCS, on his exceptional achievement and leadership of such an important organization. At the congress in Baltimore, four exceptional cytopathologists, members of EFCS and European cytology community, received important awards. These are: Torill Sauer (Norway) - IAC George L. Wied Life-Time Achievement in Cytologic Research Award for 2022, Ashish Chandra (UK) - IAC Maurice Goldblatt Cytology Award for 2020, Marianne Engels (Germany) IAC Maurice Goldblatt Cytology Award for 2021 and Esther D. Rossi (Italy) - ASC 2022 International Achievement Award. We are so proud! Congratulations to you and to all other distinguished international awardees.

The year 2023 – what to expect? We start with the 2nd Joint EFCS webinar "Germany&Spain" on January 17th, 14th EFCS Annual Tutorial will be organized in France, Toulouse in June. We continue with European Congresses of Cytology and the 44th edition will be held in October in Budapest lead by the current president of the EFCS Dr Laszlo Vass. The congress will host a QUATE exam as well. Registrations for all these events are open, so hurry up! We will continue with our well-established projects and activities: scientific, educational, publishing newsletters, networking and connecting people as always! We are open to all new member societies, it's time to join us!

Last year was intense and exciting, there is no reason for this one not to be the same or even better!

Sincerely,
Danijela Vrdoljak-Mozetič
EFCS Secretary General

SAVE THE DATE!

January 17, 2023 from 14:00 to 17:00 CET

Scientific program

Opening

14:00 - 14:05 **Danijela Vrdoljak-Mozetič**, MD, PhD, European Federation of Cytology Societies Secretary General

Marianne Engels, Dr. med., FIAC, Cologne, Chair of the Educational Committee of the EFCS

Lectures

14:05 - 14:35 Techniques of FNA in mediastinal and lung lesions and typical cytological findings

Ralf Heine, Dr. med., Halle

14:35 - 15:05 Biomarkers in cytological samples. How far can we go?

Maria D. Lozano, MD PhD, MIAC, Pamplona

15:05 - 15:30 Discussion

Case reports

15:30 - 15.45 Case Report

Allan Argueta MD, Pamplona

15:45 - 16:00 Case Report

Lena Hieggelke, Dr. med., Cologne

16:00 - 16:15 Case Report

Ramon Robledano MD, Pamplona

16:15 - 16:30 Case Report

Lea van der Linde, Dr. rer. hum. biol., Hamburg

16:30 - 16:50 Discussion

Conclusion and final remarks

16:50 - 17:00 **Maria D. Lozano**, MD PhD, MIAC, Pamplona

FREE REGISTRATION: https://www.efcs.eu/efcs-joint-webinar-registration-form/

SAVE THE DATE!
June 12-16, 2023

14th Annual EFCS Tutorial

Faculté de Santé, Laboratoire d'Histologie, Bat A2 1er étage, 133 route de Narbonne,
31062 Toulouse, France

Local Host: **Monique Courtade-Saidi**
EFCS Tutorial Chair: **Giovanni Negri**
EFCS Co-Chair: **Arrigo Capitanio**

PROGRAM AND REGISTRATION: https://www.efcs.eu/14th-annual-efcs-tutorial/

NEXT GENERATION CYTOLOGY!

BALTIMORE - 2022

The world of cytology came together in Baltimore, Maryland, USA, for the 21st International Congress of Cytology held jointly with the 70th Annual Scientific Meeting of the American Society of Cytopathology (ASC) from November 15-20, 2022. The Inner Harbor of Baltimore provided a beautiful backdrop for more than 685 attendees from 51 countries, including 113 representatives from 30 commercial exhibitors, to enjoy inspiring and challenging educational sessions. This Joint Session provided over 41 hours of education that included General Sessions, 13 Symposia, 22 Platform Presentations, 17 Cytology Short Courses, 20 Video Microscopy Tutorials, 5 Panel Discussions, Roundtable Discussions, 10 Microscopic Workshops, 20 Sign-out with the Professor sessions, Strategies in Cytology Education, USFNA Course, IAC Tutorial, and 136 Poster Presentations.

IAC and ASC Boards.
Baltimore 2022

IAC and ASC Past Presidents.
Baltimore 2022

(continues on the next page)

NEXT GENERATION CYTOLOGY!

BALTIMORE - 2022

The Scientific Program Committees of both IAC and ASC volunteered countless hours to create a high quality scientific program. The general sessions included the popular ASC Diagnostic Cytology Unknown Case Seminar, the ASC Leopold Koss Lectureship: “Delayed, Deferred or Lost Care: How the COVID-19 Pandemic Changed Care and Workforce Patterns in the US,” presented by Dr. Ravi Parikh, University of Pennsylvania; the IAC Lectureship: “How I’ve Learnt to Stop Worrying and Love Genomics,” presented by Dr. Jorge Sergio Reis-Filho, Memorial Sloan Kettering Cancer Center; and the ASC New Frontiers Lecture: “CODA: Mapping Large Volumes of Tissues and Tumors at Single-Cell Resolution,” presented by Dr. Denis Wirtz, Johns Hopkins University. The Congress also featured a variety of innovative symposia, focusing on existing and new reporting systems in cytopathology from the WHO, targeted topic-based workshops, video microscopy tutorials, and sign-out with the professor sessions. Attendees were able to engage with program faculty who are at the forefront of cytopathology, presenting the latest advances, current perspectives, and critical issues in the field.

The WorldVision Cytopathology Contest (WCC), held on Thursday morning, is a global outreach initiative providing a platform for fostering close international relationships. The WCC encouraged an exchange of scientific knowledge and goodwill by offering a unique cytopathology case-based competition and an award to the winner. The top four finalists-- Esma Ersoy, MD, United States; Diana Jaravaza, MD, South Africa; Tania Labiano, MD, Spain; and Lavisha S. Punjabi, MD, Singapore-- presented interesting cytopathology cases to a jury during the Congress. The international jury panel consisted of Maria D. Lozano MD, PhD, MIAC (Spain), Gary M. Tse, MBBS (Hong Kong); Deepali Jain, FIAC (India); and Panagiota Mikou, MD, MSc, PhD, FIAC (Greece). The jury and the audience voted on the best presentation. The 2022 winner was Dr. Diana Jaravaza from the National Health Laboratory Service, Tygerberg Hospital, Cape Town, South Africa who presented a fascinating and rare case of secretory carcinoma of the salivary gland

Andrew Field MD
IAC Awardee
Baltimore 2022

(continues on the next page)

NEXT GENERATION CYTOLOGY!

BALTIMORE – 2022

The Congress also honored members of the International Academy of Cytology and the American Society of Cytopathology who have made significant and lasting impacts on the field of cytology during the Award presentations and the Closing Ceremonies on Saturday afternoon. The awardees include:

IAC Achievement Awards

Maurice Goldblatt Award
2020
Andrew S. Field, MD, BS, FIAC, FRCPA
2021
Marianne Engels, MD, *FIAC*
2022
Ashish Chandra MD FRCPath, DipRCPath (Cytol)

International Cytotechnologist of the Year
2020
Masami Nambu, PhD, CT(IAC)
2021
Jen-Sheng Ko, BS, CFIAC
2022
Donna K. Russell Med, CT(ASCP), HT(ASCP) CFIAC

IAC Honorary Membership
Shirley E. Greening MS, JD, CFIAC

Kazumasa Masubuchi Life-Time Achievement in Clinical Cytology Award
Daisuke Aoki MD, PhD, MIAC

George L. Wied Award
Torill Sauer MD, PhD

James W. Reagan Award
Colleen Wright MBBCh, FCPath, MRCPath, FIAC

ASC Achievement Awards

Papanicolaou Award
Michael R. Henry, MD

Cytotechnologist Award for Outstanding Achievement
Janie Roberson, BS, SCT(ASCP)^{CM}

Excellence in Education Award
Amber Donnelly, PhD, MPH, SCT(ASCP)

International Achievement Award
Esther Diana Rossi, MD, PhD

President's Award
Zubair Baloch, MD, PhD

Volunteer Appreciation Award
Swikrity Upadhyay Baskota, MD

(continues on the next page)

NEXT GENERATION CYTOLOGY!

BALTIMORE - 2022

In addition, the IAC and ASC honored Platform or Poster Presenters rewarding research excellence and promoting the professional development of early career investigators. The leaders of the IAC and ASC created a joint Research and Current Concepts Committee who selected the recipients of the following abstract awards:

IAC/ASC Quality Improvement in Cytology Abstract Award
Comparison of Low-Cost Phantoms for Ultrasound Guided Fine Needle Aspiration Biopsy Teaching
Xiaofeng Zhao, MD, PhD, Esma Ersoy, MD, Dianna Ng, MD
Memorial Sloan Kettering Cancer Center, New York, New York

IAC/ASC Geno Saccomano, MD, New Frontiers in Cytology Award
A Novel Preservation Method of Improving DNA Stability for Liquid-Based Cytology Specimens Using a Lung Adenocarcinoma Cell Line
Yukiko Matsuo, PhD, Tsutomu Yoshida, MD, PhD, Kazuya Yamashita, PhD, Dai Sonoda, MD, PhD, Masashi Mikubo, MD, PhD, Yukitoshi Satoh, MD, PhD
Kitasato University Hospital, Kanagawa, Japan

IAC/ASC Advances in Thyroid Cytology Award
The Utility of Thyroseq in the Triage of Indeterminate Lesions in Thyroid Cytology with Microfollicular Architecture and Predominance of Hurthle Cells
Matthew Turner, MD, Christopher Sullivan, MD, MPH, Mackenzie Jones, Dorbin Abendano, MD, Maria Cecilia Reyes, MD
Medical University of South Carolina, Charleston, South Carolina

IAC/ASC Cytotechnologist Scientific Presentation Award
Approach to Out-of-Range Performance Indicators: A Quality Assurance Study
Karen Chau, MBA, CT(ASCP), Cecilia Gimenez, MD, Deepika Savant, MD, Peter Farmer, MD, Seema Khutti, MBBS, Kasturi Das, MD, Priyanka Karam, MD
Northwell Health, Greenvale, New York

IAC/ASC Innovative Cytotechnologist Practice Abstract Award
Telecytology Rapid Onsite Evaluation, with Real-time Communication between Cytopathologist, Cytotechnologist and Operator, Offers Better Adequacy Rates for Lymph Node Fine Needle Aspirations
Allison Goldberg, MD, Kelly Doxzon, MBA, CT (ASCP)
Thomas Jefferson University Hospital, Philadelphia, Pennsylvania

(continues on the next page)

NEXT GENERATION CYTOLOGY!

BALTIMORE – 2022

IAC/ASC Warren R. Lang, MD Resident's Physician Award
A Rotation of ROSEs: Workload and Reimbursement Analysis of System-wide Telecytology ROSE Coverage in a Multi-site Rural Health System
Terrance Lynn, MD, MS, MHCI, Sara Monaco, MD, Renee Frank, MD, Michelle Pramick, MD, Fan Lin, MD, PhD
Geisinger Medical Center, Danville, Pennsylvania

ASC Excellence in Diversity, Equity & Inclusion Research Award
Urine Cytology in Patients with Gender Confirmation Surgery and Hormone Therapy: Highlighting the Performance of Urine Cytology in an Underserved Patient Population
Chien-Kuang Cornelia Ding, MD, PhD[1], Christopher VandenBussche, MD, PhD[2], Carlo De la Sancha, MD[1], Nancy Greenland, MD, PhD[1], Poonam Vohra, MD[1]
1 University of California, San Francisco, San Francisco, California; 2 Johns Hopkins University, Baltimore, Maryland

The Congress concluded with a very special festive evening to "cell-ebrate" the field of cytology: The Cell-ebration Baseball Bash, was held at the famous Oriole Park at Camden Yards, home of the Baltimore Orioles Major League Baseball team. The dance floor was full the entire night from friends from around the world "cell-ebrating" the historic, in-person, truly joint meeting of the IAC and ASC.

A special thank you goes to Dr. Zubair Baloch, Chair of the ASC Scientific Program Committee, and to Dr. Syed Ali, Chair of the IAC Program Committee. In addition, a big thank you goes to the ASC Team of Beth Jenkins, Sondra Forman, JoAnn Jenkins, Patty Huff, Jaime Rice, and Sandy Hitchens, and to Ms. Allison Austin of the IAC Central Office.
As the Congress came to a close, the Italian Planning Committee shared a beautiful video inviting everyone to Florence for the 22nd International Congress of Cytology in 2025. The ASC invites everyone to Austin, Texas, next year for the 71st Annual Scientific Meeting. Please join the IAC and ASC for more information on upcoming educational events.

Cell-ebration, Baltimore 2022
Martha B. Pitman, MD and Fernando C. Schmitt, MD

Fernando C. Schmitt, MD, PhD, FIAC
International Academy of Cytology
President, 2022

Martha B. Pitman, MD, FIAC
American Society of Cytopathology
President, 2022

Interview with Prof. Luigi di Bonito

by **Despina Argyropoulou**, *EFCS Residents and Young Pathologists Committee*

One more year has come to an end, and what a year! 2022 has indeed been such a wonderful comeback year. We leave the readers of this last 2022 EFCS Newsletter with a heartwarming interview from one of the most experienced, Professor Luigi di Bonito himself! Author of more than 245 scientific works, full Professor of Anatomic Pathology since 1990 and teacher of Pathology in the Faculty of Medicine at the University of Trieste since 1996, Professor Luigi di Bonito has had a leading role in aspiration and exfoliative cytopathology courses in Trieste since 1987, has been an author of more than 34 cytology courses and numerous lectures worldwide, Chair of the 2014 EFCS annual tutorial and for a consecutive 5 years, President of 2 European Congresses of Cytology and honorary member of several European and international cytology societies!

Yet again there is no better way that to learn from the best. Happy holidays and a wonderful 2023 to all.

Picture1. Professor Luigi di Bonito at the European Congress of Cytology in Malmo, Sweden, 2019.

1) First of all, we would like to congratulate you on your recent EFCS lifetime achievement award! In hindsight, what was your drive for success during all these years of dedication as a cytopathologist?

I actually never thought about success in my career. **The goal was to work well and improve myself and my relationships with clinicians.** This has always been a priority in my work. All the gratifications I achieved during this period were a consequence of this approach to my work. I don't know if we can talk about success. But having the opportunity to meet great colleagues I admired and to work together with them has been fantastic. Of course, being the chairman of two European cytology congresses has been very rewarding for me (in picture 1, represented himself at the European Congress of Cytology in Malmo, Sweden (2019)).

2) How did your love for cytology begin?

As a young assistant of Pathology at the University of Trieste, I noticed that cytology at that time was not widely used at my institution. So I started to follow this discipline, went to Paris, and for a year I **worked with Jean de Brux. This experience was the key to my love for cytology.** When I came back, I realized that **with cytology I was able to anticipate histological diagnosis** in many cases, and this was eventually noticed even by my colleagues and the director of the Institute, Prof. Giarelli, who had been quite sceptical at first.

(continues on the next page)

Interview with Prof. Luigi di Bonito

by **Despina Argyropoulou**, *EFCS Residents and Young Pathologists Committee*

3) Do you recall a remarkable moment during your cytology career path that you would like to share with the readers?

I think that one of the most remarkable moments was the organization of the first cytology course in Trieste, with Antoine Zajdela as a guest. It was a great success, we repeated the course for twenty years, annually, changing each year the topics. I was then invited by Zajdela to organize similar courses in Paris, where it was repeated many times, and then in Bruxelles, again for many years. In Bruxelles, Claude Gompel always invited two tutors, the one who was most appreciated by the participants was invited again. I was invited consecutively for many years... I was undoubtedly not always the best one, but probably the participants felt my enthusiasm for cytology. This opened to me the doors of Europe. This is why I often tell young cytopathologists **not to be afraid to attend international events as often as possible**, to watch and **learn how others work**.

4) You have chaired five editions of the EFCS tutorials. Can you share with us your experience during this process?

The experience that I was able to gain in my previous courses was obviously very useful for the organization of the EFCS Tutorials. In the first years, I was supported by Amanda Herbert and Torill Sauer, then by Giovanni Negri, who now chairs the Tutorial (in picture 2, represented from left to right Dr. Amanda Herbert, Professor Luigi di Bonito, Arrigo Capitanio and Giovanni Negri in Brussels (2018)). Overall, I am very grateful to EFCS for the opportunity I was given. Over the years I have been able to meet great colleagues, whose teaching skills and vast culture I admired. In fact, the success of the Tutorials is mainly due to the excellent work of all the tutors that contributed to the event over all these years. With many of them I had, and still have, also a very nice personal relationship. **The centre of all that was the particular formulation of the tutorials, which where, and still are, based on close interaction between tutors and participants,** something that is not possible in virtual meeting, and this should continue also in the future. This is a peculiarity of the EFCS Tutorials that makes them unique. The enduring success of the Tutorial is the best proof that this approach works very well (in picture 3, photograph taken at the EFCS Tutorial in Gothenburg, Sweden (2017)).

Picture 2. From left to right Dr. Amanda Herbert, Professor Luigi di Bonito, Arrigo Capitanio and Giovanni Negri in Brussels, 2018.

Picture 3. Photograph taken at the EFCS Tutorial in Gothenburg, Sweden, 2017.

(continues on the next page)

Interview with Prof. Luigi di Bonito

by **Despina Argyropoulou**, *EFCS Residents and Young Pathologists Committee*

5) How do you see education and training in the field of cytopathology?

I know there are many differences in Europe concerning training in cytology. Of course, I know the Italian situation best, but there are probably many common points with other countries. In Italy cytology is often not taught enough during residency, ant this is a big issue that should be addressed as soon as possible. **Young pathologists should know the opportunities that cytology may give in diagnostics,** also with the aid of molecular techniques, which work often best on cytological samples. Beside this, it is important for Europe to organize training opportunities for young cytologists and cytopathologists, also using digital cytology since digital is going to become part of the daily diagnostic in the near future.

6) What is the most memorable cytology diagnosis you have ever made?

I can't remember one particular case, because each diagnosis has its own peculiarities. However, the cases that may be most memorable have usually been those with a positive cytology, and an initial negative biopsy, in which the cytological diagnosis was later confirmed by a further histology. The **cytohistological correlation has always been a keystone of my work.** Again, in these cases collaboration with clinicians is very important. Overall, these cases often lead to real cultural growth, showing **how important correlation between different techniques can be for the final diagnosis.**

7) What is your all-time favourite cytology book?

I have used so many books that I cannot mention one in particular. When I was young, the most used book was the one by Koss, nowadays there are many excellent books on specific topics.

8) How do you see the future of cytology?

The future of cytology depends on us. If we can show clinicians how useful cytology can be, cytology will have a great future. Unfortunately, some pathologists do not believe in cytology, mainly because they do not use it. Fundamental will be the teaching of residents, as well as our participation in interdisciplinary events, where we can demonstrate the usefulness of cytology, also as a basis for molecular techniques.

Visit EFCS website
https://www.efcs.eu

The second edition of the Milan System for Reporting Salivary Gland Cytopathology. Updates and changes

Fine needle aspiration (FNA) is a well-established procedure for the diagnosis and management of salivary gland lesions. Nevertheless, some challenges are due to salivary gland tumor diversity, complexity, and cytomorphological overlap. Until recently, the reporting of salivary gland FNA specimens was not homogeneous among different institutions throughout the world, leading to diagnostic confusion among pathologists and clinicians. In 2015, an international group of pathologists, decided to develop an evidence-based tiered classification system for reporting salivary gland FNA specimens, the "Milan System for Reporting Salivary Gland Cytopathology" (MSRSGC). The MSRSGC consists of six diagnostic categories which incorporate the morphologic heterogeneity and overlap among various non-neoplastic, benign, and malignant lesions of the salivary glands. In addition, each MSRSGC diagnostic category is associated with a risk of malignancy and management recommendations.

The 1st MSRSGC Atlas, published in 2018, includes definitions, morphologic criteria, diagnostic category explanations, and sample reports for each of the diagnostic categories. The MSRSGC Atlas also dedicates specific chapters to the application of ancillary studies, clinical management, and current histologic considerations. The purpose of the MSRSGC is focused on being a practical classification system which can be adopted from institutions with all levels of expertise in salivary gland cytology. Since its implementation, the MSRSGC gained widespread international acceptance among cytologists and clinicians. In many institutions, all around the world, it is currently used to report cytology results at many institutions worldwide. Due to this increasing popularity and value, it has been endorsed by the 2021 ASCO guidelines for the management of patients with salivary gland cancer and by the 2022 WHO Classification of Head and Neck tumors. Specifically, the ASCO guidelines recommend that pathologists should report risk of malignancy (ROM) using a risk stratification scheme for salivary FNAs with particular attention to high-grade features. In the Milan System malignant chapter, the authors stressed out the concept of grading for malignant lesions, which is likely to be useful for the more appropriate management, The MSRSGC is designated as the current standard reporting scheme. Since 2018, numerous FNA studies including meta-analyses have been published using the MSRSGC diagnostic criteria, confirming the value and role of the Milan system as a practical and useful classification system. In a recent PubMed search, more than 200 studies using or referring to the MSRSGC have been published, including studies from North America, Europe, Africa, Australia, and several Asian countries. These papers confirmed the mean ROM for each category within the recommended range published by the MSRSGC. All these papers and the data from published studies using MSRSGC since its introduction, served as a basis for a recent update of the Milan system. The 2nd edition of the MSRSGC, which is expected in early 2023, will include refined ROMs for each diagnostic category, a new Chapter on imaging studies for salivary glands, updates on the application of ancillary studies to salivary gland FNA, as well as updated nomenclature and entities in keeping with the latest 2022 WHO classification. Furthermore, additional pictures substituting half of the original ones, have been added as well as a complete revisions of the diagnostic chapters with an emphasis for the neoplastic chapter and its subclassification. To note, Japanese and Chinese versions of the MSRSGC were published in 2019 and 2022, respectively. The second edition is expected for the beginning-first months of 2023.

Esther Diana Rossi[1] and **William C. Faquin**[2]

1 Division of Anatomic Pathology and Histology, Agostino Gemelli School of Medicine, Università Cattolica del Sacro Cuore, Rome, Italy.

2 Department of Pathology, Massachusetts General Hospital and Harvard Medical School, Boston, Massachusetts, USA.

Case Challenges!

Case Challenges!

1

Woman, 34 years old, asymptomatic. Previous pap smear was taken six months before during pregnancy. The result was ASCUS, severe cytolysis. Repeat pap smear and HPV test were taken. HR HPV was positive (HC2). Colposcopy result was hypertrophic glandular epithelium.
Repeat pap smear looked like this (Figures 1-6):

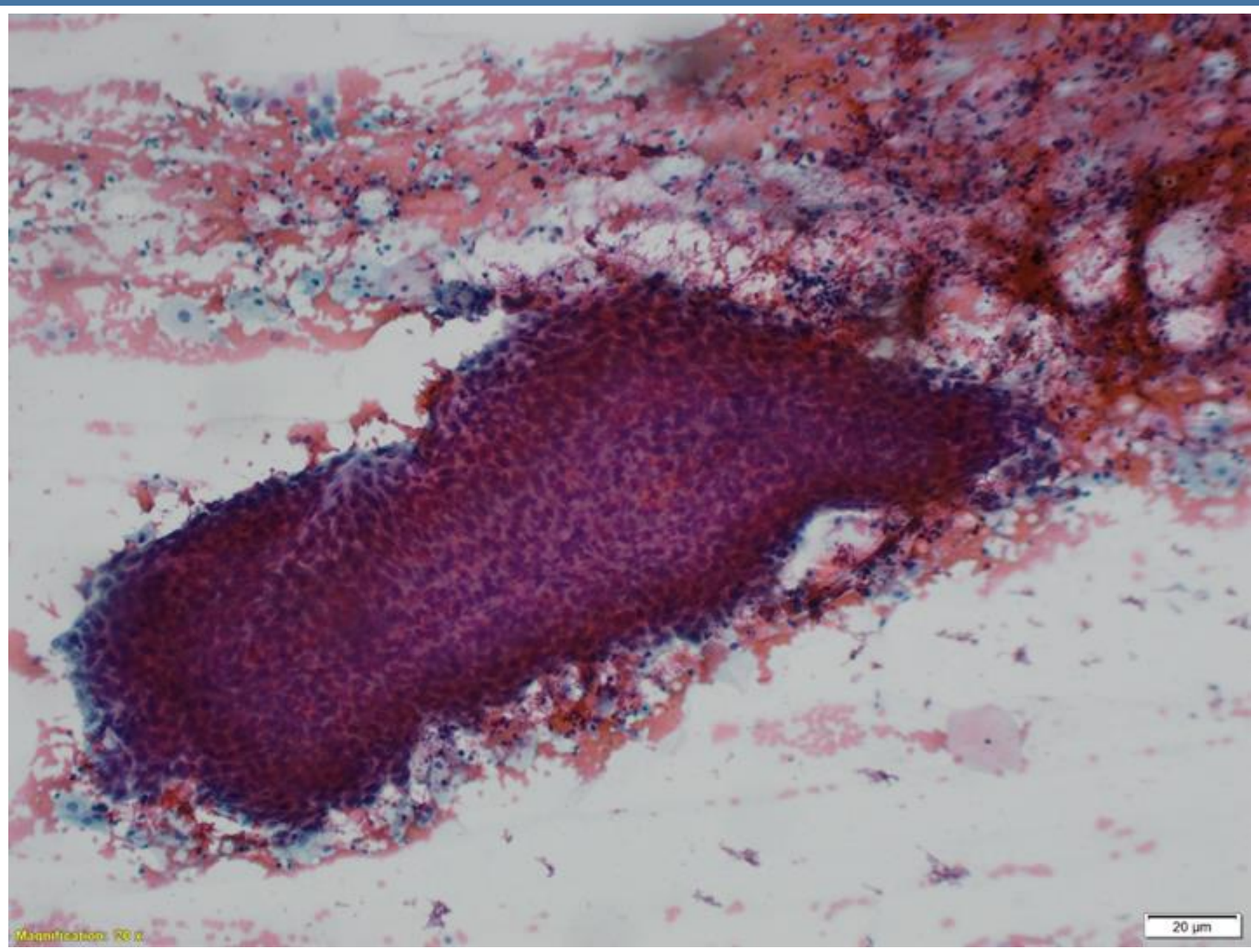


Fig. 1. Papanicolaou stain, x100

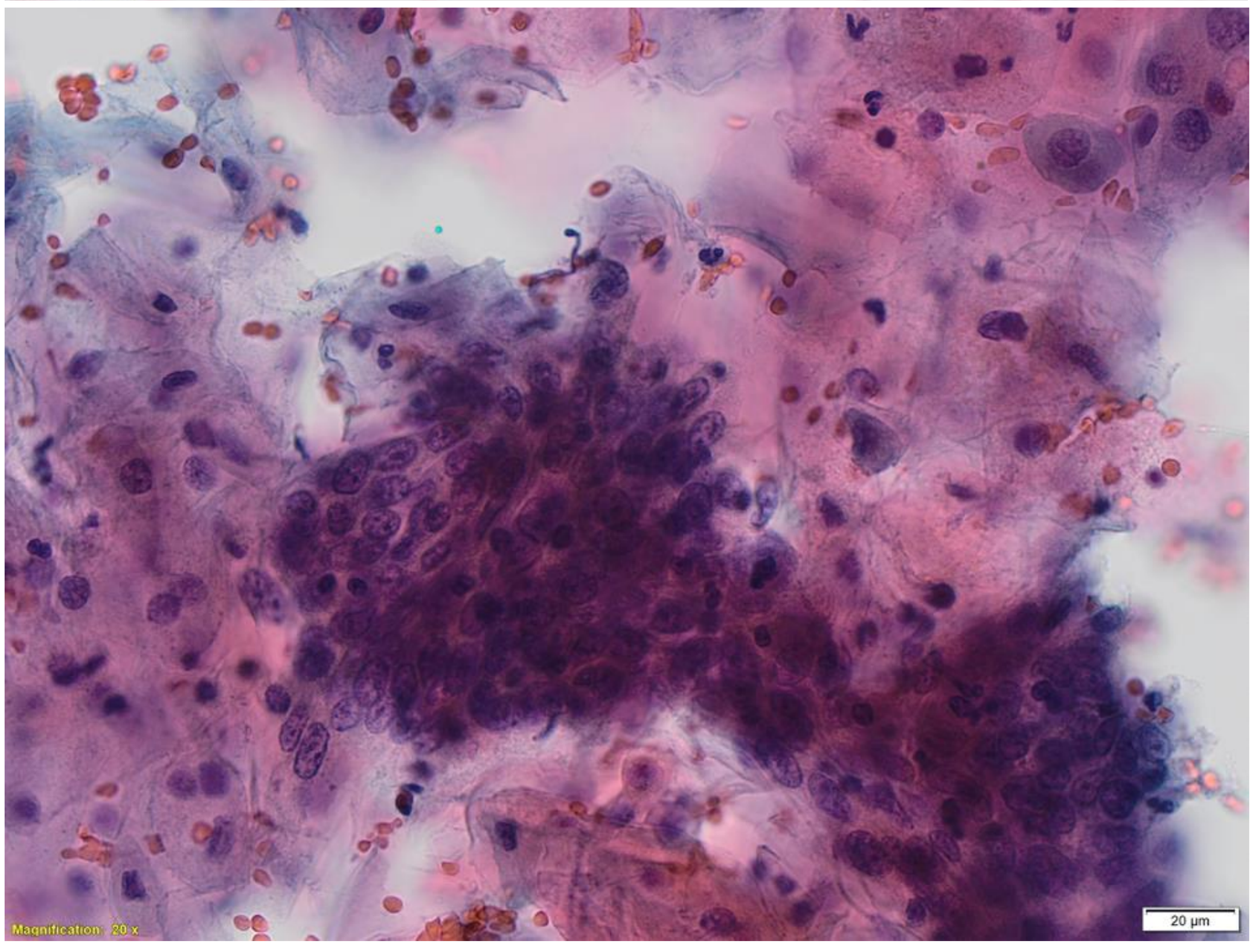


Fig. 2. Papanicolaou stain, x400

(continues on the next page)

Case Challenges!

1

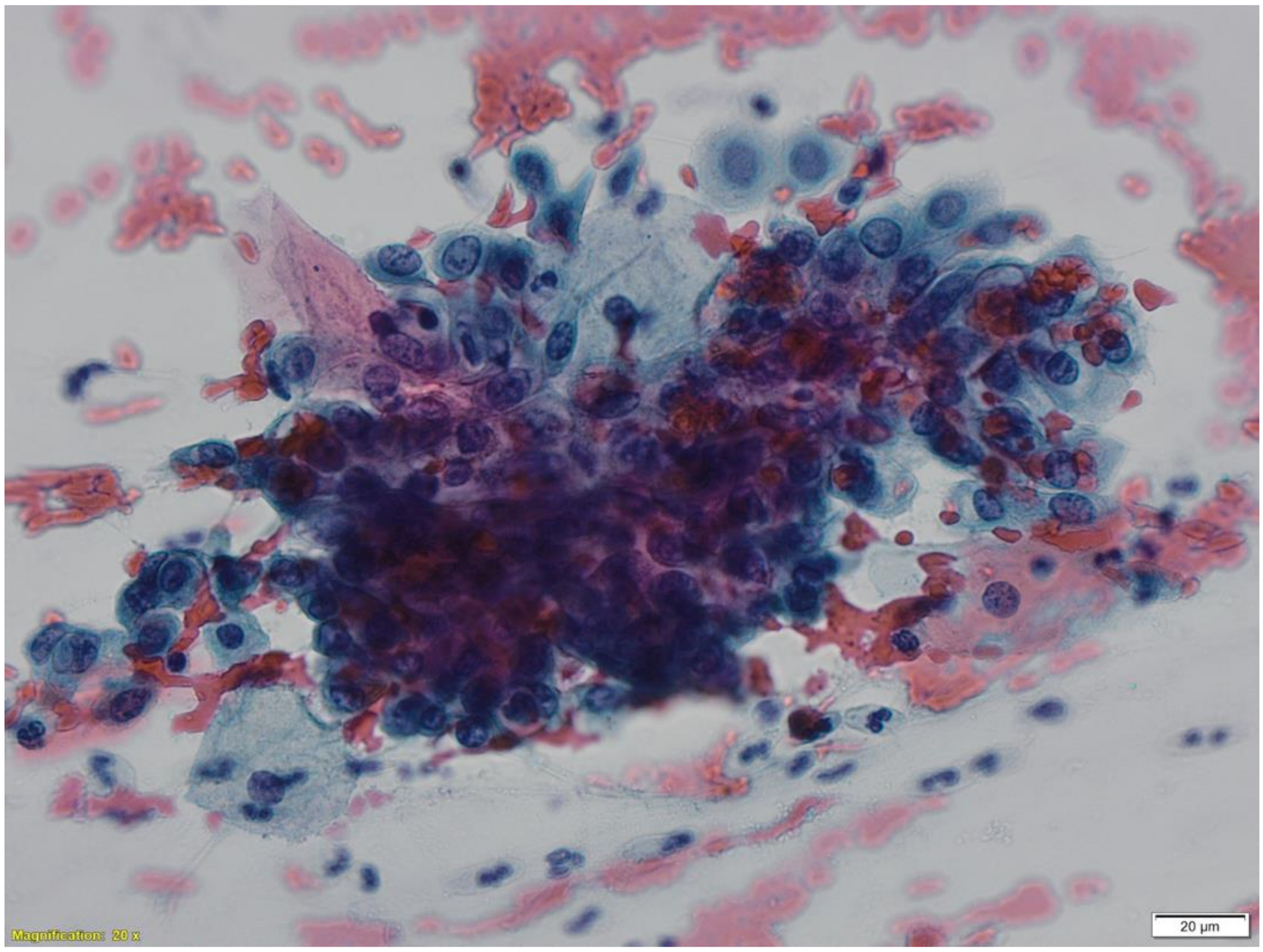


Fig. 3. Papanicolaou stain, x400

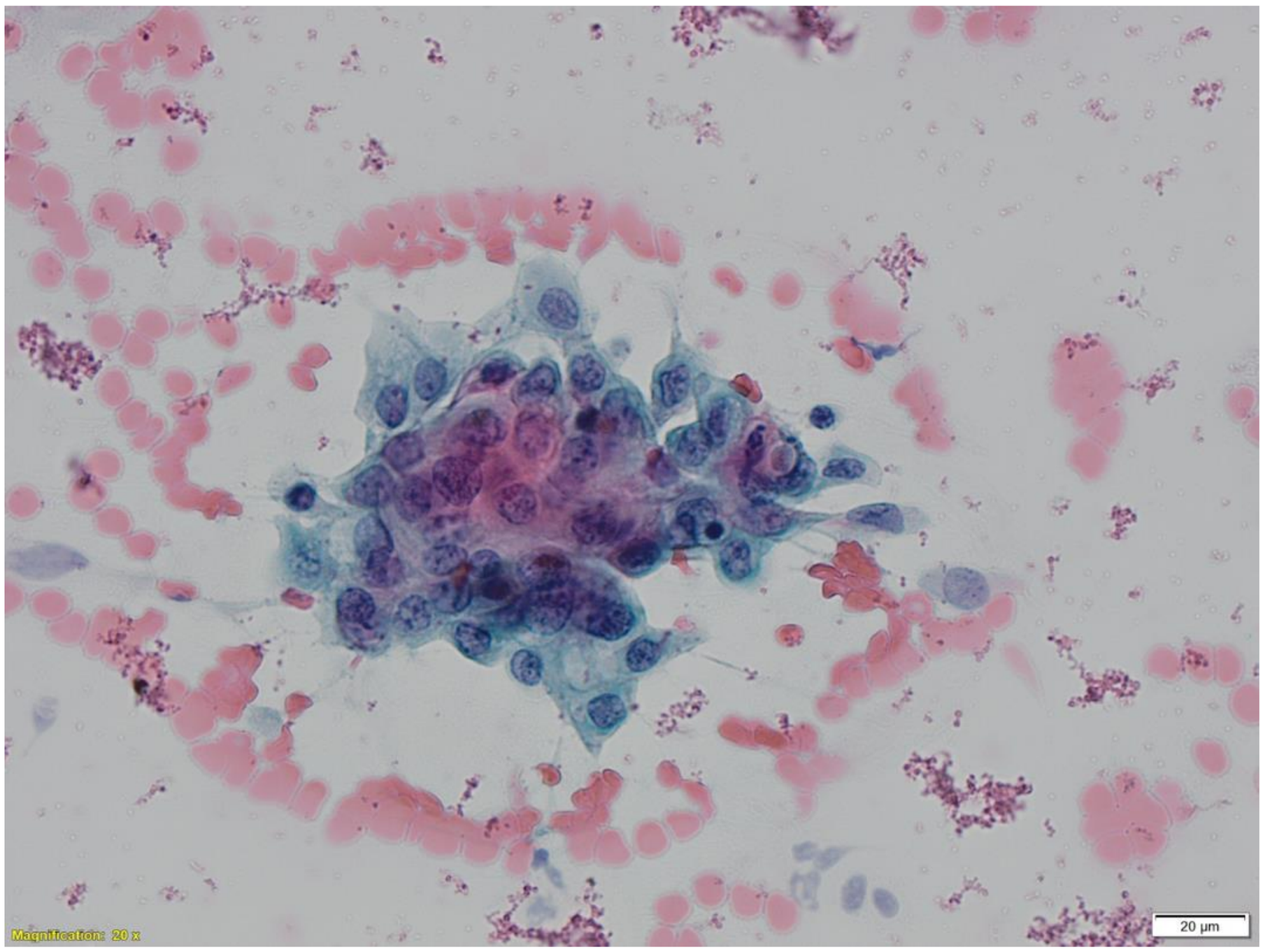


Fig. 4. Papanicolaou stain, x400

(continues on the next page)

Case Challenges!

1

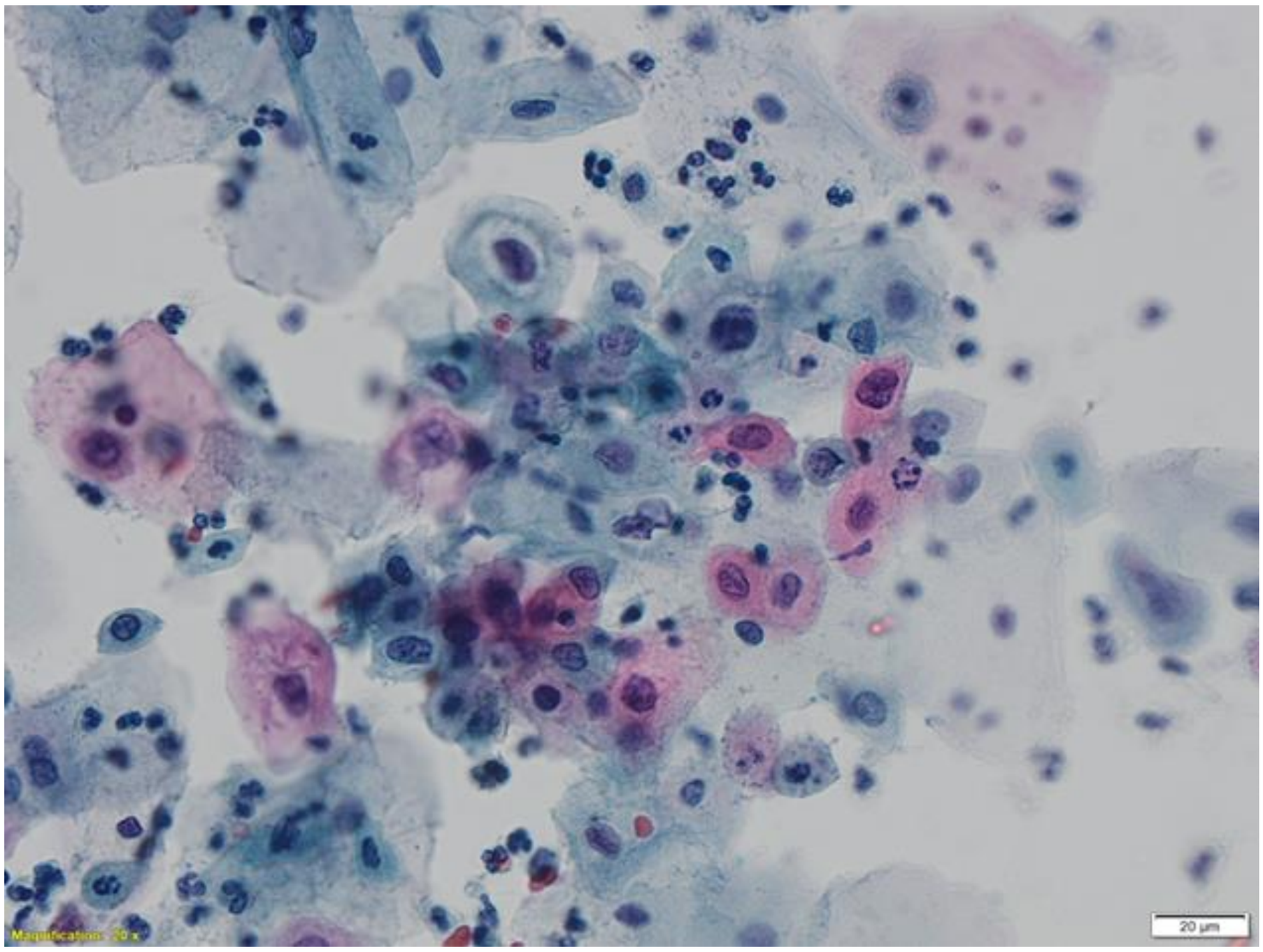


Fig. 5. Papanicolaou stain, x400

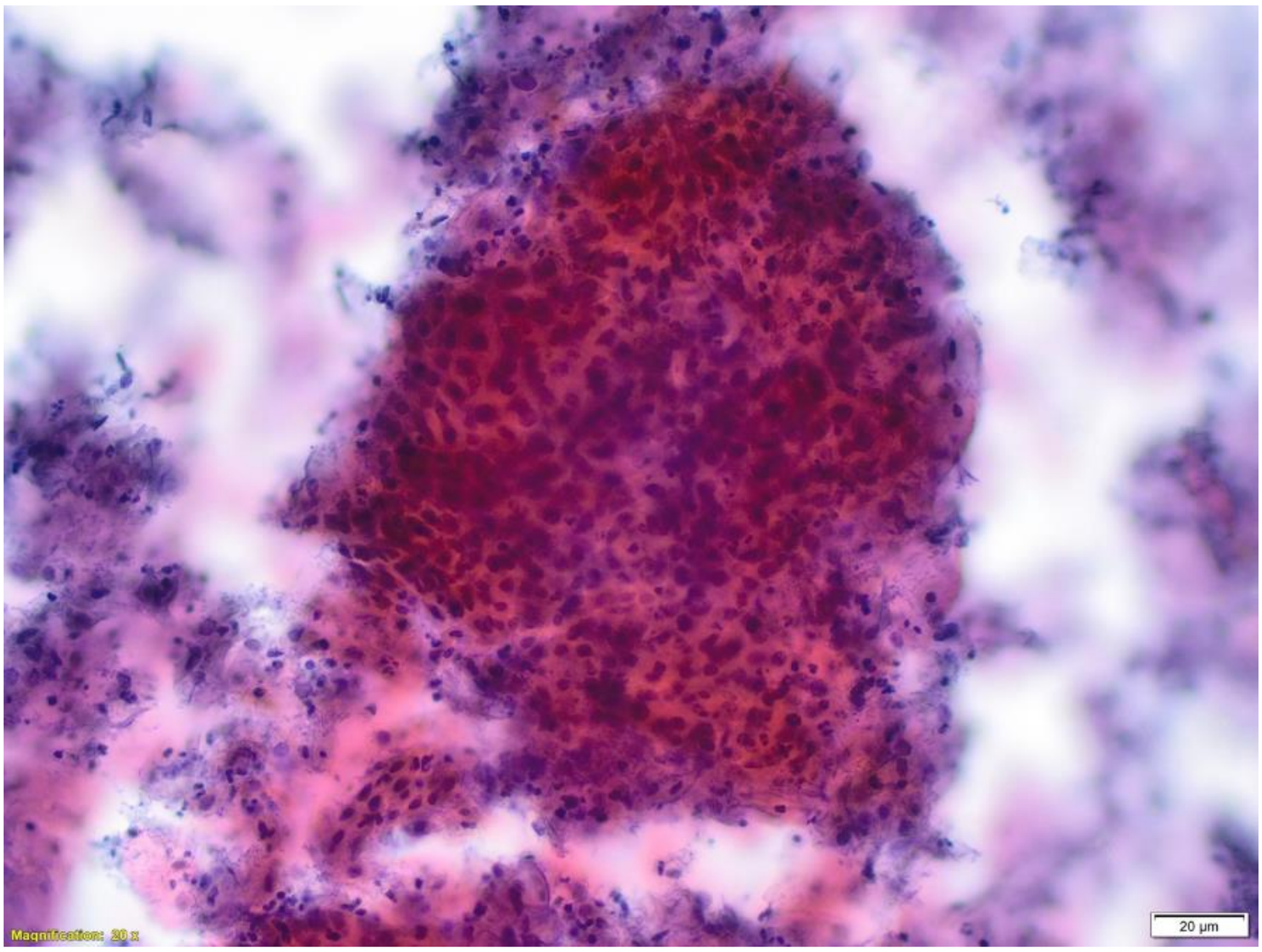


Fig. 6. Papanicolaou stain, x200

(continues on the next page)

Case Challenges!

1

Woman, 34 years old, asymptomatic. Previous pap smear was taken six months before during pregnancy. The result was ASCUS, severe cytolysis. Repeat pap smear and HPV test were taken. HR HPV was positive (HC2). Colposcopy result was hypertrophic glandular epithelium.

How would you classify the finding?

a. Negative for intraepithelial lesion or malignancy
b. ASCUS
c. AGC
d. ASC-H
e. LSIL
f. HSIL
g. Squamous cell cancer
h. Adenocarcinoma

(continues on the next page)

Case Challenges!

1

Woman, 34 years old, asymptomatic. Previous pap smear was taken six months before during pregnancy. The result was ASCUS, severe cytolysis. Repeat pap smear and HPV test were taken. HR HPV was positive (HC2). Colposcopy result was hypertrophic glandular epithelium.

Answer for pap smear category: Squamous cell cancer, but ASC-H or HSIL would also be appropriate.

Follow up of the case:

Repeated colposcopy: exophytic tumour with atypical vascularisation and with sharp margins.

Punch biopsy:

Histology description: papillary, thickened squamous epithelium with koilocytosis (Figure 7).

Diagnosis: CIN1, condyloma acuminatum.

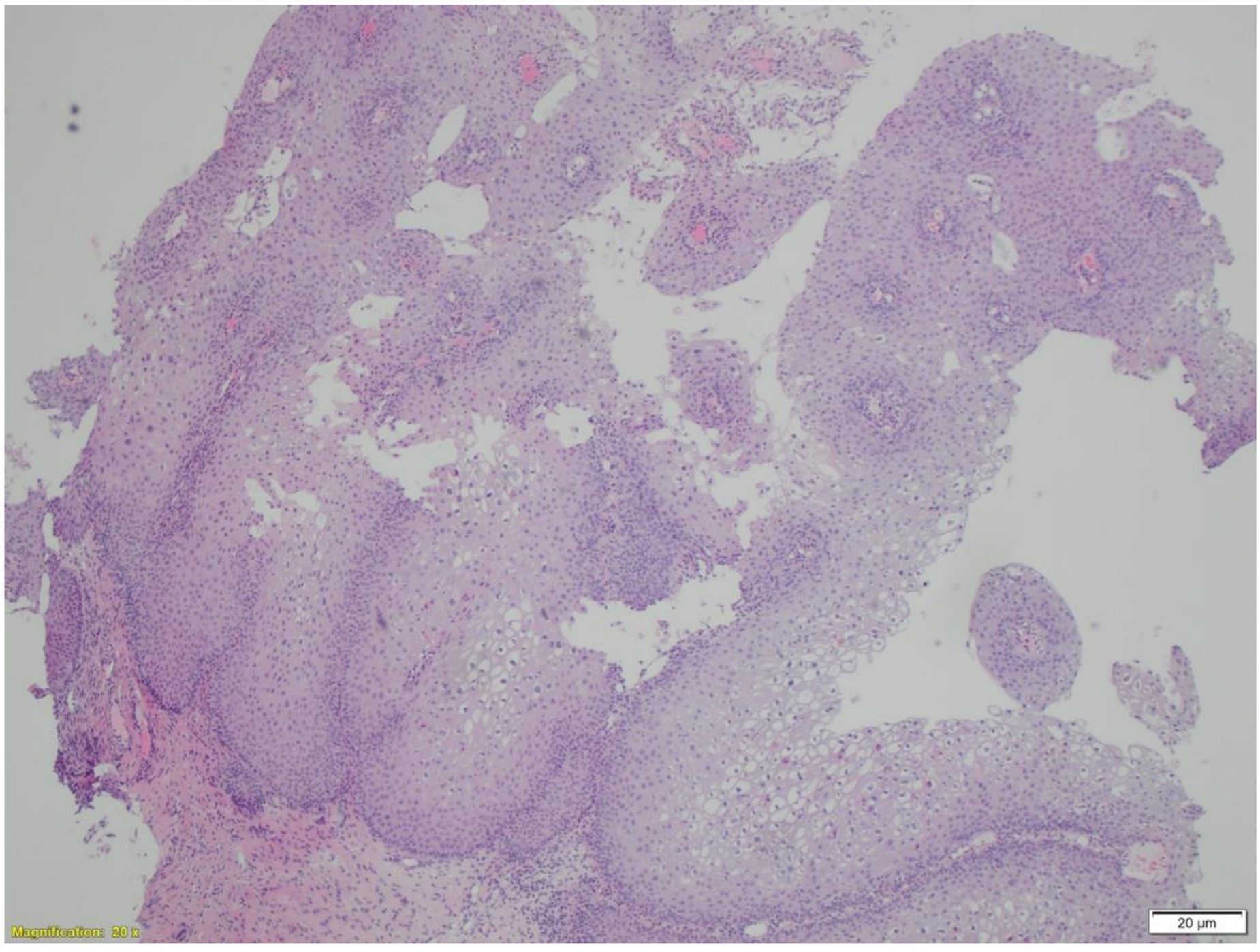


Fig. 7. Papillary, thickened squamous epithelium with koilocytosis, H&E, 100x

After discussion on the multidisciplinary team, the recommendation was to perform cold knife conization.

(continues on the next page)

Case Challenges!

1

Conisation:

Histology description: papillary tumour tissue showing atypical squamous epithelium, parakeratosis and few koilocytes. Invasion of the stroma 0,8 mm, less than 7mm in horizontal spread, positive exocervical margins (Figures 8 and 9).

Diagnosis: Squamous cell carcinoma – papillary type, microinvasive, FIGO 1a1.

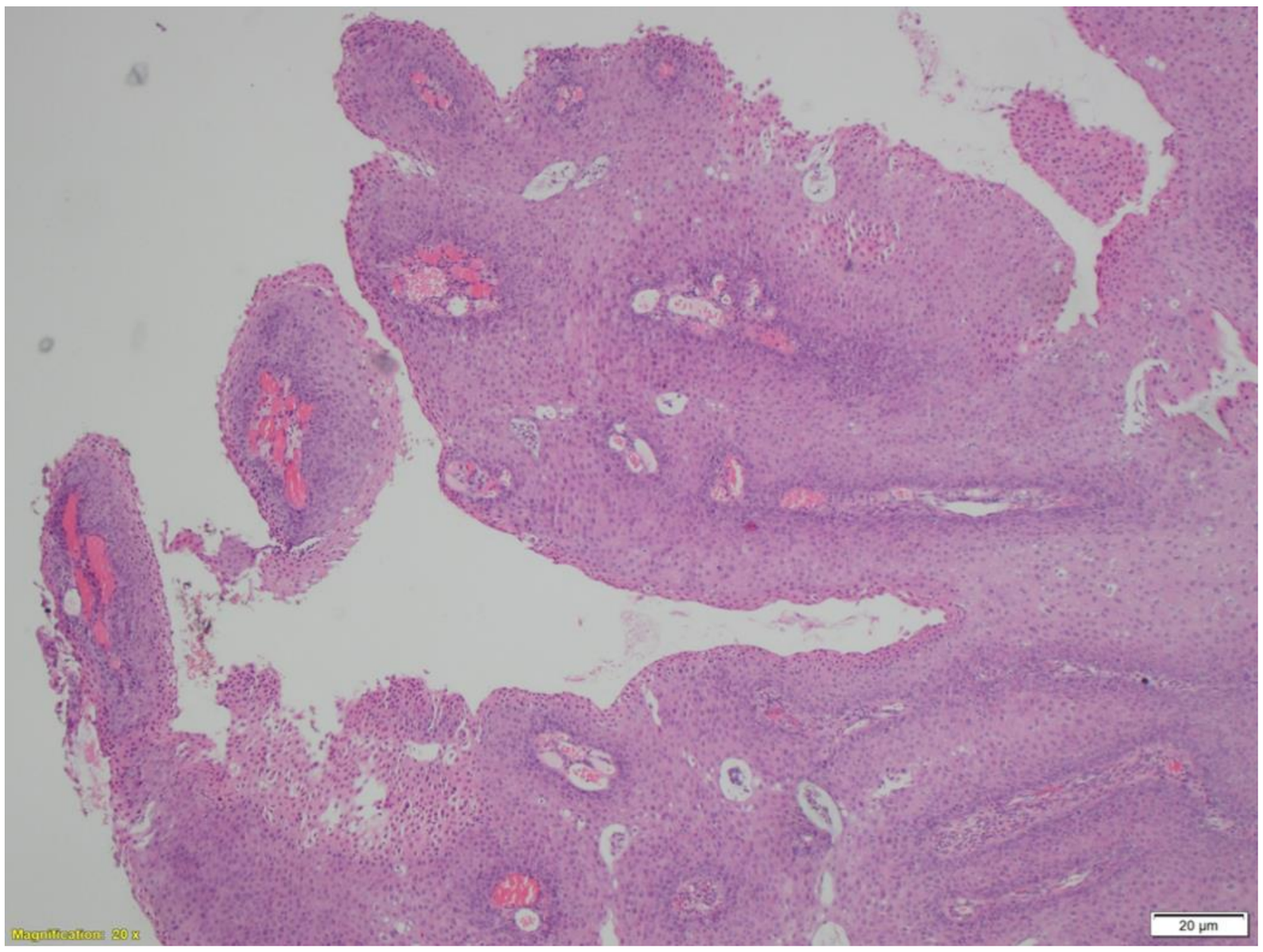


Fig. 8. Papillary tumour tissue showing atypical squamous epithelium, parakeratosis and few koilocytes, H&E, 100x

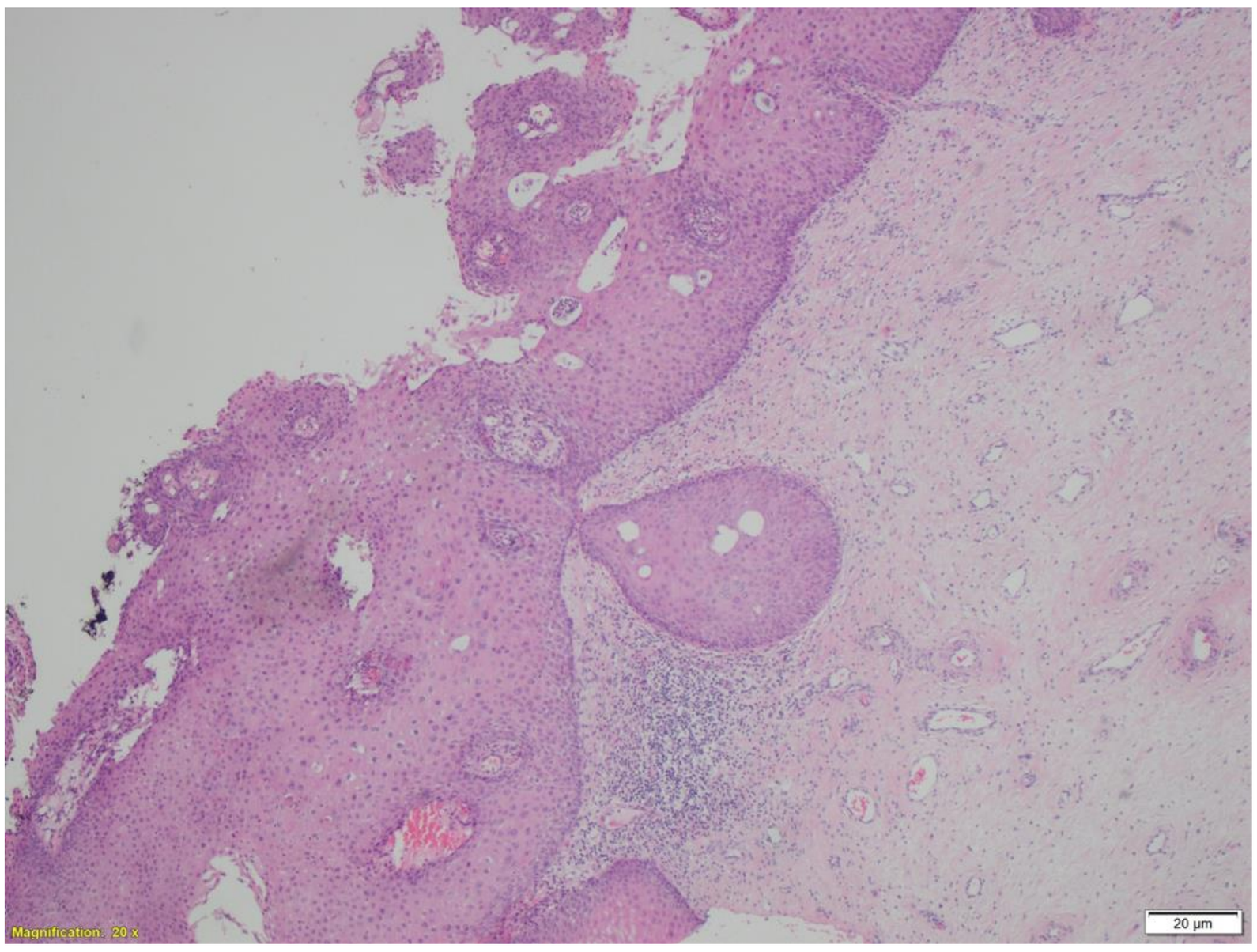


Fig. 8. Invasion of the stroma, H&E, 100x

(continues on the next page)

Case Challenges!

1

Woman, 34 years old, asymptomatic. Previous pap smear was taken six months before during pregnancy. The result was ASCUS, severe cytolysis. Repeat pap smear and HPV test were taken. HR HPV was positive (HC2). Colposcopy result was hypertrophic glandular epithelium.

Cytology features to observe: hyperchromatic crowded groups – large and solid, like tissue fragments, blood in the background (Figure 1); small atypical squamous cells with hyperchomatic nuclei, irregular chromatin and nuclear borders in clusters resembling squamous metaplasia (Figures 2-4); areas with koilocytes and cells with borderline cellular changes (Figure 5); large, thick fragments of parakeratotic cells (Figure 6).

Papillary squamous cell carcinoma (SCC) of the uterine cervix is a rare, distinct type of SCC. It is HPV associated and represents 1,6 % of all cervical cancers. It is considered to be less aggressive than classical squamous cell carcinoma. Papillary SCC shows exophytic growth of fibrovascular cores lined by multi-layered atypical epithelium with squamous differentiation. Superficial biopsy may not reveal evidence of invasion, but carcinoma can be diagnosed when there is a clinically visible lesion of the exophytic growth pattern. Complete excision of the lesion usually reveals an underlying invasive tumour.

Comment: it is important to always compare cytology, colposcopy, and biopsy results, and in the case of any discrepancies, discuss it on multidisciplinary teams or consultations, to achieve the best possible way of diagnosing and treat your patients.

Literature:

Randall ME, Andersen WA, Mills, Stacey E, Kim JAC. Papillary Squamous Cell Carcinoma of the Uterine Cervix. A Clinicopathologic Study of Nine Cases. International Journal of Gynecological Pathology 5(1):p 1-10, March 1986.

Turker LB, Gressel GM, Abadi A, Frimer M. Papillary squamous cell carcinoma of the cervix: Two cases and a review of the literature. Gynecol Oncol Rep. 2016 Nov; 18: 18–21.

WHO Classification of Tumours Editorial Board. Female Genital Tumours, WHO Classification of Tumours, 5th Edition, Volume 4, IARC, Lyon, 2020

Author of the case:

Assist Prof Danijela Vrdoljak-Mozetič, MD, PhD, MIAC

Clinical Hospital Centre Rijeka and Faculty of Medicine, University of Rijeka, Rijeka, Croatia

Case Challenges!

2

53-year-old female patient presented with a cystic tumor of a body/tail of the pancreas, measuring 2.5 cm, found on CT-scan. The patient was referred for EUS-FNA and 5 ml fluid tinted with blood was obtained. The sample was sent for cytology and biochemistry, but arrived at laboratory as a coagulum, so it was not possible to determine CEA and amylase level. A cell block was made from a coagulum, but there were no cells in it.
EUS-FNA was repeated and presence of cytopathologist was requested.
This time only few drops of slightly viscous fluid was obtained, so it was decided to make direct smears. There was not enough sample for a cell block.

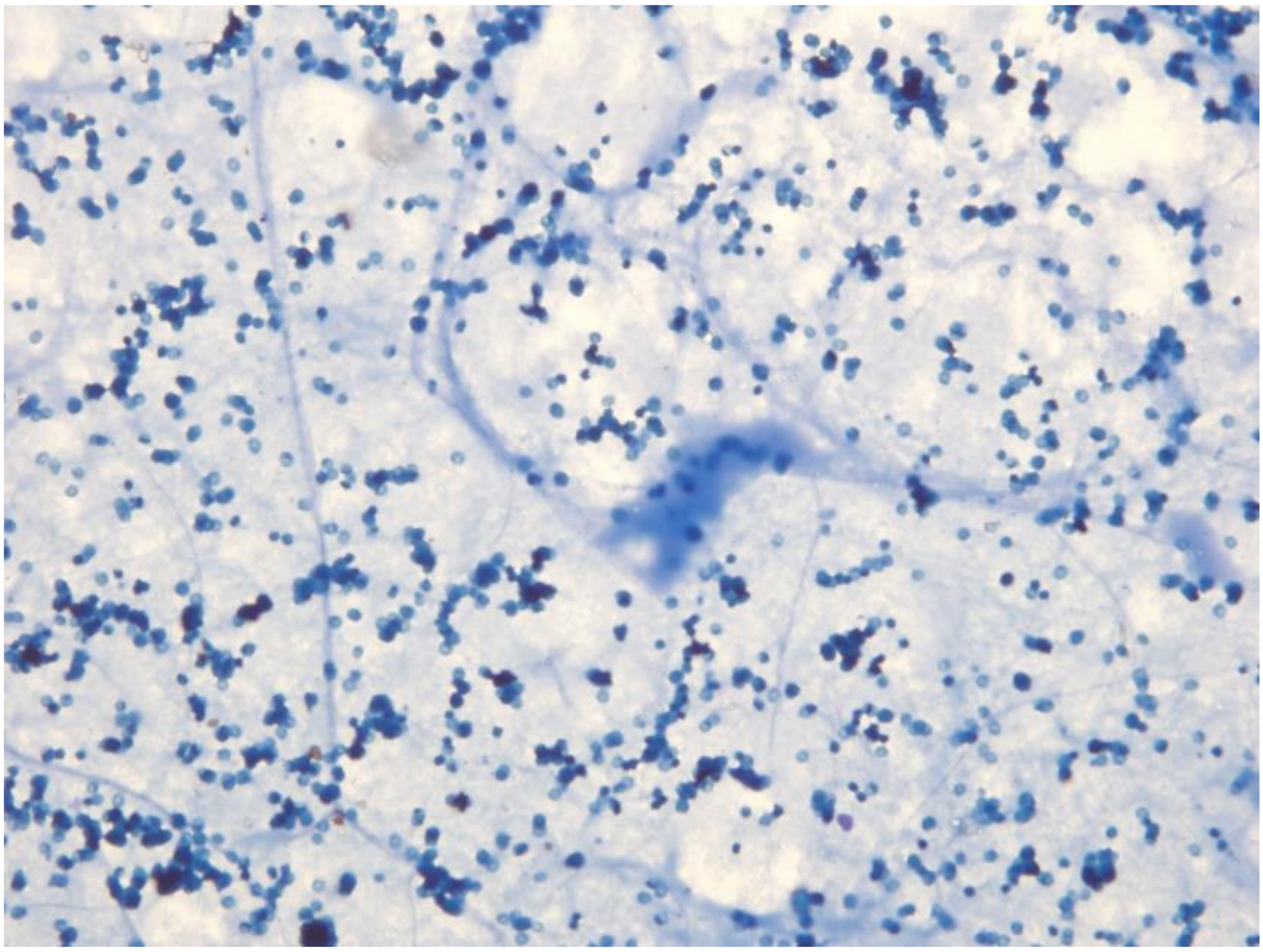


Fig. 1. May-Grünwald Giemsa staining (MGG), x100

(continues on the next page)

Case Challenges!

2

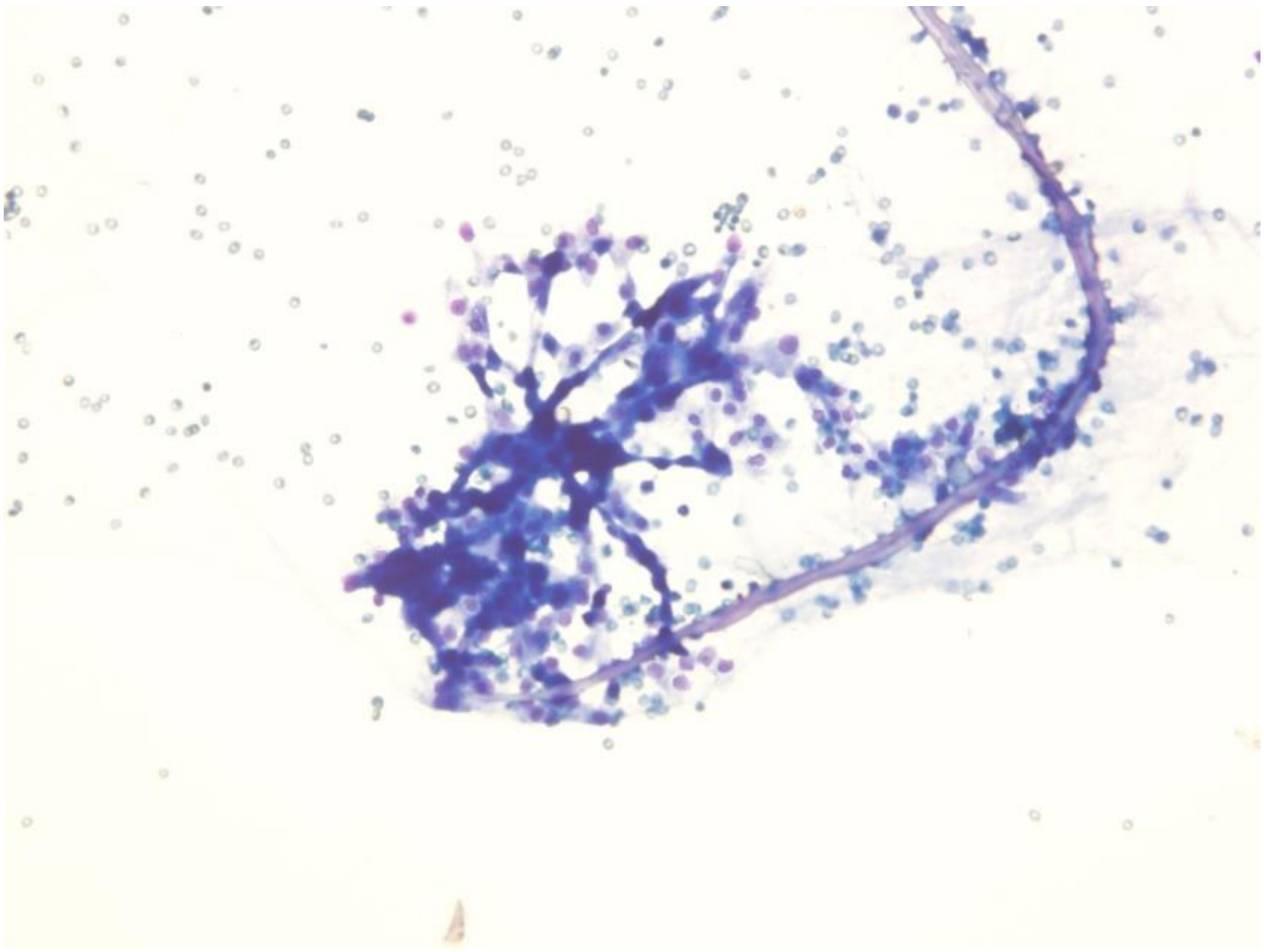


Fig. 2. MGG, x100

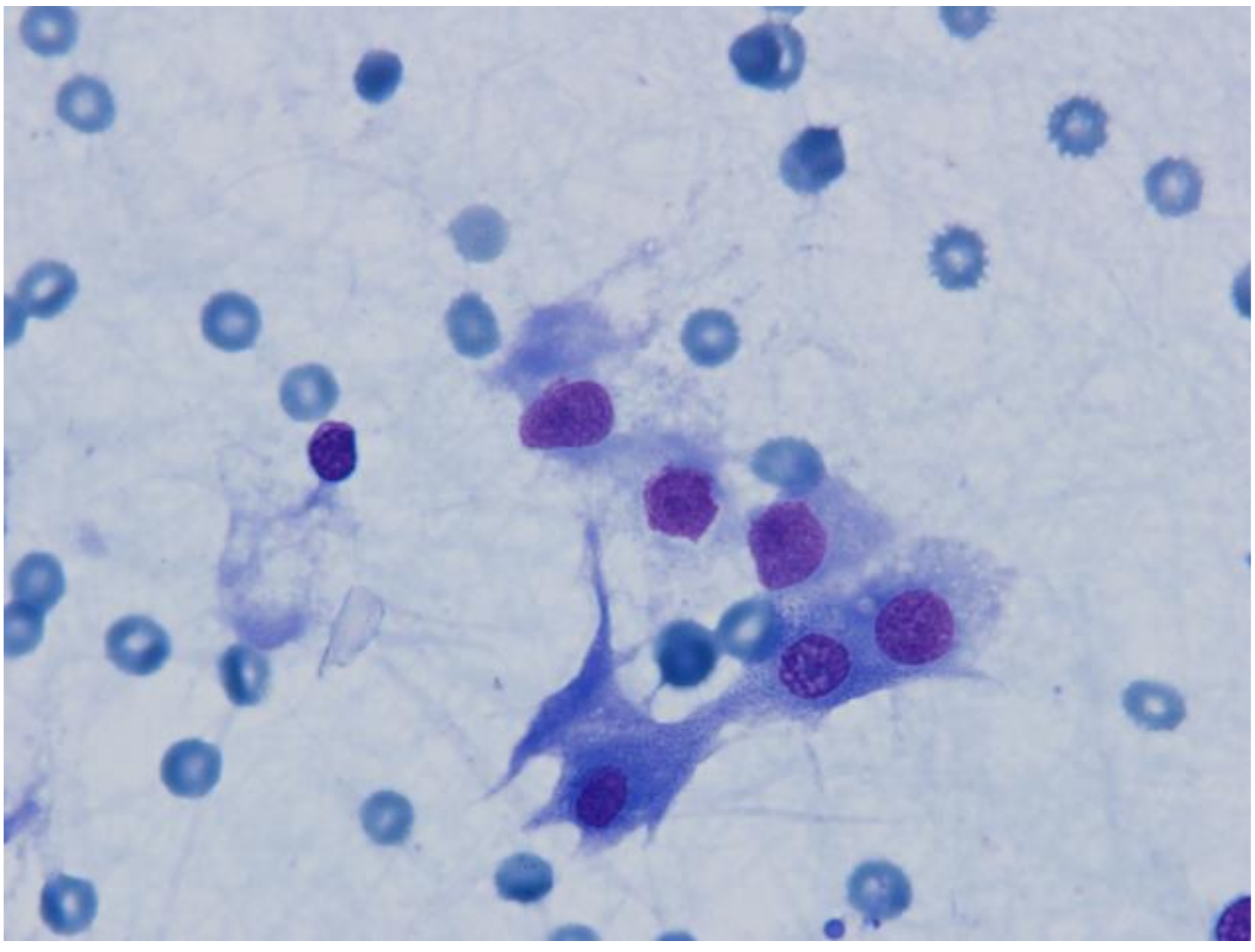


Fig. 3. MGG, x1000

(continues on the next page)

Case Challenges!

Additional findings on smear:

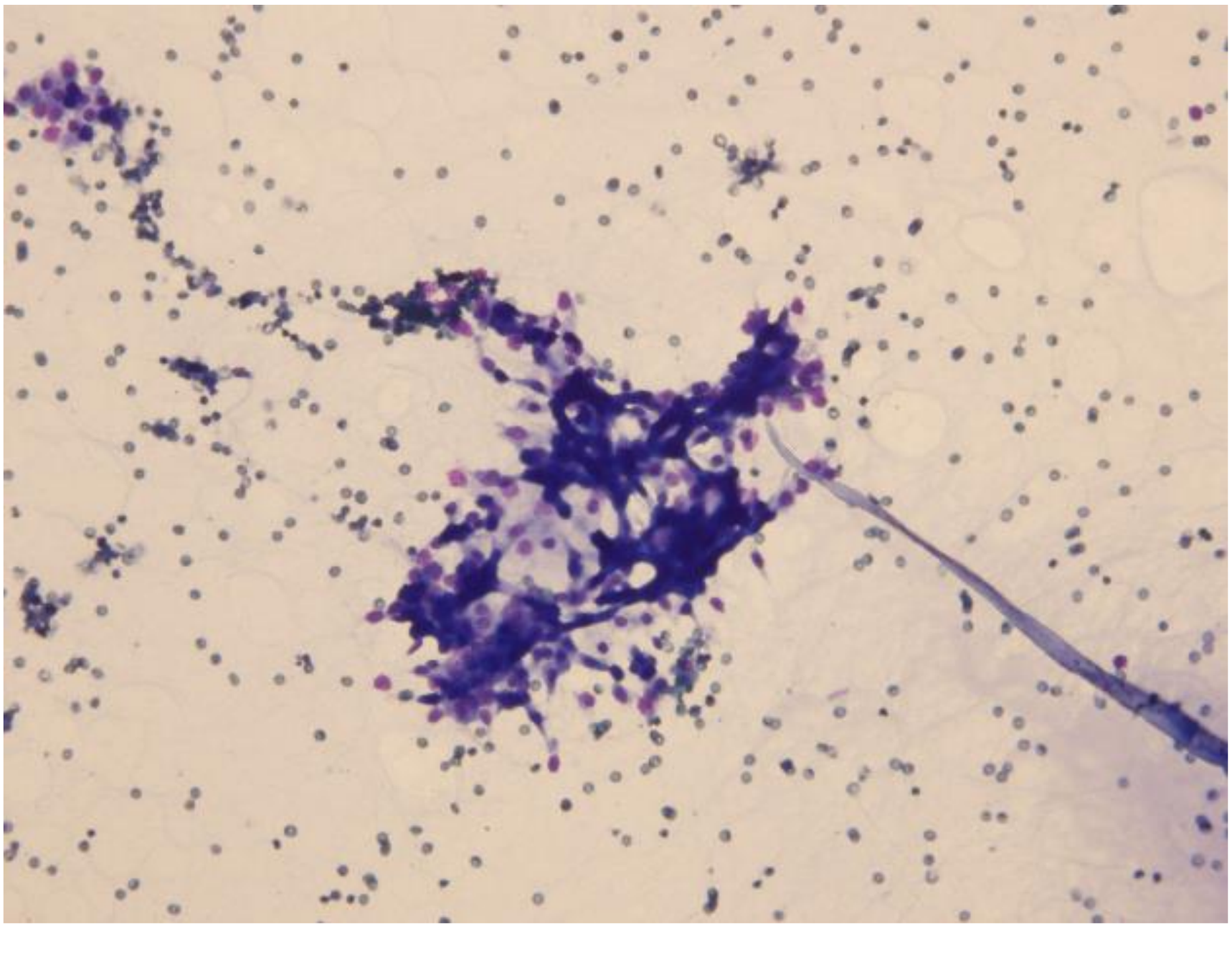


Fig. 4. MGG, x100

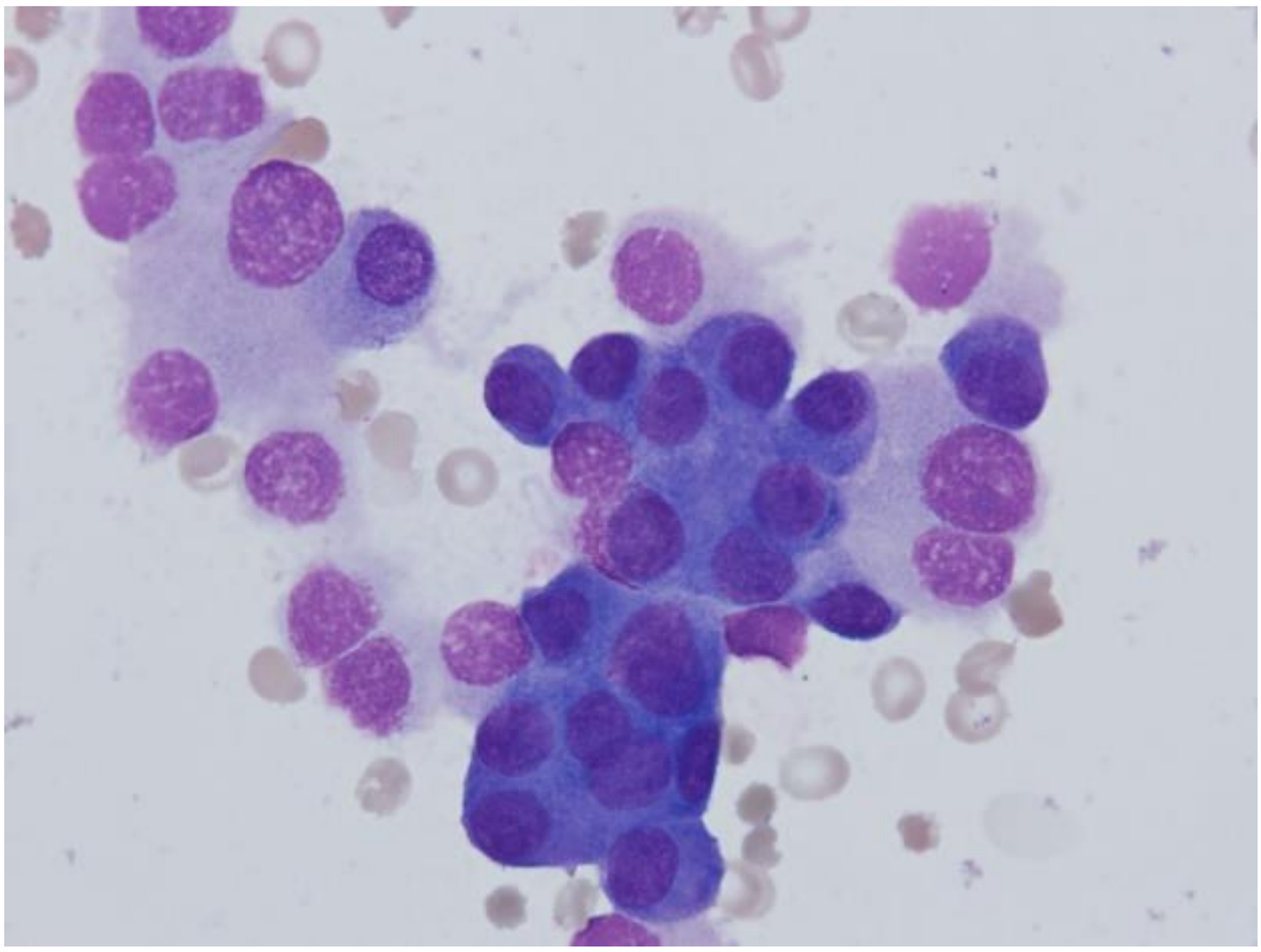


Fig. 5. MGG, x1000

(continues on the next page)

ANSWERS

2

53-year-old female patient presented with a cystic tumor of a body/tail of the pancreas, measuring 2.5 cm, found on CT-scan. The patient was referred for EUS-FNA and 5 ml fluid tinted with blood was obtained. The sample was sent for cytology and biochemistry, but arrived at laboratory as a coagulum, so it was not possible to determine CEA and amylase level. A cell block was made from a coagulum, but there were no cells in it.
EUS-FNA was repeated and presence of cytopathologist was requested.
This time only few drops of slightly viscous fluid was obtained, so it was decided to make direct smears. There was not enough sample for a cell block.

Questions:

1. Describe what you see
2. Are those cells part of the lesion or contamination? Is the lesion mucinous or non-mucinous?
3. Differential diagnosis?

Answers:

1. <u>Describe what you see (figures 1,2,3)</u>

Thin, only in places somewhat thicker extracellular mucin present
Overall scant cellularity
Loose sheets of uniform cells
Round nuclei, slightly visible or no nucleoli
„Spidery", poligonal cytoplasms

(figures 4,5)
Loose clusters of plasmacytoid cells
Eccentric nuclei, no visible nucleoli, stippled, coarsely granular chromatin
Grey-bluish cytoplasm with no visible granules

2. <u>Are those cells part of the lesion or contamination? Is the lesion mucinous or non-mucinous?</u>

Thin extracellular substance suggests non-mucinous cystic lesion in the first place, although it appeared thicker and more mucinous in places. Although some of the cells could not be named with certainty, presence of small groups of more familiar plasmacytoid cells with eccentric nuclei, stippled granular chromatin, and no visible nucleoli suggest neuroendocrine origin of the lesion. Those cells were definitely part of the lesion, suggesting cystic neuroendocrine tumour and not a mucinous neoplasm.

ANSWERS

2

3. Differential diagnosis

Based on CT findings (pancreatic cysts) and EUS findings (cystic neoplasm), it was a question of the nature of the cystic lesion.

This lesion definitely represents a cystic tumour, and cytological differential diagnosis included cystic neuroendocrine tumour (NET), which could not be confirmed with immunocytochemistry. Because of the presence of not entirely thin extracellular material, mucinous cystic neoplasm could not be excluded with certainty.

In this case, ICC confirmation nor grading of the tumour was possible due to a very scant sample.

Follow-up histology: Cystic NET, grade 1.

Comment: The well differentiated NETs are one of the two groups of genetically, morphologically and prognostically different neuroendocrine pancreatic neoplasms. The other group of highly malignant tumours are poorly differentiated neuroendocrine carcinomas, small and large cell. Both groups express general neuroendocrine markers but differ genetically. DAXX or ATRX mutations in transcription/chromatin remodelling complex are present in 44% of well differentiated NETs, and in neuroendocrine carcinomas they are absent while cell-cycle regulatory genes such as TP53 and RB1 are affected. Well differentiated NETs represent 3-5% of all pancreatic tumours, are usually solid, but approximately 10% can be cystic and have to be distinguished from other cystic neoplasms because it can influence the treatment. Neuroendocrine tumours are graded according to mitotic activity or proliferation index (Ki-67) into three grades (G1, G2, G3) and grading is possible on cytological samples. High-grade G3 NET may be difficult to distinguish from NEC. NETs may be functional (associated with clinical syndromes) or non-functional, and may follow more benign clinical course, but most are biologically aggressive and may metastasize. Biological behaviour cannot be predicted by cytomorphology and cytological atypia is not a sign of malignancy. Typical cytological features include granular, stippled chromatin (“salt and pepper” appearance easily visible in Papanicolaou staining), no distinct nucleoli, eccentrically placed nuclei in abundant cytoplasm. Cytoplasmatic granules are usually not visible in pancreatic NETs.

Literature:

Xue Y et al. Morphologic Variants of Pancreatic Neuroendocrine Tumors: Clinicopathologic Analysis and Prognostic Stratification. Endocr Pathol. 2020 Sep;31(3):239-253.

Sigel C. Advances in Cytologic Diagnosis in Gastropancreatic Neuroendocine Neoplasms. Cancer Cytopathology 2018

Boutsen L et al. Accuracy of pancreatic neuroendocrine tumor grading by EUS FNA: analysis of large cohort and perspectives for improvement. Neuroendocrinology. 2018; 106:158-166.

Farrel JM et al. Pancreatic neuroendocrine tumors: accurate grading with Ki-67 index on fine-needle aspiration specimens using the WHO 2010/ENETS criteria. Cancer Cytopathology, 2014

Author of the case:
Assist Prof Tajana Štoos-Veić, MD, PhD, MIAC
University Hospital Dubrava, Zagreb, Croatia

Thank you for your time!

Please send your feedback to residentsyoung@efcs.eu

Check our Twitter accounts: @CytologyEFCS and @efcsyoung

The EFCS Newsletter

Expected Release Date of Next Issue:
March/April 2023