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Message from the ***Chief Hospital Manager***

Dear Colleagues,

In my last communication I mentioned the prospect of having more hospital beds and a new pathology laboratory in the new extension building. Actually the precious space now occupied by the laboratory will make room for two additional operating rooms. That will complete this intermediate phase of our expansion. What about our ultimate target of a 600 bed hospital whereby the land grant stipulates? This final phase of Union Hospital construction will probably take place in another five to ten years' time. The plan is already on the drawing board and is being repeatedly refined and modified.

With the ever growing infrastructure and number of staff, it is most important that good 'governance' is being maintained. With healthcare institutions like Union Hospital it is important that both 'corporate governance' and 'clinical governance' are to be observed at all times in order to be successful as a business enterprise which specializes and excels in caring for the sick and maimed. We are fortunate to have in our Hospital Management Board several senior executives from the world renowned real estate developer, the Henderson Land Group, to advise us on the running and operation of the hospital. The Board is being chaired by Professor Fok Tai Fai who is a retired clinician and senior administrator of the Medical Faculty of the Chinese University of Hong Kong. A glance at the list of directors of our Board (see the page of News Update) will certainly convince everybody how seriously we view 'corporate governance' in our day to day operations. As to 'clinical governance', the concept was introduced and developed in Union Hospital when we achieved our hospital-wide ISO accreditation in the year 1999 by Lloyd's Registered Quality Assurance (LRQA). The concept was further refined and considered subsequently through bi-annual accreditation of hospital's clinical services by the Trent Accreditation Scheme from United Kingdom. To put it in a nut-shell, the hospital is obligated to ensure that all the doctors working there are well qualified and credentialled in their relevant specialties and individual patients are being treated by the 'right doctor' with the 'right' credentialling in his or her clinical specialty in a timely manner. To take a simple example, a general surgeon for adults should not undertake to perform endoscopies in small children.

To ensure good 'clinical governance' in our organization with about one hundred full-time and three hundred plus active visiting clinicians we rely on a senior management team and a well established reporting system of daily activities, unusual/untoward incidents and complaints/ negative feedbacks. The senior management team is headed by myself as Chief Hospital Manager and Medical Director. On the hospital administration arm, much burden is being shared with our Deputy Chief Hospital Manager, Professor Henry Lik Yuen Chan and the Assistant Chief Hospital Manager, Dr. Yannie Oi Yan Soo. Both of them are experienced and astute clinicians in their fields, i.e. gastro-enterology & hepatology and neurology. Two other essential members of the senior management team are Dr. Clara Wu, Deputy Medical Director, and Dr. Louis Chin Pang Cheung, Assistant Medical Director. Both of them are ring leaders of our renowned 'Emergency Medicine Centre'. While Dr. Wu is the current President of the Hong Kong College of Emergency Medicine, Dr. Cheung has been a member of the Hong Kong Medical Council for at least a couple of years. With such a team overseeing the clinical services, all the patients patronizing Union Hospital should have peace of mind and rest assured that they will be in good hands!

Wishing you & your family the Best in the coming Holiday Season.

Yours most sincerely,

Dr. Anthony K Y Lee
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PIVKA-II is Complementary to AFP as a Biomarker for Surveillance of Hepatocellular Carcinoma in Patients with Liver Diseases

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Union Hospital will be the first laboratory in Hong Kong to launch an immunoassay Elecsys protein-induced vitamin K absence II (PIVKA-II) (Roche Diagnostics International Ltd, Rotkreuz, Switzerland) as a new biomarker for surveillance of hepatocellular carcinoma (HCC). It will serve as a central laboratory for a HCC surveillance program of 3 hospitals under the Hospital Authority (Queen Mary Hospital, Prince of Wales Hospital, and Princess Margaret Hospital) as well as other patients requesting this service in Hong Kong starting October 2022.

With an estimated 60% increase by 2040, HCC remains a global disease burden. The Asian Pacific Association for the Study of the Liver (APASL) guidelines recommend biannual surveillance using a combination of ultrasound (US) and alpha-fetoprotein (AFP) in all high-risk individuals for the early detection of HCC in order to improve the survival rate of HCC patients[1]. AFP has had an established role as a biomarker in HCC for decades. However, even in combination with US, AFP has its challenges, including sensitivity and specificity, which are dependent on various factors. These include the cut-off levels used, the degree of necro-inflammation of the liver, and the aetiology of the liver disease. The recommended method of surveillance (US+AFP) can miss up to 1 in 3 patients with HCC[2].

PIVKA-II, also known as Des-γ-carboxy (abnormal) prothrombin (DCP), was first described in 1968. PIVKA-II has been shown in previous studies to be an independent predictor of microvascular invasion in HCC and to be superior to AFP for the early detection of HCC, being highly sensitive and specific. A new immunoassay for the quantitative measurement of PIVKA-II in human serum and plasma, to be used as a diagnostic aid in HCC, has been developed to complement the tumour marker portfolio on the Elecsys® automated immunoassay platform. In a reference range population comprised 811 individuals, the mean PIVKA-II concentration was 19.7 ng/mL, with values ranging from 19.1–20.7 ng/mL across age groups. The 95th percentile was 28.4 ng/mL. Therefore, 28.4 ng/mL was used as a cut-off for PIVKA-II in the clinical performance analyses[3].

In a recently published multi-centre study including 169 HCC patients and 208 controls from 7 centres across China, Thailand, Japan, and Germany, the Elecsys PIVKA-II assay showed high sensitivity and good specificity; sensitivity was higher for late-stage *versus* early-stage HCC (94.5% *vs* 77.9%) (Table 1)[3]. In the HCC cohort, 45.8% of patients had early-staged (BCLC staging 0-A) HCC. A previous systematic review of 38 studies with 11,124 cases, revealed that PIVKA-II alone was only moderately accurate in detecting HCC (sensitivity 0.66, 95% CI 0.65-0.68; specificity 0.88, 95% CI 0.87-0.90; positive likelihood ratio (+LR) 7.13, 95% CI 5.73-8.87; negative likelihood ratio (-LR) 0.33, 95% CI 0.29-0.38)[4].

Unlike AFP-positive HCC, AFP-negative HCC (defined as AFP ≤20 ng/ml) are not easily diagnosed, as most present as early or small HCCs. Additionally, the presence of hepatic nodules that resemble HCC tumours on imaging can lead to misdiagnosis. In a large multicentre study, 1,158 patients with HCC, almost half (46%) had normal (<20 ng/ml) AFP levels and only 6% (n=66) had AFP levels between 200-400 ng/ml[5]. There is also evidence to suggest a high prevalence of AFP-negative HCC in patients with fatty liver disease, both alcoholic and non-alcoholic. The accuracy of PIVKA-II levels alone in diagnosing small HCC is still inconclusive. Combining both markers with cut-off levels maximised for sensitivity and specificity indicates an improvement in the detection of small HCC. In the multicentre study, using a combination PIVKA-II (at a cut-off of 28.4 ng/mL) or AFP (at a cut-off of 20 ng/mL), overall sensitivity for HCC detection was 92% *versus* 87% using the Elecsys PIVKA-II assay alone, or 52% using the Elecsys AFP assay alone[3]. The corresponding specificities were 82%, 84% and 98%, respectively. This suggests that combining AFP and PIVKA-II could be useful in picking up HCC where utilising either marker alone might not.

In conclusion, PIVKA-II is best used in combination with AFP in the detection of HCC, including small sized tumours (≤3 cm), compared to either biomarker alone. PIVKA-II is valuable in the detection of HCC in AFP-negative HCC patients.

Table 1. Clinical performance of Elecsys PIVKA-II and Elecsys AFP assays by HCC stage[3]

Assay (cut-off)	Metric, % (95% CI)	HCC Stage		
		Early (*n* = 77)	Late (*n* = 91)	Overall (*N* = 168)
PIVKA-II (28.4 ng/mL)	Sensitivity	77.9 (67.0–86.6)	94.5 (87.6–98.2)	86.9 (80.8–91.6)
	Specificity	83.7 (77.9–88.4)	83.7 (77.9–88.4)	83.7 (77.9–88.4)
AFP (20 ng/mL)	Sensitivity	36.4 (25.7–48.1)	64.8 (54.1–74.6)	51.8 (44.0–59.5)
	Specificity	98.1 (95.1–99.5)	98.1 (95.1–99.5)	98.1 (95.1–99.5)

AFP, alpha-fetoprotein; CI, confidence interval; HCC, hepatocellular carcinoma; PIVKA-II, prothrombin induced by vitamin K absence-II.

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Biomarkers in Colorectal Cancer

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Colorectal cancer (CRC) is the 2nd most frequently diagnosed malignancy with 5,556 new cases in Hong Kong in 2019[1]. It is also the second leading cause for cancer related deaths in both male and female population. Most CRC cases are sporadic diseases. They are more related to environmental and dietary factors and the incidence increases with age. On the other hand, less than 10% of CRC are due to hereditary conditions (e.g. familial adenomatous polyposis, Lynch syndrome etc)[2]. People with these conditions usually have underlying genetic mutations and should be kept under regular surveillance for early detection of CRC. There is also a group of CRC which is familial but the underlying genetic alterations are not yet identified[3].

While inherited CRC syndromes are caused by specific germline mutations, most sporadic cases are believed to be the result of a stepwise accumulation of somatic mutations. The understanding of the molecular events underlying CRC has been much enhanced in recent years. Different genetic mutations are identified and these provide diagnostic, predictive and prognostic information about the disease in an individual. Molecular testing of these genetic alterations (or biomarkers) has become essential in the management of CRC patients. Genetic profiling is recommended once diagnosis of CRC is made. A brief summary on the essential biomarkers for CRC is provided below.

1) KRAS/NRAS

The EGFR signaling pathway plays an important role in carcinogenesis and progression of CRCs. Some CRCs might have over-expression of EGFR[4,5].

Predictive role:
Anti-EGFR monoclonal antibodies (e.g. cetuximab, panitumumab) are proven to be effective in some metastatic CRCs. However, mutations in downstream genes such as KRAS and NRAS make the signaling pathway constitutively active and tumors with these mutations are not responsive to anti-EGFR agents[6,7]. NCCN mandates comprehensive testing for KRAS and NRAS exons 2, 3 and 4 before the use of anti-EGFR agents in CRCs[8].

Prognostic role:
The prognostic role of RAS is controversial. Some studies showed that KRAS and NRAS mutations are independently associated with a worse prognosis[9-12] but the finding is not consistent[13].

2) Microsatellite Instability (MSI)

MSI is the biological footprint of defective mismatch repair (dMMR) machinery. Cells with defects in these proteins are unable to correct errors that occur during DNA replication and consequently accumulate errors. This causes the creation of novel microsatellite fragments[14].

Diagnostic role:
MSI-H CRCs may be sporadic (~ 12%) or Lynch syndrome-associated (~3%)[15]. It can be screened by PCR-based assay (microsatellite instability test) or IHC for MMR protein expression (MLH1, MSH2, MSH6, PMS2 – 4 most frequent MMR mutation genes). Recent cost-effectiveness studies recommend testing for Lynch syndrome (defects in MMR system) to all newly diagnosed CRC patients[16].

Prognostic role:
MSI-H CRC has a more favorable stage-adjusted prognosis[17,18], and this might be explained by a more robust immunologic response to the tumor.

Predictive role:
According to NCCN guideline[8], adjuvant chemotherapy for stage II CRCs is only recommended for those with high risk features, including T4 classification, presentation with intestinal obstruction, tumor perforation, <12 lymph node sampling, poorly differentiated histology and lymphovascular invasion. However, not all stage II CRC patients with high risk features gain similar survival benefit from adjuvant chemotherapy. Some studies showed that the use of single agent 5-fluorouracil as adjuvant treatment for MSI-H or dMMR stage II or III CRCs adds no survival benefit or even reduces benefit compared with pMMR tumors[19-22].

MSI-H/dMMR CRCs are susceptible to immune checkpoint inhibitors (ICIs). In the Keynote-177 trial[23], patients with MSI-H who received pembrolizumab alone had higher progression-free survival (16.5 months vs 8.2 months) than those who received conventional chemotherapy. There is also a higher overall response rate (44% vs 33%) in those who received pembrolizumab. The duration of response is long. Pembrolizumab is now recommended as first line treatment for MSI-H metastatic CRCs . Combination of nivolumab and ipilimumab has also demonstrated clinical benefit in both previously treated MSI-H/dMMR metastatic CRC patients[24] or as first line treatment[25,26]. Alternatively, single agent using pembrolizumab or nivolumab can be employed as later lines of treatment in MSI-H/dMMR CRCs[27,28].

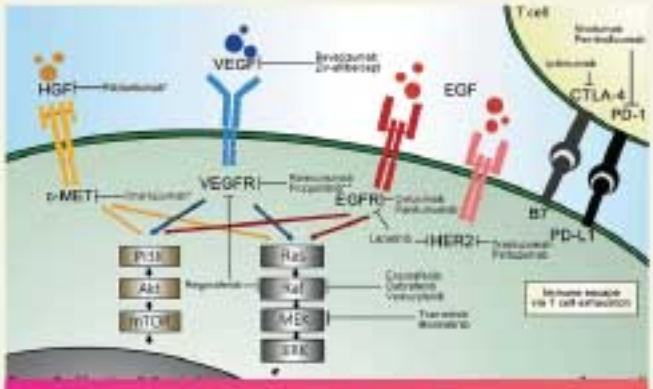
3) BRAF V600E mutation

BRAF is a serine/threonine protein kinase which is an immediate downstream effector of KRAS in the MAP kinase signaling pathway.

Diagnostic role:
This mutation is more frequently detected in sporadic MSI-H CRCs than in MSS CRCs [29]. BRAF mutations are almost never found in HNPCCs and this aids to differentiate sporadic MSI-H tumors from HNPCC-related tumors [30].

Prognostic role:
Some studies have shown that CRCs with BRAF mutations are more aggressive and with a shorter overall survival, mainly in those with MSI-L or MSS tumors [31-33].

Predictive role:
A retrospective study showed that the presence of BRAF mutation in RAS wild-type tumors led to resistance toward anti-EGFR agents [34-36]. Consensus-based guidelines from the NCCN and the ESMO both suggest not using cetuximab or panitumumab for patients with BRAF V600E mutated cancers.



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A combination of the BRAF inhibitor, encorafenib, with cetuximab has been investigated in the randomized, phase III BEACON trial for metastatic, BRAF V600E mutation-positive CRC after progressing from initial chemotherapy [37, 38]. The combination improved overall survival and response rate compared with the control group receiving cetuximab and irinotecan-based chemotherapy, with quality of life maintained.

4) HER2

HER2 is a member of the same family of signaling kinase receptors as EGFR.

Predictive role:
There are various trials demonstrating benefits of HER2 targeted therapy (trastuzumab + lapatinib, trastuzumab + pertuzumab, fam-trastuzumab deruxtecan) for mCRC patients who have HER2 overexpression but RAS and BRAF wild type after failure of conventional chemotherapy [39-41].

As more biomarkers have been identified as valuable for the predictive and prognostic roles in the management of CRC, it will be reasonable to offer a comprehensive genetic testing panel for CRC patients at the timing of diagnosis, especially those with advanced stage of disease. Next generation sequencing (NGS), a massive parallel sequencing tool, has become the most cost-effective molecular platform in clinical molecular diagnostics [42]. In addition to fundamental biomarkers, it can help to identify some rare but actionable mutations (e.g. TMB, NTRK fusion). On the other hand, circulating tumor DNA (ctDNA) can be taken from blood (liquid biopsy) to study the acquired resistance mechanism. Studies of its use in the management of CRC patients are underway and it will likely play an important role in the future [43].

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Diagnosis and Management of Perioperative Anaphylaxis

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Case history

An 11-year-old boy consulted the allergy team for perioperative anaphylaxis during general anaesthesia for alveolar bone grafting and teeth extraction. He has a past medical history of cleft lip and palate with two surgical repairs performed 10 years ago, mild childhood eczema, asthma and allergic rhinitis. However, details of the previous general anaesthesia were not retrievable. The procedure was aborted, and the patient was transferred to the paediatric intensive care unit for monitoring. Serum tryptase levels measured during the acute phase and 24 hours later were 7.4ug/L and 1.8ug/L, respectively. The allergy team communicated with the anaesthetists and retrieved the anaesthesia record. The sequence of the events is listed in Table 1. The patient has no previous history of drug allergy, including antibiotics, tolerated paracetamol, and did not develop any reactions while blowing a latex balloon (implying that the risk of natural rubber latex allergy is low).

The patient was arranged to have skin testing four weeks after the acute event. The skin testing results are listed in Table 2 and Figure 1. Basophil activation test (BAT) was also tested positive for atracurium, but negative for rocuronium, cis-atracurium, suxamethonium, propofol, lidocaine, latex, and chlorhexidine. There a diagnosis of atracurium allergy was confirmed. The anaesthetist-in-charge was informed about the results and was advised to avoid atracurium and cis-atracurium in the subsequent operations due to possible cross-reactivity. The patient received a subsequent operation using rocuronium as the neuromuscular blocking agent, and the procedure was uneventful.

Overview of perioperative anaphylaxis

Investigating perioperative anaphylaxis is very challenging due to the combined effects of anaesthetic drugs, concurrent administration of several drugs, hidden exposures, and numerous differential diagnoses complicates the evaluation of perioperative events. There are various mechanisms that lead to perioperative anaphylaxis, which include IgE-mediated or IgG-mediated reactions, as well as non-allergic and non-specific activation of mast cells and basophils. It is impossible to distinguish between the different mechanisms clinically. Therefore, investigations for perioperative anaphylaxis aimed at identifying IgE-mediated reactions to prevent recurrence on re-exposure.[1]

The most common causes of perioperative anaphylaxis are neuromuscular blocking agents and antibiotics. However, other medications, such as chlorhexidine, latex, colloids, and local anaesthetic agents, although less common, are also possible culprits.[2] A complete documentation of the timeline between exposures and events is essential. Document to be reviewed should include anaesthetic record, all drug charts (pre-, intra-, and post-operation), and details of any surgical or other perioperative exposures (such as disinfectants, local anaesthetic sprays/gels, dyes, and surgical materials)

Investigations

Confirmation of anaphylaxis using serum tryptase level.

Measurement of serum tryptase can provide laboratory evidence of anaphylaxis as long as the acute tryptase levels is measured within the first 3 hours of anaphylaxis. A tryptase level during the reaction of >11.4ng/mL or at least [2ng/mL + 1.2 x (post-reaction or baseline tryptase level)] was considered to be elevated.[3]

Skin testing

Skin prick tests (SPT) and intradermal tests (IDT) are performed based on published maximum non-irritant concentrations.[1, 4] It is recommended that skin testing should be performed at least 4-6 weeks after the event to avoid false-negative results. The risk of anaphylaxis during IDT is very low; however, the risk of milder systemic reactions elicited by IDT may increase with higher concentrations, large volumes, or multiple testing.

Basophil activation test (BAT)

Basophils may also be activated by IgE-mediated or non–IgE-mediated stimulation. Upon activation, the appearance and up-regulation of surface activation and degranulation markers, such as CD63 and CD203c, can be quantified by flow cytometry. In theory, BAT can be performed for all drugs and can be used to identify both culprit drugs and potential safe alternatives. In general, BAT has high specificity but a lower sensitivity than skin testing in identifying the possible culprit drugs.[5]

Drug Challenge

Drug challenge (also known as drug provocation testing) is considered the gold standard of the investigation. It is used when the skin testing and basophil activation test are negative or equivocal. It is also the only reliable test when investigating drug groups that cause reactions through non-IgE-mediated mechanisms, for example, opioids or NSAIDs. Nevertheless, a drug challenge may impose a risk of inducing anaphylaxis, and not all drugs can be practically challenged, such as neuromuscular blockers.

Conclusion

The diagnosis of perioperative anaphylaxis and identification of the culprit relies on the collaboration between the anaesthetists and allergists. Careful documentation of medications being used before the event, the symptoms and signs during the reactions, and the selection of the appropriate tests are crucial to optimize the chance of identifying the culprit drug and preventing a reaction recurrence.

Figure 1. Intradermal testing for perioperative drugs involved.

The red arrow indicates a positive reaction for atracurium intradermal testing with an increase in wheal size and flare.

Table 1. Events and medications leading to the perioperative anaphylaxis.

TIMING	MEDICATIONS/EVENTS
PREMEDICATIONS	Ametop, paracetamol
INTRA-OPERATIVE MEDICATIONS RIGHT BEFORE ANAPHYLAXIS	Fentanyl, atracurium, dexamethasone, inhaled sevoflurane
3 MINUTES AFTER ALL MEDICATIONS ADMINISTERED	Difficulty in ventilation, swollen vocal cords, generalized rashes and hypotension. Given 4 doses of adrenaline followed by IV adrenaline infusion, and IV hydrocortisone.

Table 2. Skin prick and intradermal testing results

DRUG	SKIN PRICK TESTING*	INTRADERMAL TESTING*
CONTROLS	Histamine 4mm Saline 0mm	Saline control - negative
LATEX	- Prick with latex glove mix with NS - 0mm - Prick through latex glove – 0mm	N/A
2% CHLORHEXIDINE LORIS	(5mg/ml) – 0mm	(0.002mg/ml) - negative
ATRACURIUM	(1mg/ml) – 3mm	(0.01mg/ml) - 5mm →10mm with flare***
FENTANYL	(0.05mg/ml) – 0mm	(0.005mg/ml) - negative
LIGNOCAINE (2%)	(undiluted) – 0mm	(1/10 dilution) - negative
CIS-ATRACURIUM	(2mg/ml) – 0mm	(0.02mg/ml) – negative
ROCURONIUM	(10mg/ml) – 0mm	(0.05mg/ml) – negative
PROPOFOL	(10mg/ml) – 0mm	(1mg/ml) - negative

Skin testing was performed based on the recommended concentrations published in ENDA/EAACI Drug Allergy Interest Group position paper.[4]

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News Update

Union Hospital Management Board

Union Hospital is committed to high standards of corporate governance and the members of our Management Board are all veteran experts to provide advice and support for the operation of the hospital:

Prof. FOK Tai Fai (Chairman)

Dr. LEE Kai Yiu, Anthony

Dr. LAM Ko Yin, Colin

Prof. CHAN Lik Yuen, Henry

Mr. KWOK Ping Ho, Patrick

Mr. YIP Ying Chee, John

Prof. CHUNG Sheung Chee, Sydney

Dr. WU Wing Yee, Clara

Conferment of Honorary Fellowship - Prof Sydney Chung

It is with our greatest pleasure to let you know that Professor Chung Sheung-chee Sydney has been presented the Honorary Fellowship by the College of Surgeons of Hong Kong in September 2022. The conferment of Honorary Fellowship represents the highest honour of the College, bestowed from time to time to a person who has made significant contributions to international surgery and to the surgical development in Hong Kong. Let us send our warmest congratulations to Professor Sydney Chung for his well-deserved achievement! Congratulations!

Conjoint Diploma Conferment Ceremony on 18 September 2022 at Hong Kong Academy of Medicine Jockey Club Building
(From left to right) Dr. Bonita Law, Prof. Sydney Chung and Dr. Clara Wu

Medical Support For A New Racing Season

CMO team at Season Opening
(From left to right) Dr. Ho Man Kam, Dr. Johnson Chu, Dr. Clara Wu and Dr. Yuen Pak Chuen at Season Opening

CMO team with Mr Kim Kelly, Chief Stipendiary Steward of HKJC
(From left to right) Dr Johnson Chu, Dr. Clara Wu, Mr. Kim Kelly, Dr. Yuen Pak Chuen and Dr. Ho Man Kam

It has come to the commencement of the fifth racing season that the Chief Medical Officer (CMO) Team of Emergency Medicine Centre to provide medical services to Hong Kong Jockey Club (HKJC). The past season was an extraordinarily difficult year for the community including the racing activities. COVID-19 has inflicted an unexpected and unprecedented degree of uncertainty on society. During such circumstances, the progress of any organization depends on its ability to obtain the latest information and incorporate new approach to adapt to the changing needs and environment.

In view of this, the CMO team has taken an active role to provide HKJC with latest information on the global and local situation, and scientific advice on prevention and management of COVID-19. I am immensely proud to see that the racing activities at HKJC has never been stopped or cancelled due to the pandemic. We have also managed to hold the Hong Kong International Races during the pandemic, which is exceptional in the racing field around the world during COVID-19.

The success cannot be achieved without the support from Hospital Management, our affiliating doctors, and also the assistance from supporting departments. Thank you very much!

Grand Opening of Allergy Centre

The Grand Opening Ceremony of our Allergy Centre was successfully held on 20th October, 2022 at 9/F, H-Zentre, Middle Road in Tsim Sha Tsui. The official ceremony was graced by the presence of Henderson management, Prof Fok Tai Fai Chairman of Board and the Union Hospital Management team.

The Allergy Centre has commenced its operation in October, 2022, it aims to provide comprehensive allergy assessment and therapeutic services to the public. Our team is comprised of doctors specialized in the field of allergy, immunology, and paediatrics, as well as nurses, dietitians, clinical psychologists, and clinical pharmacists, with state-of-the-art facility are in place to offer high quality services.

01 From left: Dr. Louis Cheung, Dr. Clara Wu, Dr. Gilbert T. Chua, Ms. Margaret Lee, Dr. Anthony Lee, Mr. Augustine Wong, Dr Adrian Wu, Prof. Henry Chan and Dr. Yannie Soo
02 Welcome Speech by Dr. Anthony Lee, Chief Hospital Manager & Medical Director, Union Hospital
03 Opening Address by Prof. Chan Lik Yuen, Henry, Deputy Chief Hospital Manager, Union Hospital
04 Dr. Wu Young Yuen, Adrian **05** Dr. Gilbert T. Chua

For booking and enquiries:
2608 3366 (2/F, Union Hospital)/
2682 2313 (9/F, H Zentre, TST)

Upcoming CME Programme:

Suicide Risk Screening

Date: 25 November 2022 (Friday)
Time: 1:00pm-2:00pm
Venue: Online Zoom or
Seminar Room, 2/F, Main Building, Union Hospital

Speaker: **Dr. Tung Ka Yee**
Consultant in Psychiatry

Chairman: **Dr. Yannie O.Y. Soo**
Assistant Chief Hospital Manager
Union Hospital
Specialist in Neurology

Enquiry: 2608 3180

Zoom CME registration

Trends of Cultured Pathogens

The Most Frequently Isolated Pathogens from Urine Cultures during May to August 2022

Most Common Pathogens Isolated	*Escherichia coli*	
Period	May to Aug 2022	Jan to Apr 2022
Number of Isolates per Admission (Total number of Urine Cultures)	236 (2338) (Include 48 ESBL 20.3%)	197 (1870) (Include 44 ESBL 22.3%)
Isolation Rate	10.1%↓	10.5%
Antibiotics	**Non-susceptible Rate**	
Amoxicillin/Clavulanic Acid	11%↓	16%
Ampicillin	66%↑	61%
Ampicillin/Sulbactam	55%↑	48%
Cefazolin (Oral)	24%↑	3%
Ceftriaxone/Cephalosporins 3G	22%	22%
Cefuroxime (Oral)	27%↓	33%
Cefuroxime (Parenteral)	23%	23%
Ciprofloxacin*	45%↑	44%
Ertapenem	0%	0%
Gentamicin	23%	23%
Imipenem	0%	0%
Levofloxacin*	59%↓	62%
Nitrofurantoin	2%↑	1%
Trimethoprim/Sulfamethoxazole	37%↑	35%

Remarks: Non-susceptible Rate of Levofloxacin & Ciprofloxacin is increased as the criteria for the interpretation of Susceptibility on Levofloxacin & Ciprofloxacin were changed on 1st April 2020.

The Most Frequently Isolated Pathogens from Respiratory Secretion Cultures during May to August 2022

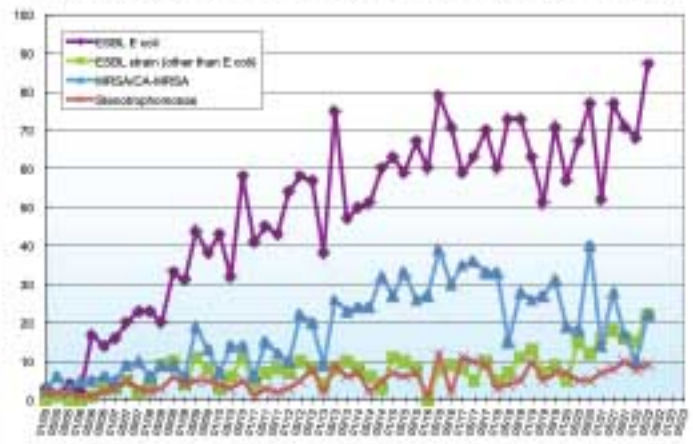
Period	May to Aug 2022		Jan to Apr 2022	
No of Request	261		203	
Pathogens	Number of Isolates	Isolation Rate	Number of Isolates	Isolation Rate
Staphylococcus aureus	32 (Include 4 MRSA 12.5%)	12.3%↑	10 (Include 2 MRSA 20%)	4.9%
Pseudomonas aeruginosa	28	10.7%↑	15	7.4%
Klebsiella pneumoniae	15 (Include 1 ESBL Kleb.)	5.7%↓	15	7.4%
Acinetobacter baumanii complex	10	3.8%↑	1	0.5%

The Most Frequently Isolated Pathogens From Genital Cultures During May to August 2022

Most Common Pathogens Isolated	*Group B Streptococci*		*Candida albicans*		*Yeast (Candida albicans excluded)*	
Period	May to Aug 2022	Jan to Apr 2022	May to Aug 2022	Jan to Apr 2022	May to Aug 2022	Jan to Apr 2022
Number of Isolates per Admission (Total number of Genital Cultures)	162 (816)	222 (770)	92 (816)	152 (770)	40 (816)	56 (770)
Isolation Rate	19.8%↓	28.8%	11.3%↓	19.7%	4.9%↓	7.3%
Antibiotics	**Non-susceptible Rate**					
Cefotaxime	0.0%	0.0%				
Clindamycin	67.9%↑	59.7%				
Levofloxacin	15.4%↓	16.1%				
Penicillin	0.0%	0.0%				
Vancomycin	0.0%	0.0%				

[1]Suspectible to penicillin can be considered susceptible to ampicillin, amoxicillin, amoxicillin/clavulanic acid, ampicillin/sulbactam, cefaclor, cefazolin, cefdinir, cefepime, cefprozil, cefotaxime, ceftriaxone, cefuroxime, cefpodoxime, ceftizoxime, cephalothin, cephapirin, imipenem, loracarbef, and meropenem.

Trend of ESBL, MRSA & *Stenotrophomonas* isolated from all specimen types by every four months



	ESBL *E coli*	ESBL strain (other than *E coli*)	MRSA/ CA-MRSA	*Stenotrophomonas*
May-Aug 16	79	8	39	12
Sep-Dec 16	71	9	30	2
Jan-Apr 17	59	8	35	11
May-Aug 17	63	5	36	10
Sep-Dec 17	70	10	33	9
Jan-Apr 18	60	5	33	3
May-Aug 18	73	7	15	4
Sep-Dec 18	73	11	28	5
Jan-Apr 19	63	13	26	10
May-Aug 19	51	7	27	5
Sep-Dec 19	71	9	31	7
Jan-Apr 20	57	5	19	7
May-Aug 20	67	15	18	5
Sep-Dec 20	77	12	40	5
Jan-Apr 21	52	16	14	7
May-Aug 21	77	18	28	8
Sep-Dec 21	71	16	17	10
Jan-Apr 22	68	15	10	8
May-Aug 22	87	22	22	9

New Clinical Sessions

Specialty Clinic – Obstetrics & Gynaecology

Booking & Enquiry: 2608 3222	Time Schedule
Dr. Kwok Sui Yee, Karen	Thu 14:30-17:00 Sat 14:30-17:00
Dr. Mak Ho Leung, Jimmy	Thu 15:00-18:00

Specialty Clinic – Paediatric Immunology, Allergy & Infectious Diseases

Booking & Enquiry: 2608 3366	Time Schedule
Dr. Gilbert T. Chua	Mon 09:30-13:00 15:00-18:00 Tue 15:00-18:00 Wed 09:30-13:00 Thu 09:30-13:00 15:00-18:00 Fri 09:30-13:00 15:00-18:00 Sat 15:00-18:00

Union Healthcheck Centre - Allergy Specialty Service

Booking & Enquiry: 2682 2313	Time Schedule
Dr. Gilbert T. Chua	Wed 14:00-17:00 Sat 09:30-13:00

Specialty Clinic – Oncology

Booking & Enquiry: 2608 3315	Time Schedule
Dr. Lui Cheuk Yu, Louisa	Mon 15:00-18:00 Wed 15:00-18:00 Sat 09:00-10:30

Union Oncology Centre (H Zentre)

Booking & Enquiry: 2159 6100	Time Schedule
Dr. Lui Cheuk Yu, Louisa	Mon 09:00-13:00 Tue 09:00-17:00 Wed 09:00-13:00 Thu 09:00-17:00 Fri 09:00-17:00

Union Hospital Polyclinic (Tsuen Wan)

Booking & Enquiry: 2608 3399	Time Schedule
Obstetrics & Gynaecology Dr. Lee Lee	Mon 10:00-13:00 Fri 15:00-18:00
Ophthalmology Dr. Wong Ka Wai, Jasper	Wed 10:00-13:00 Sat 14:30-18:00

New Doctors

Please extend a warm welcome to the following doctors for joining our clinical team!

Dr. Gilbert T. Chua
Specialist in Paediatric Immunology, Allergy and Infectious Diseases

Dr. Kwok Sui Yee, Karen
Consultant in Obstetrics & Gynaecology

Dr. Lee Lee
Consultant in Obstetrics & Gynaecology

Dr. Mak Ho Leung, Jimmy
Consultant in Obstetrics & Gynaecology

Dr. Wong Ka Wai, Jasper
Specialist in Ophthalmology

Dr. Tsang Wai Kan
Consultant in Radiology

Regular Meeting

Mortality and Morbidity Meeting

Date :	9 November 2022 (Wednesday)
Time :	8:30 am – 9:30 am
Co-ordinator :	Dr. Kwong Kwok Hung, Peter Consultant in General Surgery, Union Hospital
Venue :	Training Room, 8/F MIC, Hospital Building, Union Hospital
Booking & Enquiry:	2608 3151 (Quality Assurance & Training Department)

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