RECRUS
Research Newsletter

Volume 3, Issue 21, March 2023, 533 – 593

UPM UNIVERSITI PUTRA MALAYSIA
BERILMU BERBAKTI

HSAAS
HOSPITAL SULTAN ABDUL AZIZ SHAH
هوسفيتل سلطان عبد العزيز شاه

High-Quality Research, True Academics, Real Experts

IN THIS ISSUE

Announcements

REGISTER NOW!

- BMJ Case Reports Writing Workshop. 30th March 2023.
- Tools for Systematic Reviews. 11th April 2023.
- Big Data in Clinical Research. 20th April 2023.
- International Clinical Trials Day 2023 [Early announcement]
- MJH Series 17: Exploring Factors That Influence the Practice of Open Science by Early Career Health Researchers: A Mixed Methods Study. 26th May 2023
- Featured Principal Investigator Series 1: Prof. Dr. Chan Yoke Mun. 3rd May 2023
- Good Research Management Practice. 8th – 9th June 2023
- 9th Asia Pacific Primary Care Research Conference (Research in The New Norm) & Pre-Conference Workshop Research Championship. Venue: Sheraton Petaling Jaya Hotel; Date: 2 - 4 June 2023
- The 8th World Conference on Research Integrity in Athens, Greece. 2 to 4 June 2024.
- Metascience 2023 Conference to be held May 9-10 in Washington D.C. And, free virtual symposia pre-conference events April-May 2023. Registration coming soon. https://metascience.info/
- Webinar: Systematic Reviews in Evidence Based Medicine. 29th March 2023

FROM THE EDITOR'S DESK

'HAPPY BIRTHDAY' Hospital Sultan Abdul Aziz Shah (HSAAS)! This is the name for HPUPM since February 2023.

The Issue 21 of the Newsletter present to you many Breaking News articles and video clips. These are the Money matters in research activity, Grant Opportunities and Tips to Successful Applications with Prof Goh from RMC, Linking Innovation and Collaboration: How CiRNeT at UPM is Advancing Clinical Research and the Application Procedure to Conduct Research in HSAAS in video clips.

In Research Achievements and Impacts section, there are keypoints from the Department of Urology and Radiology, and there are written appraisals from MJH Series 14 on Development of a Clinical Risk Score Prediction Tool for 5-, 9-, and 13-Year Risk of Dementia, and MJH Series 15 on Predicting Coronary Artery Disease In Primary Care: Development and Validation of a Diagnostic Risk Score for Major Ethnic Groups in Southeast Asia. Check out also two interesting synopses on Genomic Health Service Research and Big Data in Clinical Trials, and Clinical Research Conduct: Research Integrity and Ethics Considerations.

Lastly, do not missed the announcement of very interesting local and international research related courses and webinar.

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Click to visit our Facebook and Youtube page

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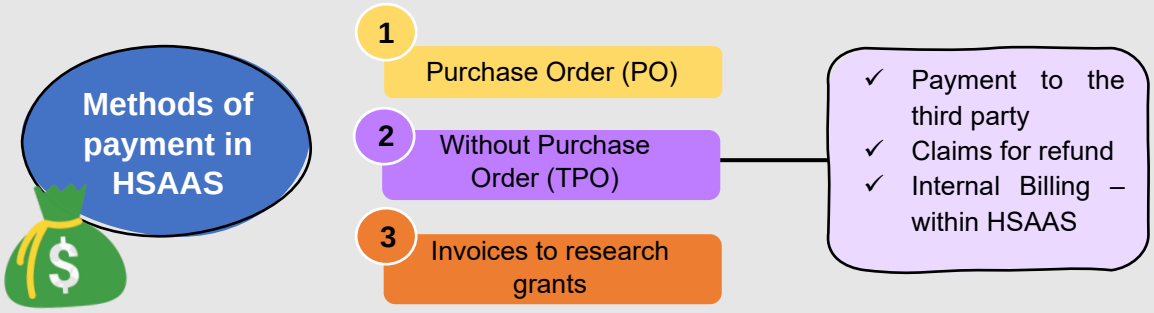
BREAKING NEWS

Established in 2019, HSAAS, formerly known as the University Putra Malaysia Teaching Hospital (HPUPM) was officiated by His Excellency Sultan Sharafudin Idris Shah AlHaj Ibni Almarhum Sultan Salahuddin Abdul Aziz Shah AlHaj on February 28, 2023 and is now known as **Hospital Sultan Abdul Aziz Shah (HSAAS)**

MONEY MATTERS IN RESEARCH ACTIVITY



A. CLAIMS

i. Claims to Sponsor

Principal Investigator (PI) must fill in **Borang Arahan Pengeluaran Invois** and submit the form to Unit Hasil, HSAAS together with the supporting documents.

ii. Claims for Refunds (Pay & Claim)

Principal Investigator (PI) can submit a **Memo Tuntutan Bayaran Balik** to Bahagian Kewangan, HSAAS together with the supporting documents.

Supporting documents
- **Bank transaction proof**
- **Bank statement**
- **Other related documents such as receipt etc.**

If the bank transaction is not from PI's bank account (for example; the payment is made by a Research Assistant), it is necessary to for the PI to attach **Surat Akuan Pembayaran** together with other required documents. PI can obtain the letter from the Bahagian Kewangan, HSAAS.

If the research period is about to end, the PI needs to submit **Surat Permohonan Penangguhan to RMC** to enable Bahagian Kewangan, HSAAS to process the payment claim application during that extension period.

For more info, please refer to **Pekeliling Bursar Bil. 6 Tahun 2022: Polisi Tuntutan Bayaran Balik (Pelbagai) di UPM**

B. HONORARIUM

For honorarium payments to individuals, the claims cannot be made through Sistem eClaim, unless the individual is involved in field work or *'kerja lapangan'* (outside HSAAS).

PI needs to submit **Memo Arahan Bayaran Balik** to Bahagian Kewangan, HSAAS along with these supporting documents:

- **List of honorarium recipients,**
- **Their IC number / Passport**
- **Their Bank information / Bank statement**
- **Other related documents such as receipt, invoice etc**

C. PAYMENT FOR PURCHASING RESEARCH-RELATED EQUIPMENT / SERVICES

✓ Any purchase of research materials or professional services related to research is encouraged to be done through:

1. **Purchase Order (PO)**

OR

2. **Direct payment**

Submit a **Memo Arahan Bayaran Balik** to Bahagian Kewangan, HSAAS along with **individual / supplier bank information, a copy of research agreement and other related documents.**

🚫 Refund claim is not recommended for this application. However, PI who insists to proceed with this method of claim will be of full responsibility for any issues or consequences arises in the future.

⚠ The application must be submitted to Bahagian Kewangan, HSAAS within **three (3) months** after the date of procurement of the research materials / services.

D. APPOINTMENTS FOR PROFESSIONAL NON-CONSULTANT SERVICES

⚠ For any appointments for Professional Services (Non-Consultant), researchers need to refer to the procedure outlined in **PK 10.9** unless the provision for this service has been stated and approved in the **research agreement / research proposal.**

✓ The appointments must be approved by an authorized officer (eg: Director / Dean) and then be brought to Jawatankuasa Penilaian PTj before the offer letter can be issued.

🚫 PI is not authorized to make any appointments for this kind of services.

E. DONATION

⚠ It is required to submit a **Memo Permohonan Memberi Sumbangan** to Unit Hasil and Unit Kaunseling dan Kerja Sosial Perubatan (CMSSU), HSAAS for any donations / contributions from Researchers / external parties to any Akaun Amanah in HSAAS.

✓ The application will be submitted by CMSSU to the UPM Vice Chancellor's Office for approval.

BREAKING NEWS

GRANT OPPORTUNITIES AND TIPS FOR SUCCESSFUL APPLICATION

By: **Prof. TS. Dr. Goh Yong Meng,**
Deputy Director, Research Grant Division, Research Management Centre (RMC), UPM

Article by: Nurfaizah Saibul

NOW OPEN

Public Grant

FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS)

15th February – 13th March 2023

Fundamental research

New idea, theory, concept, method, model or process.

Research Output:
Postgrads students:
1 Ph.D or 2 Master
Publication: ≥ 2 articles

FRGS

RM 250,000.00

Duration:
2 or 3 years

Patent search and Industrial collaboration

Applicants are strongly encouraged to:

- **Collaborate with industry/ agency.**
- **Submit evidence of a patent search.**

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Public Grant

FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS)

16 Stepwise Approach to Proposal Writing

1	**Problem Statement**	What are specific areas and problem significance? **Research Questions**- Clear, simple, and unique.
2	**Objectives**	Construct **2 or 3 solutions** to the problem.
3	**Socio-economic objective**	Who are the **"owners"** or **stakeholders** of the problem and how they will benefit?
4	**Justification**	Prioritized objectives based on **cost-benefit** considerations of solving the problem (See **Figure 1**). Think about the **hypothesis** (how the solution is going to work) and technical risks.
5	**Parameters for each objective**	Identify **all possible parameters** to measure each objective and determine how/ when an objective is considered achieved –use **Three-Box IMO** (See **Figure 2**). Match with the resources that you have.

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Public Grant

FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS)

16 Stepwise Approach to Proposal Writing

6 Project Activities
Actions carried out for the parameters – **Gantt Chart.**

7 Milestones
Completed parameters or activities in the Gantt Chart. Review your **timing risks**.

8 Methodology
Using points from **(5)**.
Draft/finalize the no. of samples required, experimental design, unit cost per sample & other running costs, and facilities.

Determine what is the deemed to be "successful" in concluding/ achieving an objective. Align with items from **(6)** & **(7)**.

9 Project cost structure
Build a **project cost structure** based on **(8)**, making sure that the timing of spending is aligned with the Gantt Chart drafted in **(6)** & **(7).**

10 Key Critical Control Points
Re-examine the **key critical control points that will make or break the project**. E.g., emergence of novel and patentable technology/manuscript, significant technical, budget & personnel risk etc.

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Public Grant

FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS)

16 Stepwise Approach to Proposal Writing

11 Refine All Necessary Steps

Refine all necessary steps following your review in step (10). Note all potential outputs from step (10).

12 Proposal Preparation

Proposal prepared according to the best or time-tested practices in graduate research, or other granting agencies. Your proposal has to get through "bureaucratic" processes & screening.

13 Research Updates

Make sure you are **up to date with the current research focus, policies, rules and regulations, budgetary terms, and other ancillary requirements** (e.g. patent search, collaboration, outputs).

14 Potential Weak Points

Identify **potential weak points** in your proposal, while making it as impressionable as possible without over-promising.

15 Realistic and Relevance

Don't fall into the **"expensive solution for a simple problem"** mistake, AND **don't show evident disconnect between research & what's already available/expected in the market/society**.

16 Blue-sky Research

"Blue-sky research", **research with long lead time or no definite outcome,** may not be compatible with the grant scheme. Focus on quick wins which are friendlier during the numerous RMK midterm, end-of-term reviews.

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Figure 1: The "Triad"

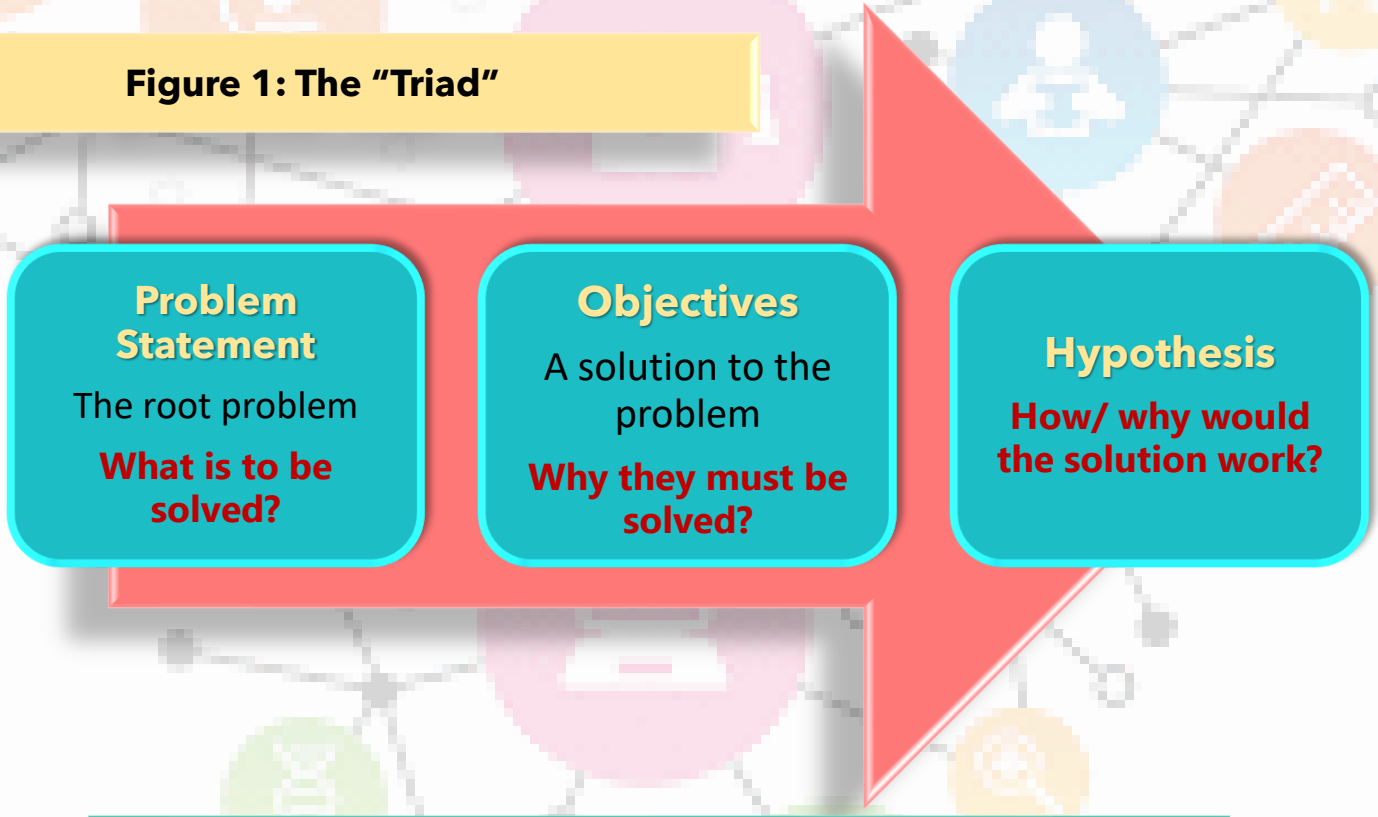

Figure 2: Three-Box IMO Method

INPUT	MECHANISM	OUTPUT

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FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS)

- **Neat, meticulous, organized and easy to follow.**
- Good formatting and presentation.
- Instantly impressionable with a fresh take on an important problem.
- Convincing previous/ preliminary data supported by the practical work plan to attain all objectives described.

- Problem statement.
- **Rationale of the study.**
- **Relevance to government policy**.
- Mindful of other concurrent, previous work.

Research background

Quality of proposal

Research objectives

- **Clear, concise,** and **relatable** to methods.

PROPOSAL EVALUATION

- Include **past evidence of previous successful research in the area** – projects or publications.
- Ensure no repetition.
- Justify why the team best fits the project with their balanced expertise.
- Must have fail safe elements built-in.

Project team composition & record

Research methodology

- Concise sample size.
- Divide methods into (few) orderly sections to facilitate review, and **DEMONSTRATE FLOW OF THOUGHT** clearly. MUST be reflected in Gantt Chart & Activities.

Expected Results

- New Theory/Findings/Knowledge – **The outcome must answer and reflect the title of the project.**
- Impacts on society, economy and nation – Socio-Economic Objectives (SEO) must be defined.

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Public Grant

FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS)

Translational potential

- **Impact description** is a must.
- How this would lead to follow-up research.
- **Patent Search** - concise using repeatable keywords.

Proposal Evaluation (Others)

Collaboration (Industry/ Agency)

- **Exclude universities** and must follow a specified format.
- Evidence of added value in the relationship, and not just others benefitting from FRGS allocation to solve their problem.

Budget

- Make sure the planned budget could fit into the suggested minimum expenditure threshold per KPT guidelines at every monitoring cycle.

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Funding Opportunities

NATIONAL FUNDS

MINISTERIAL FUNDING SCHEMES

- **Ministry of Science, Technology and Innovation (MOSTI)**
- **Ministry of Higher Education (MOHE)**
- **Economic Planning Unit (EPU)**
- **Ministry of International Trade & Industry (MITI)**

INTERAGENCY FUNDS

- **Malaysia Digital Economy Corporation (MDEC)**
- **Malaysian Global Innovation & Creativity Centre (MaGIC)**
- **Malaysian Research Accelerator for Technology & Innovation (MRANTI)**
- **Unit Peneraju Agenda Bumiputera (TERAJU)**

SPECIFIC SME FUNDS & INITIATIVES

- **Ministry of International Trade & Industry (MITI)**
- **Malaysian Investment Development Authority (MIDA)**

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Funding Opportunities

NATIONAL FUNDS

INDUSTRY-GOVERNMENT FUNDINGS

CREST MALAYSIA

TRUST FUNDS

- **Toray**
- **The National Conservation Trust Fund (PERHILITAN)**
- **SEAOHUN-MYOHUN**

CORPORATE FUNDERS

MAXIS, PETRONAS, CIMB, L'OREAL , RND SHELL

PRIVATE CHARITIES AND PRIVATE COMPANIES

GRANT OPPORTUNITIES AND TIPS FOR SUCCESSFUL APPLICATION

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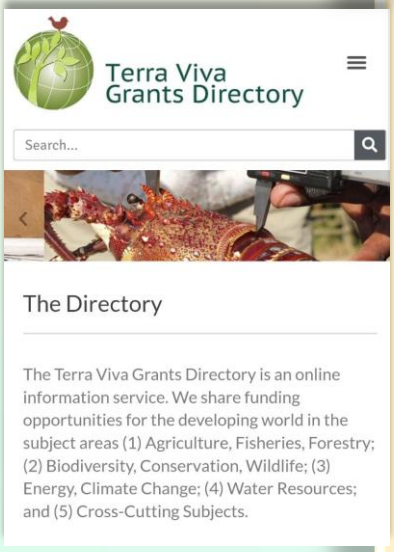
Funding Opportunities

INTERNATIONAL FUNDS & SEARCH ENGINES

TERAVIVA. ORG



- **Ranging from traveling grants to research funds.**

Terra Viva Grants Directory:
https://terravivagrants.org/

- The Terra Viva Grants Directory develops and manages information about grants for agriculture, energy, environment, and natural resources in the world's developing countries.

GRANTWATCH.COM

- US-based researchers
- https://www.grantwatch.com/

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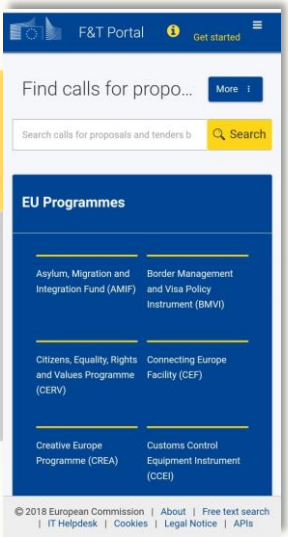
Funding Opportunities

INTERNATIONAL FUNDS & SEARCH ENGINES

European Commission Funding & Tender Opportunities

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home



International & National Research Agencies

(IDRC Canada, CIRAD-France, ARC-Australia, NWO-The Netherlands, DAAD –Germany, SATREPS-JICA/JST, SEARCA, World Bank, ADB, BRI, National Natural Science Foundation China (https://www.nsfc.gov.cn/english/site_1/index.html) etc.

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GRANT OPPORTUNITIES AND TIPS FOR SUCCESSFUL APPLICATION

By: **Prof. TS. Dr. Goh Yong Meng,**
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TIPS FOR SECURING RESEARCH FUNDING

Communicate your proposal effectively using the NABC Approach

N — NEEDS
- Why the project should be done?
- What is the immediate solution to the problem?

A — APPROACH
- How should it be done?
- Why is your approach compelling?

B — BENEFITS
- What are the benefits to the funder, target audience, and all stakeholders?
- Are the benefits long-term or immediately?

C — COMPETITION
- Who are the competitors?
- Demonstrate how and why your proposal is compelling.
- Have you mitigated all risks to the project?

Linking Innovation and Collaboration: How CiRNeT at UPM is Advancing Clinical Research

Assoc. Prof. Ts. Dr. Amir Syahir Amir Hamzah is the Deputy Director of CiRNeT, and also faculty member of the Faculty of Biotechnology and Biomolecular Sciences of UPM. Visit his Linkedin profile at https://www.linkedin.com/in/drasah/. Visit CiRNeT at http://www.cirnet.upm.edu.my

The Centre for Industrial Relation and Network (CiRNeT) at Universiti Putra Malaysia (UPM) plays a crucial role in advancing clinical research by providing a platform for collaboration between academia and industry. CiRNeT is well positioned to facilitate meaningful partnerships that can lead to new discoveries and innovations in healthcare, thanks to a wealth of expertise and resources available within the university, including its teaching hospital (Hospital Sultan Abdul Aziz Shah), multiple faculties, and research institutes.

With hundreds of experts across its various faculties, including the Faculty of Medicine and Health Sciences, the Faculty of Biotechnology and Biomolecular Sciences, and the Faculty of Veterinary Medicine, UPM has a strong tradition of excellence in the medical and life sciences fields. These experts have the skills and knowledge to tackle a wide range of clinical research challenges, and when combined with CiRNeT's support and resources, they can achieve truly groundbreaking results.

CiRNeT collaborates closely with a variety of industrial partners, including PERKESO and Zazen Health Solutions, to promote collaboration and maximise the impact of clinical research at UPM. Here we able to facilitate the transfer of knowledge and expertise between these key players and bring new ideas to the forefront of healthcare by bridging the gap between academia and industry.

CiRNeT also leverages its position within Putra Science Park (PSP) to help bring industry and academia together in new and innovative ways. The PSP provides a supportive and stimulating environment for researchers and entrepreneurs to work together, share ideas, and explore new possibilities in the field of clinical research. CiRNeT actively seeks opportunities to connect UPM's intellectual property and startup companies with stakeholders in the clinical research field, in addition to its work with industrial partners. This promotes innovation and opens up new avenues for furthering healthcare research. One example of an out-of-the-box solution for clinical research is the use of nanobiotech sensing solutions to detect metabolites that are early markers for diseases like cancer, diabetes, and Alzheimer's. This cutting-edge technology enables researchers to track and detect changes in the body's metabolic processes in real time, providing valuable insights into disease development in its early stages.

CiRNeT also works to connect experts from various fields with clinical research opportunities. For example, researchers in the field of engineering may have expertise in developing medical devices or imaging technologies that can be used in clinical research. Similarly, data analytics or machine learning experts may have insights that can help researchers better understand complex datasets and identify new research avenues.

Overall, CiRNeT is critical in connecting various stakeholders, intellectual properties, and experts from various fields in order to advance clinical research at UPM and beyond. By fostering collaboration and promoting innovation, CiRNeT is helping to shape the future of healthcare and improve outcomes for patients everywhere.

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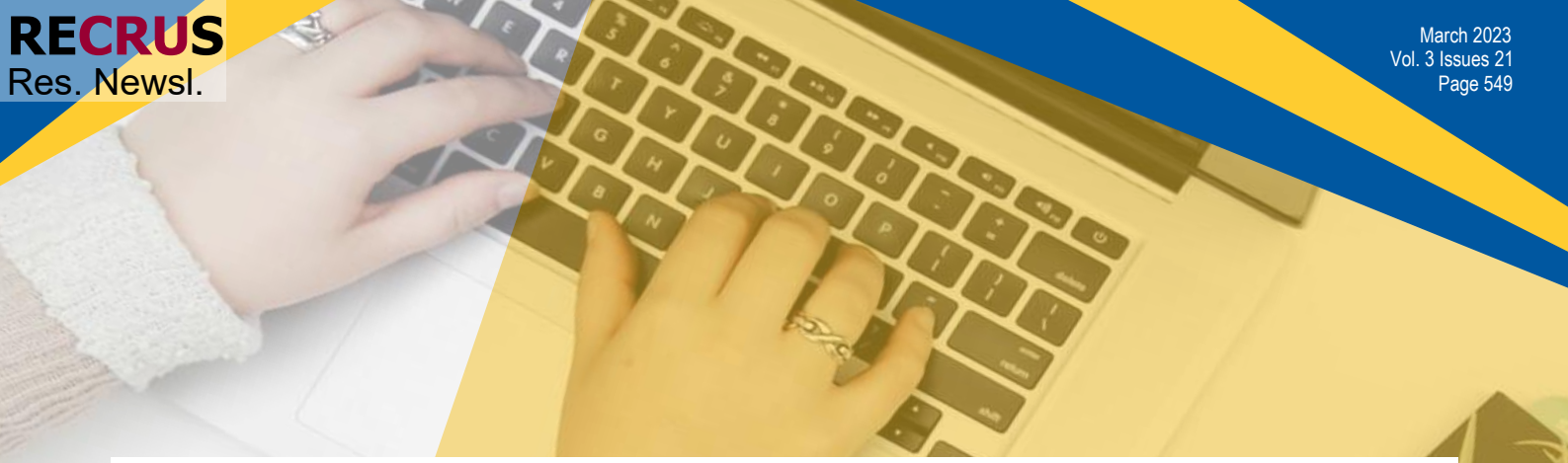


RESEARCH APPLICATION PROCEDURE IN HSAAS

SUMMARISED IN VIDEO CLIPS

Researchers who want to conduct research at HSAAS must prepare required research documents and submit the documents to Clinical Research Unit, for review and further action. Below are the video clips to summarise the research application procedure for both non-experimental and experimental studies. Please click on the symbols to watch the respective video clips.

Non-experimental studies

Experimental studies

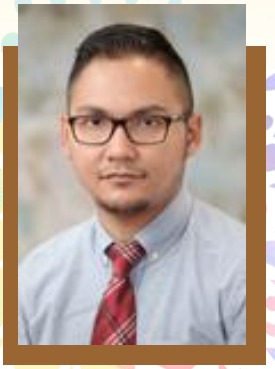
RESEARCH ACTIVITIES REPORT CRU ASSOCIATE MEMBERS (CRAMS) AND CLINICIAN SCIENTIST COTERIE (CSC) FOR SERIE 2/2023

SHARING FROM CRAMS AND CSC MEMBERS! 2/2023

By Salwana Ahmad

CRAMs Online Meeting was held every 2 months among CRAMs Members, Clinician Scientist Coterie (CSC) Members and staff among Hospital Pengajar, UPM and Faculty of Medicines and Health Sciences, UPM. This session was intended for the CRAMs members to share their research activities in the department and how they are coping with all the coming challenges and strive to keep moving forward. During the session, the members will have to present their research activities report comprising of remarkable research activities and outputs, promoting positive perceptions and motivation for facing challenges, improving clinical research, and cultivating research & networking. In light of cultivating the spirit of research and knowledge sharing, here are the summaries of the presentation shared for all of us to get to learn how is everyone is doing in proceeding with the quality research in UPM.

DEPARTMENT OF RADIOLOGY



CRAMs Member: Dr. Mohamad Syafeeq Faeez Bin Md Noh

Background:

Previously, the Department of Radiology is an imaging unit which is placed under the Department of Medicine, FPSK. At the beginning of 2006, the unit was upgraded to the Department of Imaging, and the operation was fully based in Serdang Campus. The department aspires to be at the forefront of the Radiology Education, Research, and Center of Excellence in providing the best services with advanced diagnostic equipment and imaging art.

Services provided include:

- Neuro/Cerebrovascular & Stroke (Diagnostic & Intervention), MSK Radiology, Pediatric Radiology, Uroradiology & Prostate (Diagnostic & Intervention), Peripheral Intervention (Respiratory, Nephrology, Vascular &, etc.) as well As Other Radiological services.
- **Musculoskeletal therapy (MSK Therapy)** – Institut Sukan Negara/National athletes in collaboration with orthopedics colleagues.
- Neurointerventional radiology services – private patients (referrals), referrals from other government facilities, referrals from South EastAsia (foreign patients).

REMARKABLE RESEARCH ACTIVITIES AND OUTPUTS

Research Highlights and Achievements:

Bil.	Activities/Outputs	Researcher
1.	Establishment of Padimedical – Innovative Medical Platform	Prof. Dr. Ahmad Sobri Muda
2.	Assessment of task-based F-MRI paradigm among UPM students having smartphone addiction	Dr. Suzana Ab Hamid
3.	Morphology of articular cartilage of the knee using MRI 3T in young adults	Assoc Prof. Dr. Suriani Mohamad Saini
4.	Quantitative study of the myelination pattern in term neonates by using myelin water imaging in 3T MRI	Assoc Prof. Dr. Hasyma Abu Hasan
5.	Neurotherapeutic effects of curcumin lead induced cerebellar damage in a rat model: ACVS predicts neurological and radiological improvement in LVO and DVO post reperfusion therapy	Assoc Prof. Dr. Ezamin Abdul Rahim
6.	Comparison between direct and indirect arthrogram MRI of the shoulder in detecting intra- articular pathology among patients undergoing MRI shoulder in HPUPM	Dr. Idris Ibrahim
7.	Software as a service platform for big medical data management and machine learning in mobile applications	Dr. Anas Tharek

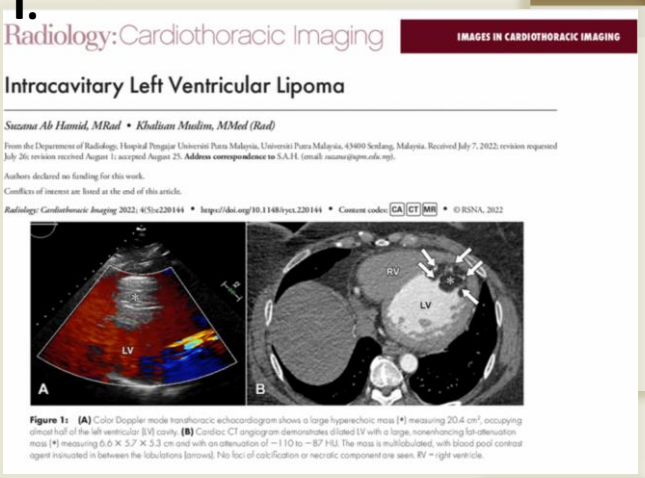
Table 1 Research activities occurring in the department.

Research Activities:

Research activities	Organizer	Date	Participation
'Bengkel Penulisan Proposal Geran Penyelidikan Siri 3/2022'	Faculty of Medicine and Health Sciences	27th Sept 2022I	All senior and junior members of the department
'Bengkel Penulisan Case Report'	Department of Ophthalmology	13th Aug 2022	Speakers – Assoc. Prof. Dr Subapriya & Dr. Syafeeq.

Highlight on Publication for 2022

1.

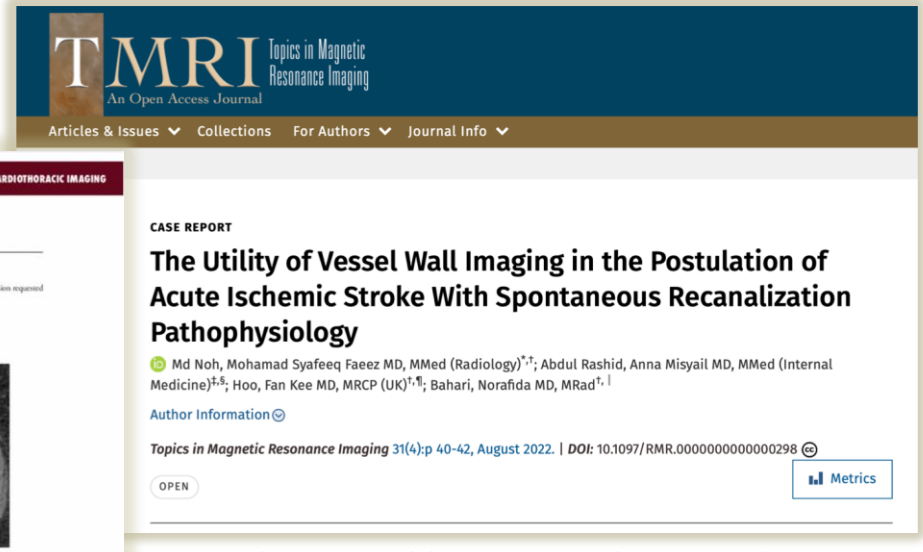

Radiology: Cardiothoracic Imaging

IMAGES IN CARDIOTHORACIC IMAGING

Intracavitary Left Ventricular Lipoma

Suzana Ab Hamid, MRad • Khaliaan Mudim, MMed (Rad)

2.


TMRI Topics in Magnetic Resonance Imaging

An Open Access Journal

Articles & Issues | Collections | For Authors | Journal Info

CASE REPORT

The Utility of Vessel Wall Imaging in the Postulation of Acute Ischemic Stroke With Spontaneous Recanalization Pathophysiology

Md Noh, Mohamad Syafeeq Faeez MD, MMed (Radiology)*,†; Abdul Rashid, Anna Misyail MD, MMed (Internal Medicine)‡,§; Hoo, Fan Kee MD, MRCP (UK)†,¶; Bahari, Norafida MD, MRad†,

Author Information

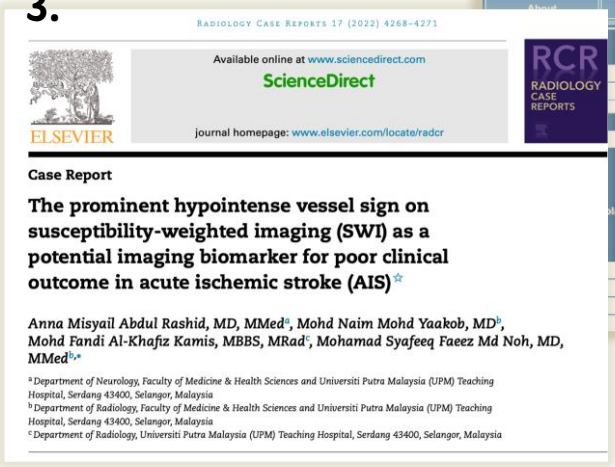
Topics in Magnetic Resonance Imaging 31(4):p 40-42, August 2022. | **DOI:** 10.1097/RMR.0000000000000298

OPEN

Metrics

More than 20 publications in the year of 2022

3.


Radiology Case Reports 17 (2022) 4268–4271

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.elsevier.com/locate/radcr

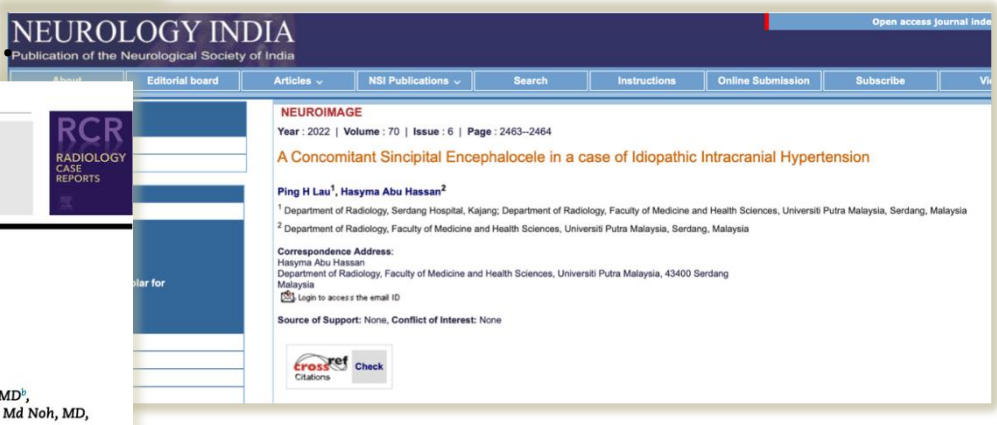
RCR RADIOLOGY CASE REPORTS

Case Report

The prominent hypointense vessel sign on susceptibility-weighted imaging (SWI) as a potential imaging biomarker for poor clinical outcome in acute ischemic stroke (AIS)☆

Anna Misyail Abdul Rashid, MD, MMed[a], Mohd Naim Mohd Yaakob, MD[b], Mohd Fandi Al-Khafiz Kamis, MBBS, MRad[c], Mohamad Syafeeq Faeez Md Noh, MD, MMed[b,]*

4.


NEUROLOGY INDIA

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NEUROIMAGE

Year : 2022 | Volume : 70 | Issue : 6 | Page : 2463--2464

A Concomitant Sincipital Encephalocele in a case of Idiopathic Intracranial Hypertension

Ping H Lau[1], Hasyma Abu Hassan[2]

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[2] Department of Radiology, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Serdang, Malaysia

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Malaysia

Source of Support: None, Conflict of Interest: None

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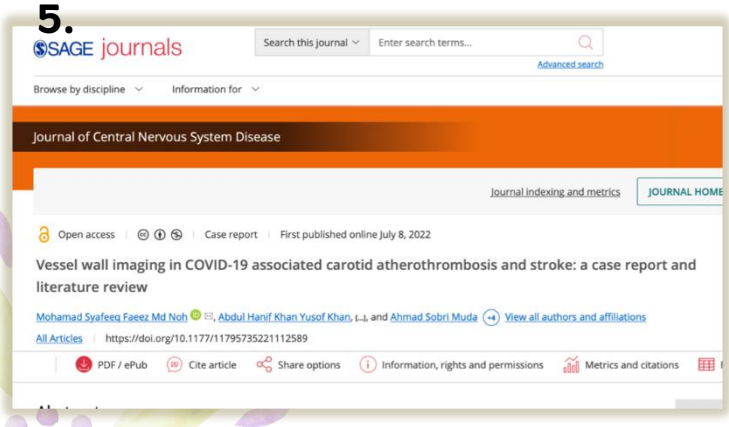
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Journal of Central Nervous System Disease

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Vessel wall imaging in COVID-19 associated carotid atherothrombosis and stroke: a case report and literature review

Mohamad Syafeeq Faeez Md Noh, Abdul Hanif Khan Yusof Khan, [...], and Ahmad Sobri Muda | View all authors and affiliations

All Articles | https://doi.org/10.1177/11795735221112589

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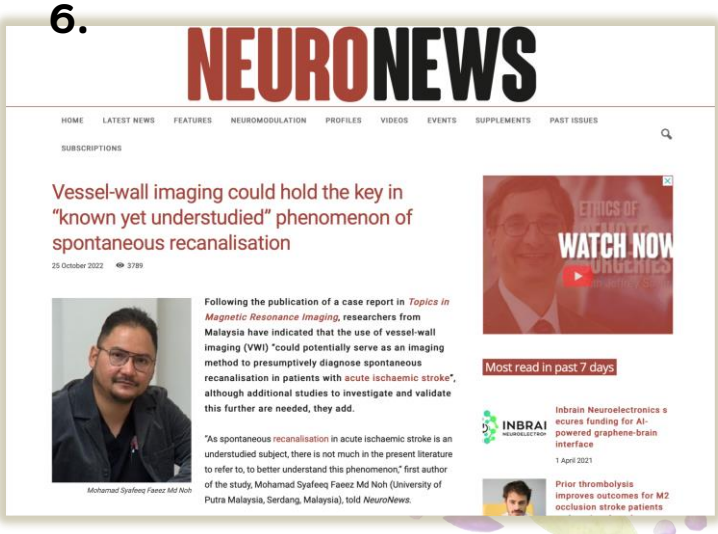
NEURONEWS

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Vessel-wall imaging could hold the key in "known yet understudied" phenomenon of spontaneous recanalisation

25 October 2022 | 3789

Following the publication of a case report in *Topics in Magnetic Resonance Imaging*, researchers from Malaysia have indicated that the use of vessel-wall imaging (VWI) "could potentially serve as an imaging method to presumptively diagnose spontaneous recanalisation in patients with acute ischaemic stroke", although additional studies to investigate and validate this further are needed, they add.

"As spontaneous recanalisation in acute ischaemic stroke is an understudied subject, there is not much in the present literature to refer to, to better understand this phenomenon," first author of the study, Mohamad Syafeeq Faeez Md Noh (University of Putra Malaysia, Serdang, Malaysia), told *NeuroNews*.

Mohamad Syafeeq Faeez Md Noh

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1 April 2021

Prior thrombolysis improves outcomes for M2 occlusion stroke patients

PROMOTING POSITIVE PERCEPTIONS AND MOTIVATION FO, FACING CHALLENGES, IMPROVING CLINICAL RESEARCH, and CULTIVATING RESEARCH & NETWORKING.

Challenges	Strategies
▪ Limited finding and time due to clinical services and burden of work as academicians/researchers	
▪ Juggling with job redundancy (man hour)	
▪ Difficulty in handling clinical data and the need for large data storage.	▪ Attending seminars and seeking help for the clinical data (statistician) & resources.
▪ Difficulty in obtaining grants and collaborators to carry out the research projects.	▪ Alternatively, try to find collaboration with other specialties, institutions, and industry partners
▪ Limited leaders or peers in respective field/niche area	▪ Collaborating with societies in Malaysia and overseas such as Bayern etc.

DEPARTMENT OF UROLOGY

Backgrounad:

The Department of Urology is previously known as Urology Unit, under the Department of Surgery, Faculty of Medicine and Health Sciences, UPM. The Unit started its operation in 2003 and started its clinical services at Hospital Serdang in year 2015, before converted into department by the University in 2020. The Department or Urology UPM is also the **first urological department established among the public universities in Malaysia.**

CRAMs Member:
Dr. Omar Ahmed Fahmy Ahmed

Service provided include:

- ❖ Specialized medical and surgical care in all major aspects of urology.
- ❖ Comprehensive urological services with a wide range of the latest state-of-the-art technologies such as **da Vinci® robotic surgical system, Koelis Trinity™ MRI-US fusion prostate biopsy systems, REZUM transurethral water vapor treatment** for benign prostatic enlargement, and many others more.
- ❖ Highlight the importance of the doctor-patient partnership in the pathway to recovery and wellness, by empowering patients and at the same time delivering patient-centric expertise and care.

Department Specialist and Lecturers:

Team consists of 5 in the Faculty of Medicine and Health Sciences & 8 at the Hospital Sultan Abdul Aziz Shah, UPM:

- ❖ 3 Consultants (Professor VK7/ Associate Prof. DU55/Senior Lecturer DU56)
- ❖ 5 Specialists and 5 Medical Officers

REMARKABLE RESEARCH ACTIVITIES AND OUTPUTS

Research Highlights and Achievements:

International Collaboration.

Researcher	Title	Country
1. Prof. Dato' Dr. Khairul Asri bin Mohd Ghani@Mamat 2. Dr. Omar Ahmed Fahmy Ahmed	Tubingen University – Wuerzburg University – BG Unfallkrankenhaun, Berlin	Germany
	University of Herdfordshire, Cornwall Royal Hospital, Truro	United Kingdom
	Oasi Reseacrh Institute-IRCCS, Troina, Italy	Italy
	King Abdul Aziz	Saudi Arabia
	Chinese University of Hong Kong	Hong Kong

Publications with international collaborators:

biomedicines
MDPI
Biomedicines. 2022 May; 10(5): 1101.
Published online 2022 May 10. doi: 10.3390/biomedicines10051101
PMCID: PMC9138649
PMID: 35625837
Adverse Events and Tolerability of Combined Durvalumab and Tremelimumab versus Durvalumab Alone in Solid Cancers: A Systematic Review and Meta-Analysis
Omar Fahmy,[1] Osama A. A. Ahmed,[2,3,4] Mohd Ghani Khairul-Asri,[1] Nabil A. Alhakamy,[2,3,4,5] Waleed S. Alharbi,[2,4] Usama A. Fahmy,[2,4] Mohamed A. El-Moselhy,[6,7] Claudia G. Fresta,[8] Giuseppe Caruso,[8,9,*†] and Filippo Caraci[8,9,†]
Satoshi Wada, Academic Editor
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Associated Data
Data Availability Statement
Abstract
Background: Recently, the combination of durvalumab and tremelimumab inhibitors, for the treatment of different types of cancers has been c effects, including its safety, are still unclear and need to be further i of the present systematic review and meta-analysis was to investiga this combination of drugs. Methods: A systematic review of the liter Reporting Items for Systematic Reviews and Meta-analyses (PRISM

Randomized Controlled Trial > Urolithiasis. 2022 Feb;50(1):113-117.
doi: 10.1007/s00240-021-01289-9. Epub 2021 Nov 22.
Retrograde intrarenal surgery versus percutaneous nephrolithotomy for treatment of renal pelvic stone more than 2 centimeters: a prospective randomized controlled trial
Maged Kamal Fayad [1 2], Omar Fahmy [3], Khaled Mukhtar Abulazayem [2], Nashaat M Salama [4 5]
Affiliations + expand
PMID: 34807274 DOI: 10.1007/s00240-021-01289-9
g the efficacy and safety of retrograde intrarenal surgery (RIRS) in larger than 2 cm against the percutaneous nephrolithotomy (PCNL). mber 2020, 121 patients were randomized to undergo PCNL (60 Both groups were compared in terms of operative time, intraoperative mplications were assessed based on Clavien-Dindo grading system. d by CT scan 6 weeks after surgery. No significant difference were in perioperative criteria. The main operative time was slightly longer p = 0.49). Stone clearance was higher in PCNL, yet the difference was PCNL group had either complete clearance or residual fragments < 4 roup (p = 0.22). Blood transfusion rate was 8.3% in PCNL compared to d towards significance (p = 0.08). Post-operative fever was higher in

Journal List > Cureus > v.13(6): 2021 Jun > PMC8291344
Cureus
Cureus. 2021 Jun; 13(6): e15775.
Published online 2021 Jun 20. doi: 10.7759/cureus.15775
PMCID: PMC8291344
PMID: 34295585
Diagnostic Ureteroscopy in CT Urography-Diagnosed Upper Tract Urothelial Carcinoma: Delay in Definitive Treatment and Increased Intravesical Recurrence
Monitoring Editor: Alexander Muacevic and John R Adler
Hadi SHSM,[✉1] Elizabeth Bright,[1] Mark Mantle,[1] Nicholas Munro,[1] and Omar Fahmy[2]
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Abstract
Go to:
Purpose
To investigate the effect of diagnostic ureteroscopy (URS) on the delay to surgical treatment of upper tract urothelial carcinoma (UTUC) detected by imaging and the risk of intravesical recurrence.
Materials and methods
We undertook a retrospective case-note analysis of all patients who underwent radical

The fund was provided by the collaborator for carrying out research and publications and they shared the benefits in terms of carrying out research and publications.

List of grants secured for the department.

Year	Type of Grants	Amount	Status
Until 30 Nov 2023	FRGS	RM192,000.00	Ongoing
Untul 21 May 2023	Geran Putra Berimpak (GPB)	RM136,500	Ongoing
2 Aug 2023	Inisiatif Putra Muda (IPM)	RM56,600.00	Ongoing
30 June 2023	Inisiatif Putra Muda (IPM)	RM30,000.00	Ongoing
2023	Industrial Grant	RM20,000	Ongoing
2023	Dr. Ranjeet Bhagwan Sing Research Grant	-	Pending results
2023	MAKNA Cancer Research Grant	-	

Ongoing Clinical Trials.

Bil.	Title	Achievements
1.	A Comparative Study of Transrectal us transperineal -MRI fusion prostate biopsy under local anesthesia	2 article has been accepted & 6 article has been submitted for these projects for 2023
2.	Extracorporeal shockwave therapy for penile rehabilitation in post radical prostatectomy patients.	
3.	Smartphone Apps tracks ureteric stents with automatic reminders to prevent forgotten stents	
4.	Impact of preoperative bladder training on the outcome of TURP	
5.	ESWL us URS in proximal ureteric stone 10- 20 mm size	
6.	Gyro ball preoperative exercise to increase the vein diameter before AVF	
7.	REZUM therapy for BPH	

PROMOTING POSITIVE PERCEPTIONS AND MOTIVATION FOR FACING CHALLENGES, IMPROVING CLINICAL RESEARCH, and CULTIVATING RESEARCH & NETWORKING.

International collaboration can be very helpful in sharing funds for various purposes, such as carrying out research projects, publications, and more. Here are a few ways in which international collaboration can facilitate the sharing of funds:

- Poling resources: When more groups collaborated, they can pool their resources to achieve research goals including include financial resources, as well as expertise, personnel, and equipment.
- Coordinating efforts: Help to coordinate efforts among multiple researchers, which can lead to more effective use of resources.

We would like to thank Dr. Syafeeq and Dr. Omar Ahmed for the sharing. We hope that the sharing can transform tacit knowledge into explicit, written, and easily communicated knowledge for the right people to receive the right information at the right time. See you the next time!.

Check out more information about our CRU Associate Members (CRAMs) for the Year 2022/2023 Member on HPUPM website at CRAMs Members.

Be featured in our next series of RECRUS Newsletter by contacting us at CRU!

APPRAISALS IN META-JOURNAL HOUR 14

By Nurfaizah, BH Chew and SQ Yew

The paper:

DEVELOPMENT OF A CLINICAL RISK SCORE PREDICTION TOOL FOR 5-, 9-, AND 13-YEAR RISK OF DEMENTIA

Why was this study conducted?

Dementia is the seventh leading cause of death and no effective treatment yet existed. An early intervention on modifiable risk factors of dementia could help prevent or delay its progression. The risk score model is a simple and convenient method for the general population to assess the probability of diseases using preclinical risk factors. This longitudinal prospective cohort study was conducted to develop a discriminative risk score model for the general population and predicts the 5-, 9-, and 13-year individual dementia risk for men and women. This study used a large sample size, risk factors of dementia that are commonly used in general practice, and risk stratification according to gender. These advantages highlighted the importance of developing this new prediction model of dementia as compared to the existing dementia risk score models.

How was it done?

YouTube

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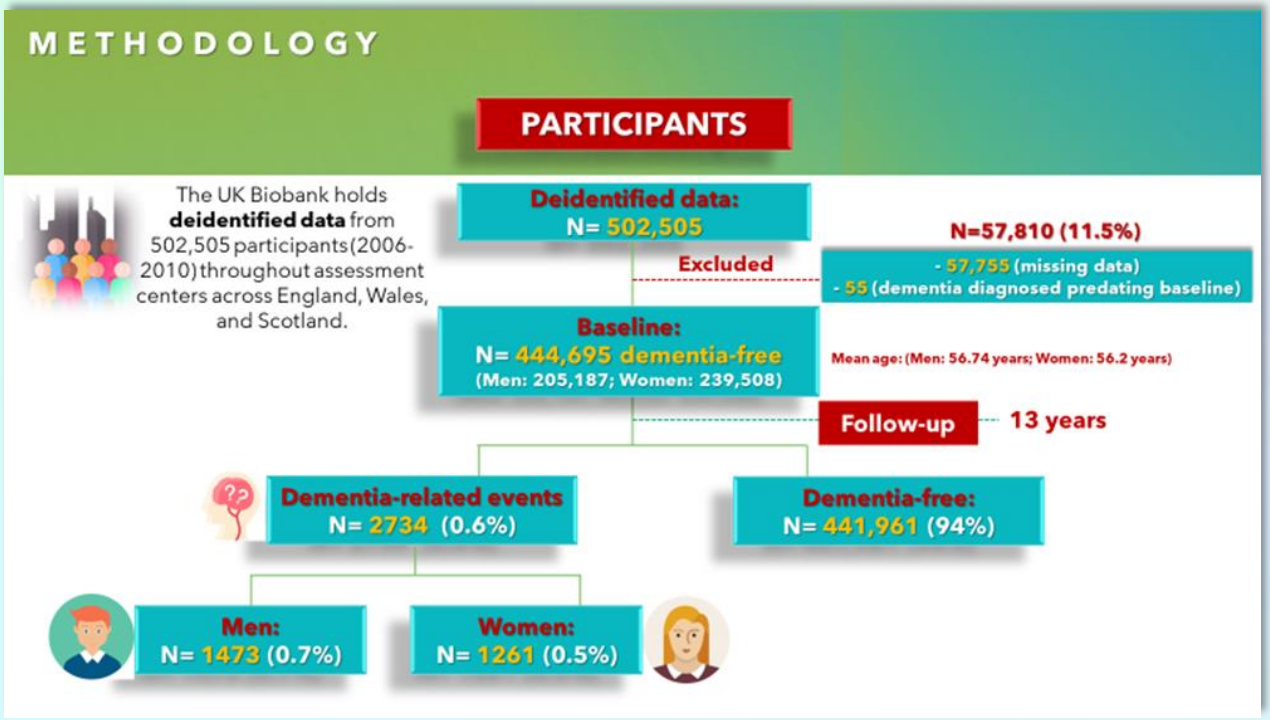
Participants:

This study used a large UK population was conducted between March 13, 2006, and October 1, 2010. Data analysis was performed from June 7 to September 15, 2021. The UK Biobank holds de-identified data from 502,505 participants throughout assessment centers across England, Wales, and Scotland. After 57,755 participants were excluded due to missing data and dementia diagnosis predating the baseline, a total of 444,695 dementia-free participants (205 187 men; mean [SD] age, 56.74 [8.18] years; and 239 508 women; mean [SD] age, 56.20 [8.01] years) at baseline were included. About 0.6% (N=2734) individuals displayed dementia-related events at follow-up and were categorized into dementia group which included 0.7% (N= 1473) men and 0.5% (N=1261) women. A total of 441961 participants did not have a diagnosis of dementia or dementia-related events at follow-up (dementia-free group).



Primary outcome:

Individual analyses of time end points were concluded on the first dementia diagnosis during the follow-up period. Dementia diagnoses were established according to the International Statistical Classification of Diseases, Version 10 (ICD-10) terms from UK Biobank data field 41 270 (ICD-10 codes F01-F04 and G30), which included Alzheimer disease, vascular dementia, unspecified dementia, organic amnesic syndrome, and dementia in other diseases classified elsewhere.

Exposure factors:

EXPOSURE FACTORS

Demographic	Lifestyle	Sleep Phenotype	Comorbidities
•Age •Ethnicity •Educational level •BMI •Employment	•Smoking •Frequency of alcohol consumption •Walking pace	•Sleep duration •Early awakening •Napping •Sleeplessness or insomnia •Snore	▪ Respiratory disease ▪ Cancer ▪ Cerebrovascular disease ▪ Diabetes ▪ Cardiovascular disease ▪ Hypertension

All measurements were taken at baseline. Participants were asked the touchscreen questions.

How the study developed a discriminative risk score model to predict the 5-, 9-, and 13-year individual dementia risk for men and women?

The point risk score prediction model was developed using optimal exposure factors of dementia that are practical and readily available to healthcare professionals. The flow process of developing the point risk score prediction model as follows:

The data were divided into **training** and **testing data sets** to **establish** and **validate** a prediction model separately.

The Least Absolute Shrinkage and Selection Operator (LASSO) regression and forward and backward stepwise multivariate Cox proportional hazards regression – **To identify potential optimal predictors that are readily available to healthcare professionals and develop an optimal risk prediction model**.

The **relative contribution of each risk predictor to the dementia** population was calculated using a population-attributable fraction (PAF).

A **point risk score model** that stratifies individuals for **5-, 9-, and 13-year risk of dementia** was developed.

Feature Selection

1st

Mann-Whitney test

-**To exclude the features without significant differences** between dementia and dementia-free groups ($p<0.05$).

2nd

LASSO regression

-The analysis was conducted with **10-fold cross-validation to select the most important predictors** from the **training data set.**

3rd

Multivariate Cox proportional hazards regression model

-The remaining features were evaluated for **associations between exposure factors and dementia risks.**

-Both forward and backward stepwise analyses were further used to identify the **optimal predictors.**

Point Risk Score Prediction Model

❑ **How to establish the predictive point risk score of each exposure factor?**

β coefficients (Cox proportional hazards regression) → Kaplan-Meier estimation → **Integers**

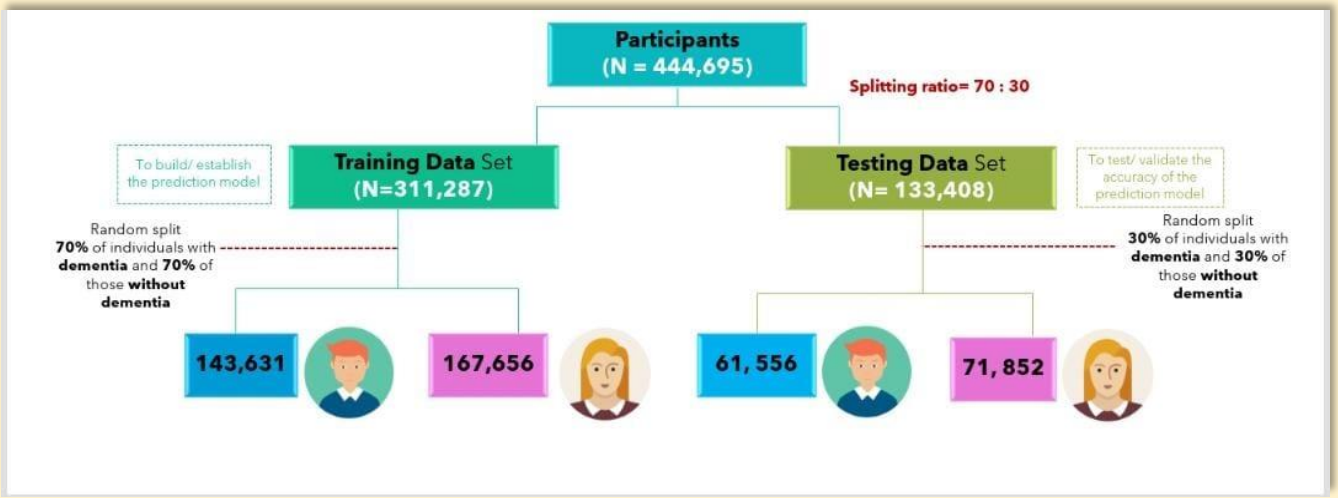
Age
35-40
40-45
45-50
50-55
55-60
60-65
65-73

❑ The continuous exposure factor of **age** was stratified into **7 levels**, each with a **width of 5 years**.

❑ **β coefficient of age X 1.5 =** Scores were rounded to the nearest **integers**.

❑ The **risk of dementia per point of risk score** was calculated at **5-, 9-, and 13 year** using **Kaplan-Meier estimates**.

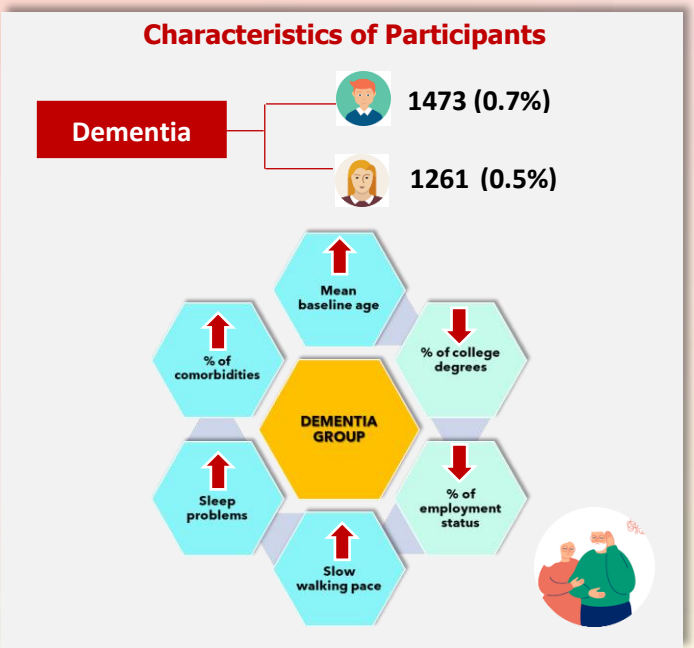
Validation of Risk Prediction Model



What was the finding?

Table 1. Summary of the outcomes

OUTCOMES	MEN	WOMEN
Occurrence of dementia (13 years followed-up)	0.7%	0.5%
C-statistic (Final multivariate Cox proportional hazards regression model)	Training:0.86	Training: 0.85
	Testing:0.85	Testing: 0.87
Shared modifiable independent risk factors	✓ Age ✓ No paid employment status ✓ Respiratory disease ✓ Cerebrovascular disease ✓ Diabetes ✓ Hypertension	
Weighted PAF for all independent risk factors	31.7 %	53.35%
Total point score of the risk score model	−18 to 30	−17 to 30
Prediction accuracy	9- year: 97.6% 13-year: 100%	9- year: 99.6% 13-year: 100%



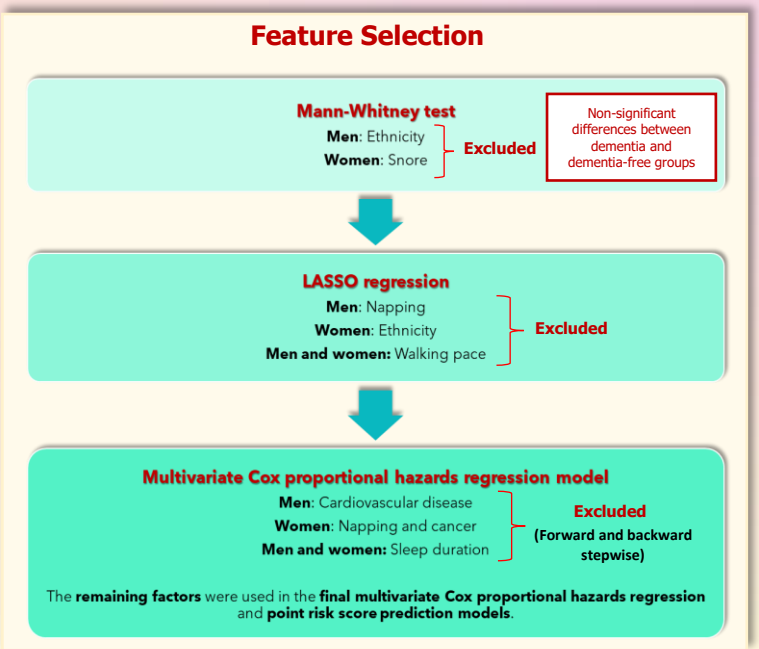


Table 2. Area under the Curve (AUC) of Training and Testing Data Sets in Men and Women

OUTCOMES	MEN		WOMEN	
AREA UNDER THE CURVE (AUC)	TRAINING DATA SET	TESTING DATA SET	TRAINING DATA SET	TESTING DATA SET
5-year	0.86	0.85	0.87	0.91
9-year	0.86	0.86	0.87	0.87
13-year	0.86	0.83	0.84	0.87

Table 3. Independent risk factors of dementia shared by men and women and exclusive risk predictor for men and women

EXPOSURE FACTORS	TESTING DATA SET	
	Men	Women
Age	HR, 1.14; 95% CI, 1.12-1.17	HR, 1.17; 95% CI, 1.14-1.20
No paid employment status	HR, 1.93; 95% CI, 1.47-2.53	HR, 1.97; 95% CI, 1.41-2.76
Respiratory disease	HR, 1.87; 95% CI, 1.53-2.30	HR, 1.82; 95% CI, 1.46-2.27
Cerebrovascular disease	HR, 3.40; 95% CI, 2.66-4.35	HR, 4.04; 95% CI, 3.01-5.43
Diabetes	HR, 1.61; 95% CI, 1.26-2.06	HR, 2.06; 95% CI, 1.53-2.78
Hypertension	HR, 1.39; 95% CI, 1.13-1.72	HR, 1.36; 95% CI, 1.07-1.72
	Men	Women
Exclusive risk predictor	**Sometimes sleepiness** (HR, 1.29; 95%CI, 1.05-1.58) had a 29% higher risk of dementia than those reporting sleepiness never or rarely.	**Low educational level** (HR, 1.43; 95%CI, 1.08-1.90) **Sleepiness often or all of the time** (HR, 1.86; 95%CI, 1.19-2.90) increased the risk of dementia.

Point Risk Score Prediction Model and Validation

5 Steps to Calculate the Point Score:

Step 1: Reference Value (Middle value of each category)
Continuous variable: Age in men (Reference: middle category- 50 to 55 years)
Categorical variable: Reference group (e.g. degree) = reference value.

Step 2: Regression Coefficient
The regression coefficient of each exposure factor in the Cox proportional hazards regression.

Step 3: Distance
The regression coefficient and reference value are used to calculate the **difference** between the reference and non-reference categories for each exposure factor.

E.g. Age (Men):

- Value of reference group =53
- Regression coefficient = 0.15
- Ref. value for men aged 36 – 40 years = 38
- **Difference: (38-53) x 0.15 = -2.25**

Step 4: Distance Constant
A distance constant corresponding to the change of 1 score for each exposure factor was set.

Age (men):
Regression coefficient x 1.5
=0.15 x 1.5
= **0.23**

Step 5: Calculation of Point Score
Point score = Difference/ distance constant

Age (men):
-2.25/ 0.23 = - 9.78 ~ **-10**

Table 4. The prevalence, commonality, and weighted Population-attributable Fraction (PAF) for all risk factors of dementia

EXPOSURE FACTORS	DEMENTIA (%)	
All risk factors	**Men**	**Women**
	31.7	**53.35**
Socioeconomic adversity ▪Non degree ▪Not paid	13.38	27.35
Comorbidities ▪Respiratory disease ▪Cerebrovascular disease ▪Diabetes ▪Hypertension ▪Cardiovascular disease (*women only*)	15.22	18.77
Others ▪Sleepiness ▪Underweight ▪Low frequency of alcohol consumption	2.84 0.07 0.20	2.33 0.15 0.48

How much can we take out from this research/paper?

This paper reported a meaningful endeavour to improvise on existing dementia prediction models by selecting clinically more available variables as the predictors. Having a large number of people diagnosed with dementia in the UK Biobank database is another feasible factor for the study. However, it is puzzling that the investigators were all from China and none was from or affiliated with an institution in the UK. This may affect contextualisation of the findings, and the process and justification for conducting the study was not explained. Under the acknowledgement, it appears that UK Biobank Resource is accessible by a certain application, but no further details are provided.

Beside the mismatch between the background of the investigator-researchers and the study settings, there are some mis-labelling of study designs and inadequate descriptions of the study. The paper describes a retrospective case-control study stratified by the gender with categorised outcomes at specified time points. The data was analysed using multivariate Cox proportional hazards regression instead of logistic regression as expected without explanation. The authors did not explain the justification of calculating risk of dementia specifically at 5-, 9-, and 13 years. These 5-, 9- and 13-year time points are not defined whether the number of dementia diagnosed at the earlier time points were accumulative from the preceding years, and/or excluded from the latter time points. This causes the actual number of people with dementia at 5- and 9-year to be unknown, and inability to judge whether the 5-year is equally credible as the 13-year and if so why the need for the 13-year prediction.

Another mis-labelling is the diagnostic study by the authors of this study which is rather a prognostic study or possibly an aetiologic study, or even a mix of these two. It is less of a diagnostic study because the diagnosis of dementia is generally a clinical diagnosis (cross-sectional in study design) where the age in year would have included the effect of the duration of the time points. The major lacking in this study is the lack of description and support for the diagnosis of dementia whether it was done and recorded in a 'gold' standard manner, and the accuracy of many self-reported predictors retrieved from the database. The self-reported comorbidities rather than being ascertained using patient's registries may lead to respondent bias, especially among those participants with lower educational levels.

It is not explained or provided proper justification on the rigorous selection of predictors through processes of Mann-Whitney test, LASSO regression and then multivariate Cox proportional hazards regression modelling. This statistical strategy is usually done in aetiology studies (explanatory model where confounders to the causal factor/s are excluded) than in diagnostic or prognostic studies (predictive model where all important determinants/predictors are included, and no confounders are excluded). Without any clarification on the statistical strategy used, it could happen that over-rigorous selection of prediction results in the over-performing prediction model. Another inadequate almost absence is the description of penalization of the prediction models. The MUST-NOT forget of all these is the model/s has yet to be externally validated. It ended in an internal validation using the same source database that has been split into the testing dataset and reported >95% accuracy. However, the weighted PAF of all modifiable risk factors for dementia accounted for 31.7% in men and 53.4% in women. Again, this estimation was not explained, neither the weighting procedure for the PAF.

With the above study designs in mind, the interpretation of the results is properly guided and cautioned. Of the many predictors, it is logical to observed strong predictors being the age and having a cerebrovascular disease, and others include engaging in employment or occupation that is more cognition-demanding, staying physically healthy, better sleep quality, and stay away from smoking and excessive alcohol. It was reported that the total point score ranged from −18 to 30 in men and from −17 to 30 in women, whereby higher scores correspond to higher risks (in percentage) of developing dementia. However, the authors did not discuss the clinical significance/implication of such scoring (i.e, what is the recommended cut-off score above which individuals in the general population require rigorous intervention to prevent dementia). In the scarcity of "effort, money, and time", surely clinicians would like to know who should be prioritised for interventions in clinical practice. Nevertheless, until this prediction model is externally validated in own society and setting, it may be a good piece of scientific evidence for the UK Biobank's population (people at hospitalisation in England, Wales, and Scotland) and not any where else.

Reference

1. Ren L, Liang J, Wan F, Wang Y, Dai X-J. Development of a clinical risk score prediction tool for 5-, 9-, and 13-year risk of dementia. JAMA Network Open.2022;5(11):e2242596. doi:10.1001/jamanetworkopen.2022.42596.

APPRAISALS IN META-JOURNAL HOUR 15

By Nurfaizah, BH Chew and SQ Yew

The paper:

PREDICTING CORONARY ARTERY DISEASE IN PRIMARY CARE: DEVELOPMENT AND VALIDATION OF A DIAGNOSTIC RISK SCORE FOR MAJOR ETHNIC GROUPS IN SOUTHEAST ASIA

Why was this study conducted?

Coronary artery disease (CAD) is the most common type of heart disease that caused by plaque build-up in the wall of the arteries that supply blood to the heart[1]. CAD risk prediction tools are useful decision supports to aid physicians in objectively evaluating the probability of CAD among patients presenting with chest pain. The decision support is particularly useful in the primary healthcare setting where the prevalence of actual disease is low. The pre-test probability (PTP) of CAD reflects a continuum of risk and has been recommended to use for selecting at-risk patients for further cardiac investigations. Patients with low pre-test risk do not benefit from routine additional testing, while those with intermediate pre-test risk are most likely to benefit from an initial non-invasive test. There are several established prediction models for CAD diagnosis such as The Duke Clinical Score (DCS), CAD Consortium Score (CCS), and Marburg Heart Score (MHS). However, these existing models have been found to overestimate CAD risk and to date, the clinical implications of using these models have not been compared in a primary care setting. It is also unknown which tool is best calibrated for use in an Asian population. Hence, the present study was primarily conducted to develop and validate a new diagnostic prediction model for CAD in Southeast Asians using clinical parameters readily available in primary care, and to compare the performance and clinical utility of three existing prediction tools (DCS, CCS, and MHS) against the new model.

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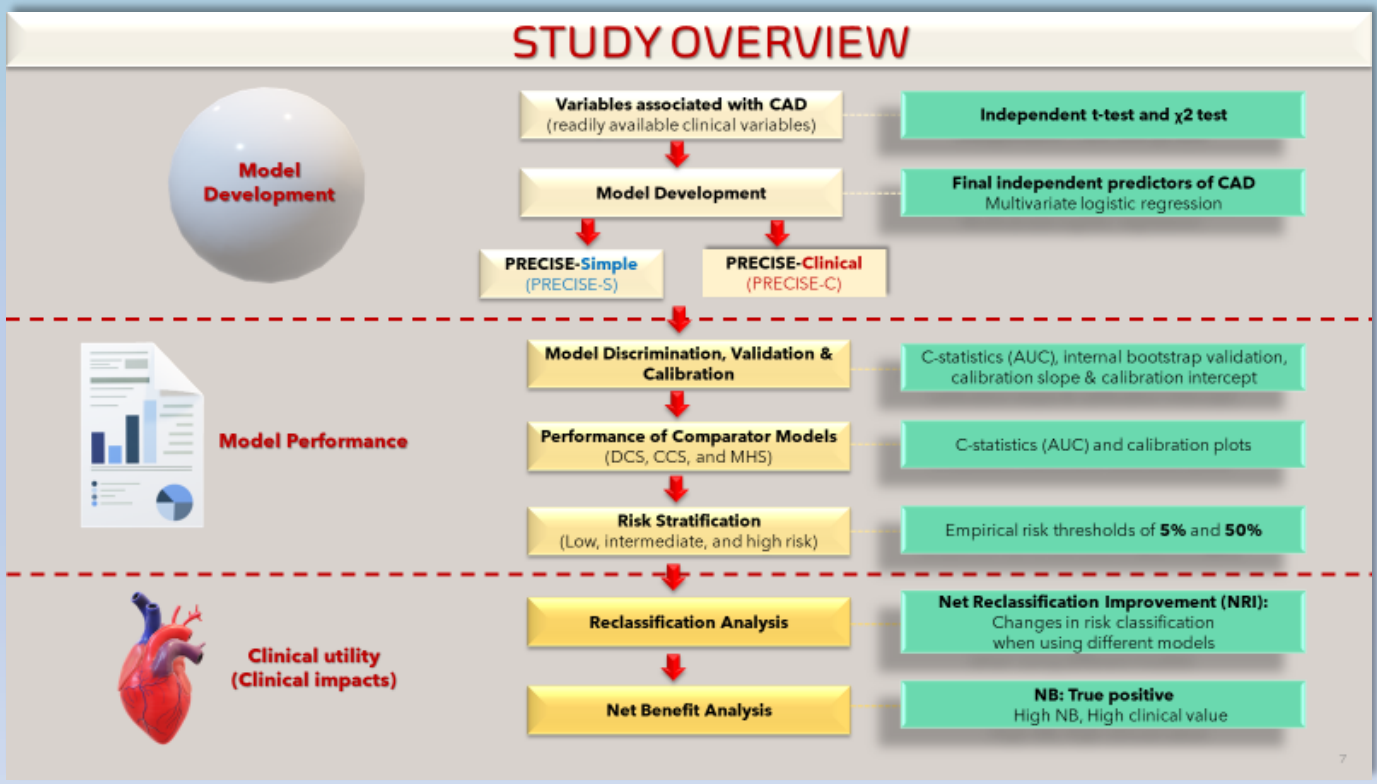
How was it done?



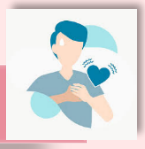
METHODOLOGY

PROSPECTIVE COHORT STUDY

PARTICIPANTS

Inclusion Criteria

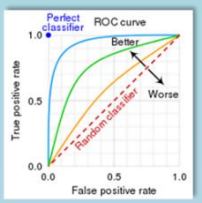
- **Consecutive patients** who attended all SHP branch clinics for **chest pain**.
- **Stable clinically**.
- Subsequently referred for **cardiac evaluation** at NHCS between **July 2013** and **December 2016**.



Exclusion Criteria

- **Existing or prior history of CAD**.
- **Acute coronary syndromes** (Unstable angina and evolving acute myocardial infarction).
- **Age below 30 years**.

MAIN MEASURES



Model Performance

Discrimination

Calibration

Clinical Utility

Net reclassification improvement (NRI)

Net benefit (NB)

STUDY PROCEDURE

Patients: interviewer-administered questionnaire and resting electrocardiogram (ECG).

Electronic medical records (EMR)- To determine clinical history and laboratory test results.

Patients without investigations in the preceding year had fasting blood tests taken upon enrolment to determine their lipid and glucose levels.

The patient and his attending doctors (primary care physician and cardiologist) were blinded to the CAD pre-test probability (PTP) results, computed using the various models tested.

All subsequent cardiac investigations at NHCS were determined at the clinical discretion of the reviewing cardiologist.

OUTCOMES MEASURES

Primary Outcome:

Diagnosis of significant CAD:

a. ≥ 70% luminal stenosis of at least one major coronary artery or ≥ 50% left main stenosis (based on either catheter-based or CT coronary angiography), or
b. Clinical diagnosis of CAD in patients without coronary angiography.

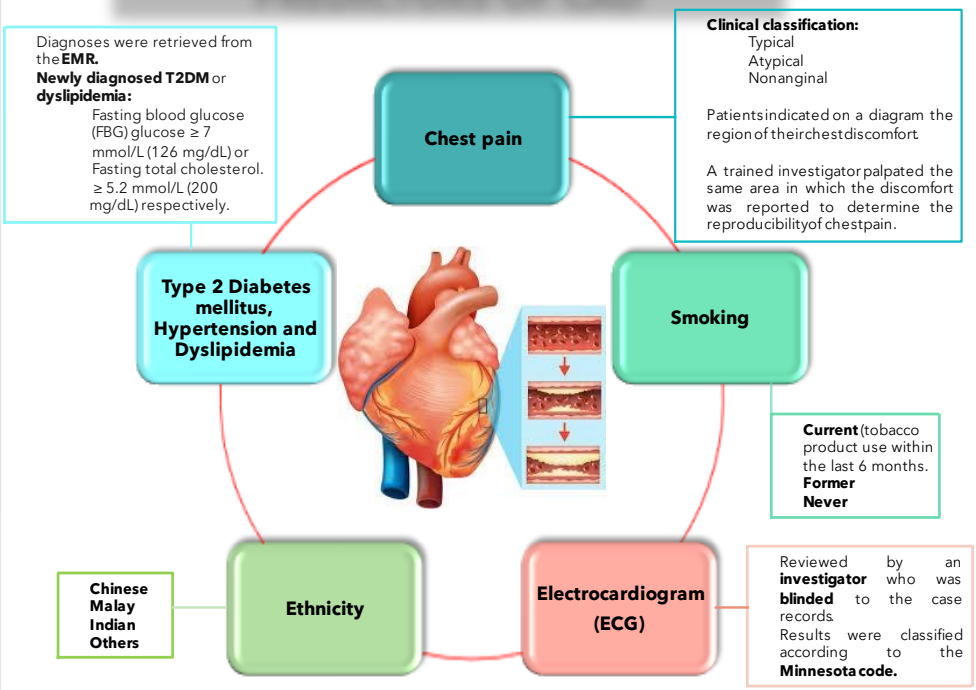
All clinical diagnoses were independently adjudicated by an investigator who was blinded to the diagnosis of the attending cardiologist. Discrepancies in diagnoses were arbitrated independently by another cardiologist in the study team.

1 year of follow-up: Matching was done at the respective national registries for mortality and major adverse cardiovascular events (MACE). MACE includes:

- Non-fatal myocardial infarction (MI)
- Non-fatal stroke
- Coronary revascularization (coronary artery bypass grafting and/or percutaneous coronary intervention).

Data on revascularization was obtained from EMR and phone interviews were conducted using standardized scripts.

PREDICTORS OF CAD

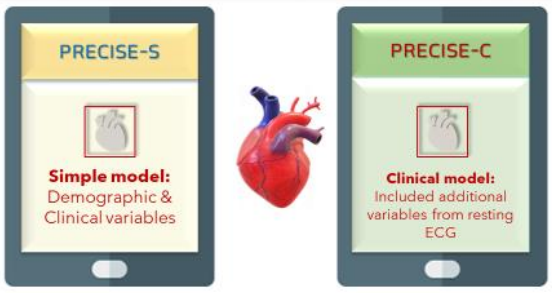


1 MODEL DEVELOPMENT

Predictive Risk score for CAD In Southeast Asians with chEst pain (PRECISE)

- **Independent t-test and χ2 test**: To determine **variables associated with CAD**.
- **Clinician input and p< 0.05**: To determine the **variable retention in the final regression model**.
- **Odds ratios (OR)** and **95% CI** were calculated.
- **Univariate and multivariate logistic regression analyses** were performed: To determine the **final independent predictors of CAD.**
- **Complete-case analysis**: To handle **missing data for predictors and outcome**.
- Values predicted by the **PRECISE score** represent the **probability of CAD** - **Range: 0 to 1**
- Two **independent risk calculators**: **PRECISE-S** and **PRECISE-C.**

Predictive Risk score for CAD In Southeast Asians with chEst pain (PRECISE)



2 MODEL DISCRIMINATION, VALIDATION AND CALIBRATION

DISCRIMINATION

Discrimination

- **The ability to differentiate between those with and without the disease.**
- Measured by AUC and its 95% CI.

Area under the curve (AUC)
- **< 0.5 –** Very poor
- **0.5 –** No better than predicting an outcome than random chance
- **>0.7 –** Good model
- **>0.8 –** Strong model

VALIDATION

Internal validation

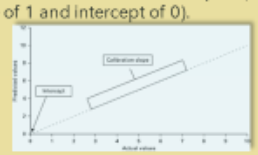
Internal Validation: To correct for over-optimism within the data.

- **829** (50%) new data sets were used by randomly sampling selected subjects from the main data set, with replacement.
- Next **stepwise multivariable logistic regression analysis** was performed on each of these data sets (significant **univariable p<0.01).**
- **Internal bootstrap validation** (829 bootstrap samples) was used to provide optimism-corrected estimates.
- The optimism is **the decrease in model performance between the bootstrap and the original samples** (can adjust the developed model for overfitting).
- The corrected calibration slope was used as a shrinkage factor for the regression coefficients and AUC with 95% CI corrected for over-optimism was estimated.

CALIBRATION

Calibration

- **The agreement between predicted and observed outcomes.**
- **Observed risks (y-axis)** against **predicted risks (x-axis).**
- The calibration slope and calibration intercept were calculated.
- **Calibration slope**: Evaluates the spread of the estimated risks (Target value: 1)
- **Calibration intercept**: Assessment of calibration-in-the-large (Target value: 0)
- Perfect calibration: Predictions lying on the 45° line of the calibration plot (i.e., a slope of 1 and intercept of 0).



3 PERFORMANCE OF COMPARATOR MODELS

- The **predictive performance** of **DCS, CCS (basic & clinical models),** and **MHS** was quantified using the original equations.
- The respective **AUC** and **calibration plots** were presented.

4 RISK STRATIFICATION

- **Cohort stratification:**
- **Low, intermediate**, and **high** CAD risk groups (empirical risk thresholds of **5%** and **50%**).
  - **Low risk**: Manage expectantly.
  - **Intermediate risk**: Should be referred for further cardiac investigations.
  - **High risk**: Receive invasive diagnostic tests (e.g. cardiac angiography).

5 RECLASSIFICATION ANALYSIS

- Cross-tabulate **the probability classification** of patients - **PRECISE-C** vs other risk models.
- **Correct reclassification**: If the predicted probability using PRECISE-C was **closer** to the observed CAD probability than DCS or CCS-Clinical.
- **Net reclassification improvement (NRI)**: Quantifies changes in risk classification when using different models.
- **NRI = NRIcase + NRInon−case**
- NRI reports differences in proportions of patients moving "up" and "down" for cases and non-cases.
  - ***Up**: Moving to a **higher-risk category***
  - ***Down**: Moving to a **lower-risk category***
  - ***Case**: Patient with CAD*
  - ***Non-case**: Patient without CAD*
- NRI values were applied to compare the reclassification capacities of the various models across the pre-determined risk thresholds.

To offer insights into the use of each predictive model in clinical practice.

6 NET BENEFIT ANALYSIS

- **Threshold probability of 5%:** Cutoff between **low**-and **intermediate-risk** groups.
- **Net benefit:** The **trade-off** between **benefits** (of detecting CAD among "true positive") VS **harm** (of unnecessary cardiac tests among "false positives")
- Unit of NB: **"True positive"**
- NB was calculated and compared for each risk model.
- The model with the **highest NB** demonstrates the **highest clinical value.**

RESULTS

KEY RESULTS

OUTCOME	PRECISE
CAD Prevalence	**9.5%** (158 of 1658 patients)
Predictors of CAD	**Age, gender, T2DM, hypertension, smoking, chest pain type, neck radiation, Q waves, and ST-T changes**
Reclassification analysis	**100% reclassification as compared to DCS and CCS-clinical.**

OUTCOME	PRECISE-S	PRECISE-C	DCS	CCS-basic	CCS-clinical	MHS
C-statistic	**0.808** (95% CI 0.776-0.840)	**0.815** (95% CI 0.782-0.847)	**0.795** (95% CI 0.759-0.831)	**0.756** (95% CI 0.717-0.794)	**0.787** (95% CI 0.752-0.823)	**0.661** (95% CI 0.621-0.701)
Net benefit (at 5% threshold probability)	**0.061**	**0.063**	**0.056**	**0.060**	**0.065**	

PARTICIPANTS WITH CAD (n=158)

- **Mean age: 61.1 ± 9.3 years**
- **Males: 127 (80.4%)**
- **Chinese:126 (79.7%)**
- **Diabetes mellitus: 48 (30.4%)**
- **Hypertension: 99 (62.7%)**
- **Hyperlipidemia: 124 (78.5%)**

RESULTS

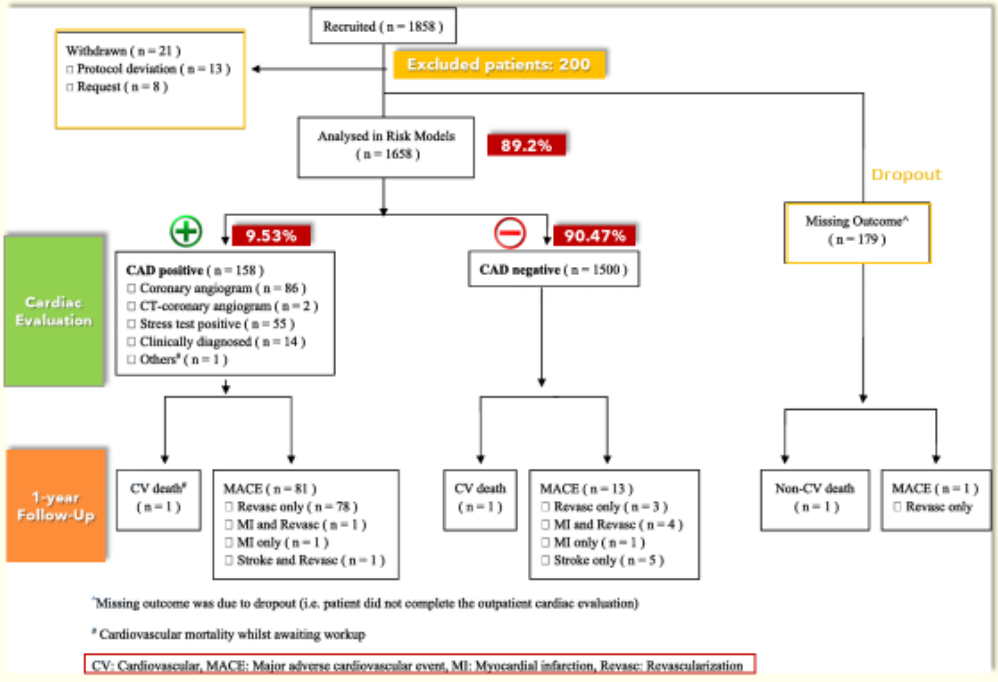
- Total recruited patients: 1858
- Total completed outcome data: 1658
- Excluded patients:
  - Dropped out: 179
  - Withdrawn: 21
- Prevalence of CAD: n= 158 (9.5%)
- Evidence of stenosis on catheter-based angiography: n= 86 (54.4%)
- CT evidence of stenosis: n= 2 (1.3%)
- Positive stress test: n=55 (34.8%)
- Clinically diagnosis of CAD by a cardiologist: n= 14 (8.9%)

1-Year Follow-up

Outcome	CAD +VE	CAD -VE	Missing Outcome
	n (%)		
Died of CV cause	1 (0.6)	1 (0.1)	1 (0.6)
MACE	81 (51.3)	13 (0.9)	1 (0.6)

PARTICIPANTS

Figure 1: Flow diagram of patients from recruitment until 1-year follow-up.



PREDICTORS OF CORONARY ARTERY DISEASE

Multivariate logistic regression analyses

- **Older age** OR 1.03 (1.02-1.05)
- **Male** OR 5.75 (3.63 -9.11)
- **Diabetes mellitus** OR 1.82 (1.20-2.76), p =0.005
- **Hypertension** OR 1.64 (1.12-2.42), p =0.012
- **Smoker** OR 2.08 (1.30 - 3.34), p=0.002
- **Typical chest pain** OR 3.95 (2.40 - 6.50), p<0.001
- **Chest pain radiating to neck** OR 3.18 (1.50-6.74), p =0.003
- **Q waves on ECG** OR 2.77 (1.54 - 5.01), p =0.001
- **ST-T changes on ECG** OR 1.74 (1.07-2.83), p = 0.027

The final equation for the simple model (PRECISE-S):

y = −6:632 + (0.035*Age) + (1.694*Male) + (0.613*Diabetes) + (0.542*Hypertension) + (0.791*Smoker) + (0.063*ExSmoker) + (1.395*Typical Pain) + (0.877*Atypical Pain) + (1.143*Pain Radiating to Neck)

The final equation for the clinical model (PRECISE-C) with resting ECG parameters:

y =−6:714 + (0.033*Age) + (1.75*Male) + (0.597*Diabetes) + (0:497*Hypertension) + (0.733*Smoker) + (0.07*ExSmoker) + (1.374*Typical Pain) + (0.875*Atypical Pain) + (1.157*Pain Radiating to Neck) + (1.020*Q waves present) + (0.552*ST−T changes present).

PERFORMANCE OF RISK SCORES

DISCRIMINATION AND VALIDATION

OUTCOME	PRECISE-S	PRECISE-C
AUC	**0.808** (95% CI: 0.776-0.840)	**0.815** (95% CI:0.782-0.847)
AUC Bootstrap Validation Cohort	**0.825** (95% CI: 0.782-0.868)	**0.841** (95% CI: 0.799-0.883)

OUTCOME	DCS	CCS-basic	CCS-clinical	MHS
AUC	**0.795** (95% CI 0.759-0.831)	**0.756** (95% CI 0.717-0.794)	**0.787** (95% CI 0.752-0.823)	**0.661** (95% CI 0.621-0.701)

CALIBRATION

OUTCOME	PRECISE-S	PRECISE-C	DCS	CCS-basic	CCS-clinical
Calibration intercept	**0.025**	-0.044	-0.037	0.014	0.013
Calibration slope	**0.503**	2.00	0.313	0.400	0.382

PRE-TEST PROBABILITY (PTP) SCORES

MODEL	RISK OF CAD	
	LOW	INTERMEDIATE
DCS	-	60.9%
CCS-basic	-	76.5%
CCS-clinical	-	70.2%
PRECISE-S	47.8%	51.0%
PRECISE-C	49.8%	48.8%

PTP Score	PRECISE-S	PRECISE-C
Range	0 - 67%	0 - 78%

RECLASSIFICATION ANALYSIS

PRECISE-C vs DCS

- **73.1%** of patients were classified into a different risk category when PRECISE-C was used instead of DCS.

PRECISE-C vs CCS-clinical

- **32.3%** of patients were classified into a different risk category when PRECISE-C was used instead of CCS-clinical.

NET BENEFIT ANALYSIS

OUTCOME	PRECISE-S	PRECISE-C	DCS	CCS-basic	CCS-clinical
Net benefit (at 5% pre-determined threshold probability)	0.061	0.063	0.056	0.060	0.065

Taking PRECISE-C as an example for illustration:

- The primary care physician is willing to refer 20 "at-risk" patients for tertiary evaluation in order to find 1 patient with CAD (i.e.,5% threshold probability).
- He decides to use PRECISE-C as a clinical decision support tool to identify patients with ≥ 5% PTP of CAD for referral.
- With the aid of PRECISE-C, he refers a total of 1000 patients for tertiary evaluation, out of which a net of 63 patients are "true positive" for CAD (i.e., a net of 1 "true positive" out of every 16 patients referred) → 1000/63 = 15.87
- In comparison, NB for DCS, CCS-basic, and CCS-clinical was 0.056, 0.060, and 0.065 respectively.

How much can we take out from this research/paper?

In the present study, the authors developed a diagnostic tool, named as the Predictive Risk scorE for CAD In Southeast Asians with chEst pain (PRECISE) in order to predict the development of coronary artery disease (CAD) among Southeast Asians. The PRECISE was then validated by comparing it against three existing tools, namely the Duke Clinical Score (DCS), CAD Consortium Score (CCS), and Marburg Heart Score (MHS). The Marburg Heart Score (MHS) is worth comparing and not the other tools from the perspectives of study population and setting.

A total of 1858 patients presented to primary care clinics with chest pain between July 2013 and December 2016 were prospectively recruited. This was a good sample size for the CAD event rate. The study samples were not truly representative of Southeast Asians because majority were Chinese. After a year of follow-up, the presence of outcome (CAD) was ascertained. Logistic regression analyses were performed to determine the final independent predictors of CAD. Subsequently, the performance of the PRECISE, DCS, CCS, and MHS models were analysed using discrimination and calibration tests. Finally, Reclassification Analysis and Net Benefit Analysis were performed to compare the clinical benefits between these tools. Reclassification analysis is of questionable relevance, more so when the comparator is not the MHS. Similarly, the net benefit analysis is lacking of convincing explanation, and of its support for the models clinical impact.

It was reported that the PRECISE model consists of nine CAD predictors, including the age, gender, type 2 diabetes mellitus, hypertension, smoking, chest pain type, neck radiation, Q waves, and ST-T changes. These predictors were either selected via multivariable analysis or included to the final model based on experts recommendation. Surprisingly, well established predictors of CAD, such as the family history of CAD, duration of physical activity, and dietary information were not given consideration in this study.

With regards to the diagnosis of CAD, it was mentioned that the diagnosis was made either based on the coronary angiography findings (i.e., objective method) or clinical judgement by the attending cardiologists (i.e., subjective method). Nonetheless, it was unclear of whether these cardiologists abide to a standardised protocol while making the diagnosis of CAD (e.g., the diagnosis of CAD must base on creatine kinase readings, symptomology, ECG findings, etc). We are also unclear to what extend these cardiologists were blinded towards the pre-test probability (PTP) of the study participants. Moreover, the referent (Gold) standard in clinical diagnosis of CAD did not hold up well. A sensitivity analysis with CAD diagnosis based on either catheter-based or CT coronary angiography would be better. Accordingly, the use of clinical diagnosis of CAD is incorrectly taken as the strength of this diagnostic study. Although the authors clearly defined the diagnosis of CAD in the present study as either ≥ 70% luminal stenosis of at least one major coronary artery or ≥ 50% left main stenosis, it seems like such definition of CAD has a discrepancy compared those used in the original DCS and CCS cohorts. As a result, the PRECISE model may not be directly comparable to the DCS and CCS models.

When performing risk stratification, study participants were categorised into low, intermediate, and high CAD risk groups using empirical risk thresholds of 5% and 50%, respectively. However, it was not elaborated on how these risk thresholds (i.e., 5% and 50%) were selected. Were they suggested by existing clinical guidelines? Were they based on clinicians' experience? Another issue requiring further clarification is that why is there such a huge and uneven gaps between the risk groups? Do they have any clinical significance? The models appeared good for low-risk and medium-risk (probability score ≤ 50%) to indicate non-CAD (> 80% accuracy) as compared to the high-risk predicting CAD at just slightly more than 50% accuracy (see supplementary Table 2).

Although the PRECISE-S and PRECISE-C performed better than DCS, CCS and MHS in terms of Reclassification Analysis and Net Benefit Analysis, the difference reported was very subtle and, hence, we are not sure to what extent this difference could result in clinical benefit. It was also puzzling and unexplained of the close similarity in performance of PRECISE-S and PRECISE-C.

Finally, the authors concluded that the PRECISE model performs well and demonstrates utility as a clinical decision support for diagnosing CAD among Southeast Asians. This statement should be interpreted with caution as the study cohort in the PRECISE study was very different from the populations in other Southeast Asian countries, except Malaysia. Future validation of the PRECISE model should therefore be conducted in this region.

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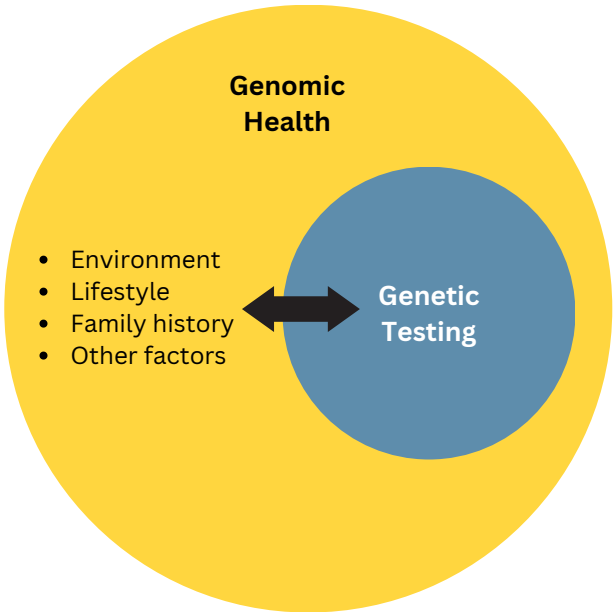
IMPLEMENTATION OF GENOMIC HEALTH IN PRIMARY CARE

1. Genetic testing versus genomic health

Genetic testing refers to the analysis of an individual's DNA to identify specific genetic variations or mutations associated with a particular disease or condition (1).

Genomic health (also known as genomic medicine), on the other hand, is a broader concept that encompasses not only genetic testing but also the analysis of an individual's entire genome to better understand how it influences their overall health and disease risk (2).

Genomic health is an interdisciplinary field that combines genetics, genomics, molecular biology, and bioinformatics to study the interactions between an individual's genes and their environment, lifestyle, family history, and other factors that contribute to their health and disease risk (3).



Written By:
Dr. Yew Sheng Qian

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2. Applications of genomic health

Diagnosis of rare diseases

Genomic health can be used to diagnose patients who have high-risk genetic errors that can cause rare diseases (4, 5).

Diagnosis of common diseases

Genomic health are increasingly being used to understand the genetic factors that lead to the development of common diseases, such as hypertension, diabetes, and cancer (6).

Disease risk assessment

Genomic health can help to identify an individual's risk for developing certain diseases, such as CVD (7) and familial hyperlipidaemia (8), enabling them to take proactive steps to reduce their risk.

Pharmacogenetics

Genomic health may be used to predict whether a person will respond to a particular drug, how well they will respond to that drug, and whether they are likely to get any side effects from the use of a specific drug (9).

Prenatal testing

Prenatal diagnosis of genetic diseases allows parents to make decisions about whether to continue with the pregnancy. It also allows early diagnosis and possible treatment of genetic disease in utero or at birth (10).

Infectious diseases

Sequencing the genomes of microorganisms that cause human infection can identify the exact organism causing the disease, help to trace the cause of infectious outbreaks, and give information as to which antibiotics are most likely to be effective in treatment (11).

Personalised medicine

Personalised medicine describes the use of genetic information to tailor health care intervention to individual need (12).

Gene therapy

Gene therapy involves the administration of DNA or RNA in order to correct a genetic abnormality or modify the expression of genes. Genome editing can add in, cut out, or replace sections of the DNA sequence (13).

3. Implementation process of genomic health in primary care

Step 1: Qualitative studies with primary care providers (PCPs)

- Conduct qualitative interviews to explore PCPs' understanding regarding genomic health (e.g., how they cope with new genetic technologies, what are their perceptions of implementing genetic testing, what are their experience in genomic health, etc).

Step 2: Develop and distribute questionnaires to PCPs

- Transcribe the qualitative interviews (in Step 1) and develop a questionnaire to gather PCPs' opinions on the genomic health. In addition, assess their confidence in collecting family history and in providing advice for genetic test results in the primary care setting.

Step 3: Qualitative studies with patients

- Conduct qualitative interviews to identify patients' response and perceptions (i.e., perceived benefits and perceived adverse effect) towards genomic health.

Step 4: Systematic review

- Conduct a systematic review to determine the gap in knowledge in genomic health (e.g., explore which disease is yet to have genetic testing).
- Researchers shall also identify the effects (beneficial and adverse effects) of genomic health towards patients' health behaviour.
- Using these findings, researchers must convince their funders regarding the need of genomic health in primary care.

Step 5: Develop genomic health intervention tools

- Develop the intervention tools (e.g., genetic testing, risk prediction engines, questionnaire on family history, etc) and apply these tools to patients with familial disease risk.

Step 6: Outcome assessment

- Determine any improvement in identification of patient at risk at primary care clinics.
- Measure any improvement in patients' surveillance (i.e., how many patients are referred to specialist clinic for further investigation and management).
- Identify the presence or absence of adverse effect (physical and psychological) among the participants.

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4. Challenges of implementing genomic health in primary care setting

- Limited evidence and conflicting interpretation of benefits of genomic health
- Lack of institutional and clinician acceptance
- Lack of standards for genomic applications
- Limited access to genomic health expertise and testing
- Lack of EMR integration of genomic results and clinical decision support
- Poor documentation of family history in primary care clinics

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BIG DATA IN HEALTH CARE: WHAT IT IS?

By Dr Nur Aazifah bt Ilham

Big data is a term often used to describe an explosion of information. In order to be classified as big data, a dataset should fulfill the following criteria as below:

High Volume (Scale of data)

Usually in terabytes or petabytes which are managed and stored using Hadoop or Apache Spart.

High Variety

(Different form of data)

The format of data can be structured or unstructured.

High Velocity

The data are frequently produced and analyzed.

Veracity (Uncertainty of data)

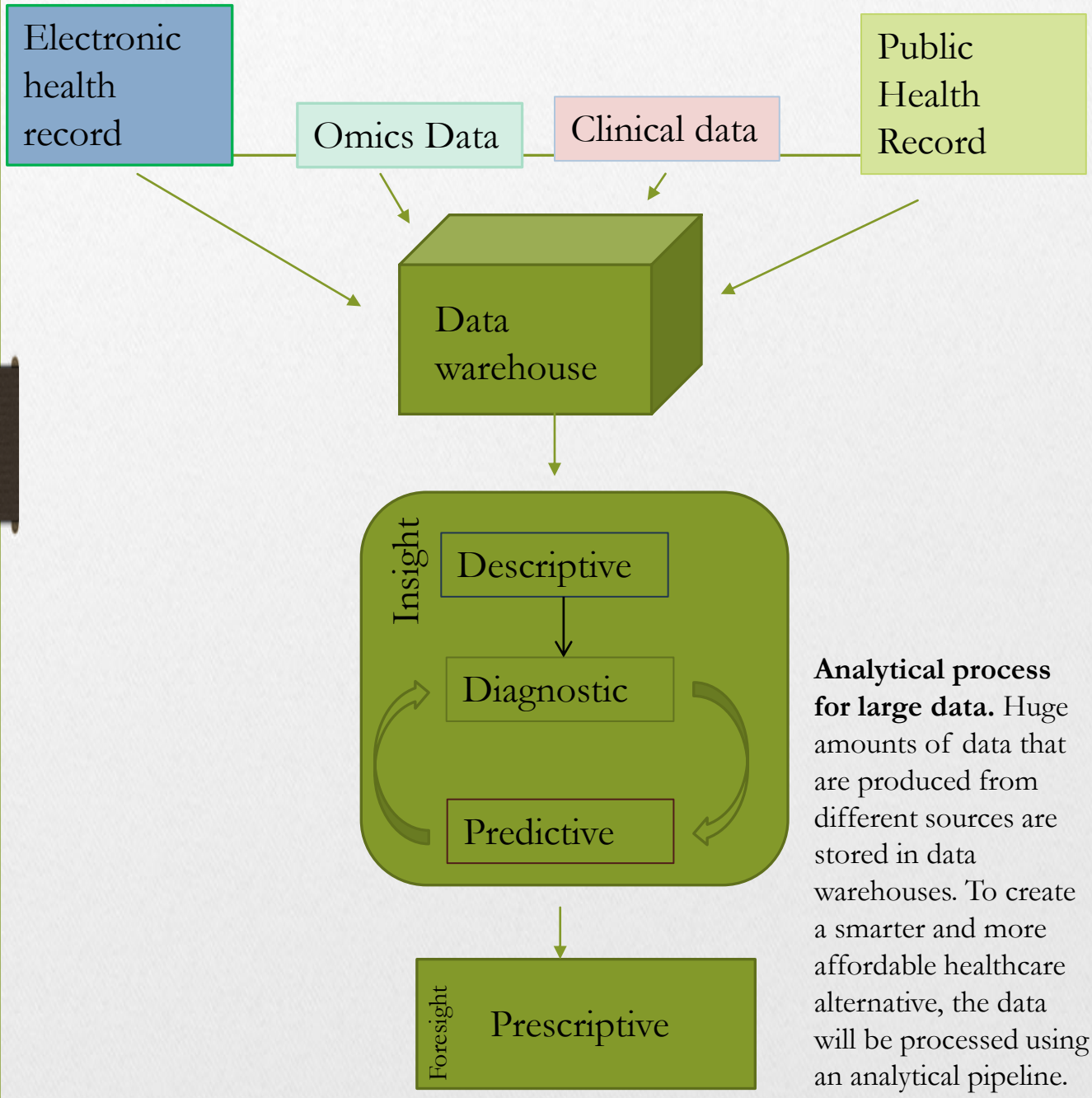
Uncertainty due to data inconsistency, incompleteness, and latency. Thus, the quality, relevancy, predictive value and meaning of data might be questioned.

Value

The information is valuable to various stakeholders or decision makers.

Healthcare as big data repository

Healthcare is multidimensional and complicated system with the objective of prevention, diagnosis, treatment and rehabilitation of disease. The massive date from various stakeholders, including the health professionals, health facilities, and financing institutions is valuable in helping decision making and improving health outcome.



Analytical process for large data. Huge amounts of data that are produced from different sources are stored in data warehouses. To create a smarter and more affordable healthcare alternative, the data will be processed using an analytical pipeline.

Smarter and cost-effective decisions will improve outcome

Adapted from Dash et al (2019) Big Data in Healthcare: Management, analysis and future prospects J Big Data

Big data application in healthcare

Administration and healthcare delivery

- Big data analytic can be used for management of healthcare to improve efficiency in delivery of service and cost-effectiveness.
- Example: Prediction of the requirement number of staff required based on previous past information can reduce patient waiting time.
- Cost-effectiveness analysis from big data will aid policy makers to make decisions to improve health outcome with reduced cost.

Clinical Information & Clinical decision support

- Health information from structure and unstructured data will be merged to help develop clinical decision. This will increase the accuracy of diagnosis, hence, improving the management plan.
- This can be done using a well plan diagnostic and predictive study. This may ease translational practice to occur in the local study.

Integrating big data with medical imaging

- Machine learning has been used to help to diagnose disease from billions of images. However, machine learning technique requires a huge number of images to accurately learn to make the diagnosis.

Personalized/precision treatment

- Systematic and integrative analyses of omics data in conjunction with EMR integration can help to design a better treatment towards personalized/precisian medicine.

Internet of Thing (IoT) devise

- IoT devise create a continuous stream of data which can be used as a health monitoring. Such devise is beneficial to be used by elderly and patients with chronic illnesses.
- The patient's parameter can be integrated in the EMR which can be used to predict health status.

Challenges in big data analysis

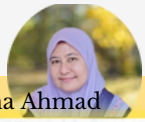
Big data generates distinct features that do not present in traditional datasets. Below are the major challenges of big data:

The complexity of big data give a unique statistical impact and computing infrastructure. However, if the difficulty can be overcome, the advantages of using big data are huge and unimaginable.

References:

1. Dash et al (2019) Big Data in Healthcare: Management, analysis and future prospects J Big Data
2. Jianqing Fan et al (2014) Challenges of Big Data analysis, *National Science Review*, Volume 1, Issue 2, June 2014, Pages 293–314

RECRUS
Res. Newsl.



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Vol. 3 Issues 21
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RESEARCH INTEGRITY

Summarized by Salwana Ahmad

Dr. Chau De Ming, the Senior Lecturer in UPM, also the Chair of the Young Scientists Network-Academy of Sciences Malaysia (YSN-ASM) Science Integrity Working Group, recently gave a talk at the Seminar on Clinical Research Conduct: Research Integrity and Ethical Considerations. During his presentation, Dr. Chau De Ming discussed the concepts of ethics in research and its relationship to research ethics, the scope of research integrity of which the Responsible Conduct of Research ((RCR) as the guidelines and framework in decision making that are available in Malaysia. In this summary, we will explore the key points from Dr. Chau De Ming's talk, including the importance of key players and shareholder benefits that can help researchers in decision-making. This summary will provide valuable insights and takeaways from Dr. Chau De Ming's informative and engaging presentation. Get the seminar recording HERE!

Main Keypoints:

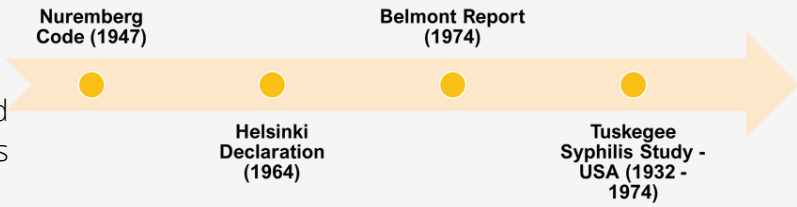
- **What is ethics and its relationship to research ethics?**

Research integrity refers to the ethical principles and standards that guide the conduct of research. It upholds three (3) concepts which are:

1. **Law** - Research is conducted in an ethical, proper, and responsible manner, and the rights and welfare of research participants are protected.
2. **Moral** - Moral considerations in research integrity include Honesty and transparency. Researchers must be truthful in all aspects of their research, including reporting findings, acknowledging limitations, and disclosing conflicts of interest.
3. **Ethics** - Refers to the principles and values that guide ethical conduct in research, with what is morally right or wrong, and it goes beyond compliance with laws, regulations, and morals.

- **Scope of Research Ethics (Responsible conduct of research)**

- **Principles of Research Ethics Through The Historical Lens of Medical Ethics.**



Guidelines underpinning research ethics codes:
1. Informed consent
2. Institutional Review Board
3. Protection of human subjects
4. Confidentiality..etc

- **Practical guidelines and policies in Malaysia**

There are two (2) guidelines available:
1. Institutional Animal Care and Use Committee (IAUCAC)
2. Institutional Review Board, Malaysia Guidelines for Good Clinical Practices.

Another two (2) Responsible Conduct of Research (RCR) documents for guidelines, that act as a framework in decision making.

What do these codes, guidelines, and policies have in common?

- The integration of the **Responsible Conduct of Research (RCR), Research Ethics, Research Integrity, and Ethical Values.**

In all aspects of research:

- **Planning, Conducting, Reporting, Managing People**

Involves

Key players and shareholders consist of individuals and institutions/entities.

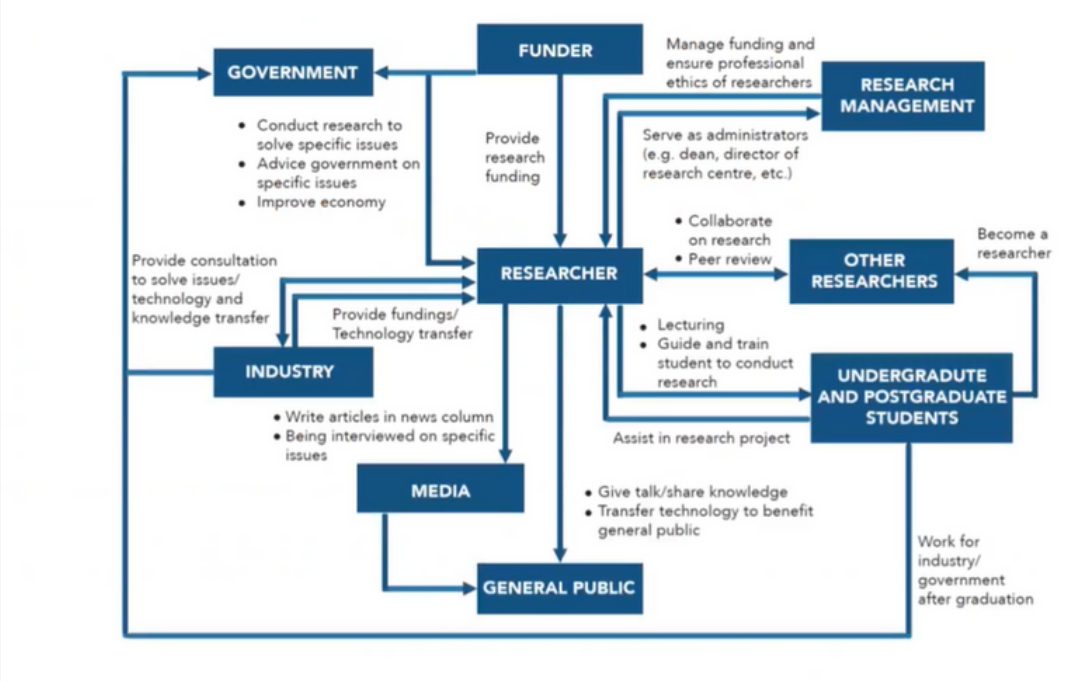


Figure 1 showed the complexity of connection of each individuals and institutions (adapted from the presentation)

Take Home Messages:

- Research integrity is crucial in maintaining the reliability, truthfulness, and ethical standards of scientific research.
- Researchers should adhere to the established principles of honesty, accountability, and transparency in their work to uphold the integrity of research.
- Any deviation from ethical conduct undermines the credibility and validity of the research. Therefore, it is essential to promote, maintain and enforce research integrity as a fundamental standard for scientific research.

Future Look:

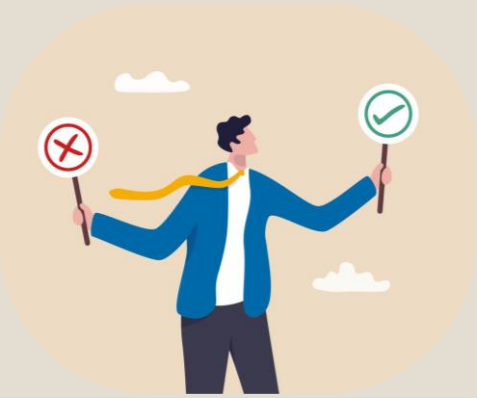
- **As an individual** - Conduct research with responsible by adhering to ethical principles and best practices throughout the entire research process to promote good influence on others.
- **As an institution** - The integration of the research integrity module into the curriculum for - undergraduates, postgraduates, and medical students.
- **At the research ecosystem at large** - Collaborate and support various initiatives to foster a culture of research integrity.

The need for the establishment of Research Integrity Office for responsible for promoting and ensuring research integrity within an organization or institution and responsible conduct of research among researchers, staff, and students.

KEYPOINTS FROM ETHICS APPLICATION IN UPM

Presented by: Assoc. Prof. Dr. Rosliza Abdul Manaf
Deputy Dean (Academic of Medicine), Faculty of Medicine and Health Sciences, UPM.
Assistant Member Secretary, Ethics Committee For Research Involving Human Subjects (JKEUPM)

The Ethics Committee for Research Involving Human Subjects Universiti Putra Malaysia (more commonly referred to with its Malay acronym, JKEUPM) is specifically given the task of protecting research participants, and to make researchers be responsible in ensuring that the basic principles regarding the use of human subjects are observed in their research.



The JKEUPM has the authority to:

a. Approve, disapprove or modify studies based upon consideration of aspects related to human subject protection;
b. Request progress reports from investigators and oversee the conduct of the study;
c. Suspend or terminate the approval of a study; and
d. Place restrictions on a study.

All researchers who wish to conduct their studies involving human subjects at any UPM facilities will require JKEUPM approval. In addition, if the research project involves either undergraduate or postgraduate students at any point, a JKEUPM ethical clearance is also needed.

For more information on the required documents for approval, kindly refer to JKEUPM website [HERE]

Alternatively, you can reach JKEUPM secretariat at +603-9769 1432/ 1438/ 1244/ 1246/ 1602 or email jkeupm@upm.edu.my

Summarised by: Iman Hafizah

ANNOUNCEMENTS

- BMJ Case Reports Writing Workshop. 30th March 2023
- Tools for Systematic Reviews. 11th April 2023.
- Big Data in Clinical Research. 20th April 2023
- International Clinical Trials Day 2023 [Early announcement]
- Meta Journal Hour Series 17. 26th May 2023
- Featured Principal Investigator Series 1: Prof Dr. Chan Yoke Mun. Date and Time.
- Good Research Management Practice (GRMP) 8 - 9 June 2023 (Series 2) at Faculty of Medicine & Health Sciences UPM
- 9th Asia Pacific Primary Care Research Conference (Research in The New Norm) & Pre-Conference Workshop Research Championship. Venue: Sheraton Petaling Jaya Hotel; Date: 2 - 4 June 2023
- The 8th World Conference on Research Integrity in Athens, Greece, will be held on location and online from 2 to 4 June 2024
- Metascience 2023 Conference
- Webinar: Systematic Reviews in Evidence Based Medicine

BMJ CASE REPORTS WRITING WORKSHOP

BMJ Case Reports

9:00 am - 1:00 pm

30 March 2023

Seminar Room, Level 1

HSAAS, UPM

Registration Fees

RM 10 (UPM Staff/Students)
RM 30 (Non-UPM Staff/Students)

Our speakers

DR RUZIANA MASIRAN
Psychiatrist and Senior Lecturer
Department of Psychiatry, UPM

DR TAN KIT-AUN
Psychologist and Senior Lecturer
Department of Psychiatry, UPM

Registration link:
shorturl.at/dfly4

CPD points will be awarded

Objectives of the workshop

1) To guide participants on case report writing
2) To introduce participants to BMJ Case Reports
3) To provide a hands-on writing guide for BMJ Case Reports

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HSAAS HOSPITAL SULTAN ABDUL AZIZ SHAH

BMJ CASE REPORTS WRITING WORKSHOP

BMJ Case Reports

Tentative Programmes

Time	Topic
8:30 – 8.45 am	Registration
8:45 – 9.00 am	Welcome Speech
9.00 – 10.00 am	How to Write a Good Case Report
10.00 – 10.15 am	Break
10.15 – 10.45 am	Introduction to BMJ Case Report
10.45 – 11.45 am	Hands On Session 1
11.45 am – 12.45 pm	Hands On Session 2
12.45 – 1.00 pm	Q & A Session

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Overview

Tools for Systematic Literature Review

There are tools to assist a more standardized and rigorous methodology in any particular systematic review. It helps improving efficiency and ensure that all relevant studies are included and analyzed consistently and transparently. The tool typically involves a step-by-step approach to searching, screening, selecting, appraising, synthesizing, and reporting the review results.

Join us to learn about what are systematic reviews tools available and to help you to choose the right tools that suit your review types and in different review stages.

TUESDAY
11TH APRIL 2023
2.00 PM - 4.45 PM
HYBRID SESSION

Seminar Room 1 & 2, Level 1/ Cisco webex
Hospital Sultan Abdul Aziz Shah (HSAAS), UPM

SEMINAR FEE:
RM10 (UPM Staff/Student)
RM30 (Non-UPM /Public)
e-certificate *CPD/MMA points are provided.

REGISTER NOW

PRESENTER:

SALWANA AHMAD
RESEARCH OFFICER

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PROGRAMME DETAILS

20th April 2023

4:00 – 5:00 PM

Webex Meeting

REGISTRATION FORM

shorturl.at/bexF3

SPEAKER'S BIODATA

DR. RALPH KWAME AKYEA

MBChB, MPH, PhD

Dr. Ralph Kwame Akyea is a Senior Research Fellow with the Primary Care Stratified Medicine Research Group, School of Medicine, University of Nottingham, UK. He received his medical degree from the University of Ghana Medical School and earned both his master's degree in Public Health (MPH) and PhD in Primary Care from the University of Nottingham, UK. Ralph's research involves the use of routinely collected electronic healthcare and cohort databases. He applies novel epidemiological, statistical, and data science methods to understand disease heterogeneity and identify unique patient groups at greater risk of adverse clinical outcomes. He collaborates extensively with multidisciplinary research teams internationally and charities to improve clinical outcomes for patients.

The University of Nottingham | UPM | HSAAS

EARLY ANNOUNCEMENT

UPM UNIVERSITI PUTRA MALAYSIA BERILMU BERBAKTI

HSAAS HOSPITAL SULTAN ABDUL AZIZ SHAH

INTERNATIONAL CLINICAL TRIAL DAY 2023

Date: 19th May 2023 (Friday)
Venue: Hospital Sultan Abdul Aziz Shah, UPM

THEME

Well-designed and well performed clinical trial

TARGET AUDIENCE

- Researchers
- Clinician
- Nurses
- Medical Officers
- Research/Science Officer
- Postdoctoral/Postgraduates

2023

OBJECTIVES

- Sharing scientific knowledge and experience in planning and conducting the clinical trial or any trials in a proper way.*Talk
- Learning how to make scientific research and data more accessible, transparent, and reproducible through the Malaysia Open Science Platform (MOSP).*Talk
- Role of a statistician in a randomized controlled trial (RCT). *Talk
- Evaluating Evidence of Mechanisms in Medicine - EBM and EBM+.*Forum discussion

SPEAKER

To be updated.

SESSION MODE:
HYBRID . PHYCICAL . ONLINE.

REGISTRATION & FEE:

UPM Student: RM50
UPM Staff: RM50
Non-UPM/Public: RM70

REGISTER NOW

*E-certificate, morning tea & lunch will be provided for physical participants.
*MMC-CPD points are available.

Further details, please contact us at:

cru_hsaas@upm.edu.my
03-9769 9762

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HSAAS
HOSPITAL SULTAN ABDUL AZIZ SHAH
هوسفيتل سلطان عبد العزيز شاه

CLINICAL RESEARCH UNIT PRESENTS

META-JOURNAL HOUR

FULL ARTICLE

Exploring Factors That Influence the Practice of Open Science by Early Career Health Researches

Click to access full article:
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7836032/pdf/hrbopenres-3-14368.pdf

26th MAY 2023 (FRIDAY) | 10.30 – 11.45AM | WEBEX

JOIN US!

Click [HERE] to register
or scan the QR code below:

Brought to you via:

webex by CISCO

Click [HERE] to access the webinar

Speaker

LIVE

Ms. Iman Hafizah
Research Officer, CRU

Open to all UPM/ HSAAS staff, students and public
CPD points (UPM & MMA) and e-certificate will be awarded upon successful participation

3 GOOD HEALTH AND WELL-BEING

EXPERIENCE SHARING BY FEATURED RESEARCHER

PROF. DR. CHAN YOKE MUN

3 May 2023 ● 3:30 - 5:00PM ● Webex Meeting

Speaker's Biodata

1. CURRENT & PREVIOUS APPOINTMENTS:
   - Professor and clinical dietitian, the Department of Dietetics, Faculty of Medicine and Health Sciences, UPM
   - Head, the Research Centre of Excellence, Nutrition and Non-Communicable Diseases (RCoE-NNCD), Faculty of Medicine and Health Sciences, UPM
   - Former head, the Medical Gerontology Laboratory, Malaysian Research Institute on Ageing.

2. RESEARCH INTERESTS & EXCELLENCE:
   - Chronic diseases in elderly, nutrition epidemiology, renal nutrition, and bone nutrition.

3. PROJECTS LED, PUBLICATIONS & CONTRIBUTIONS:
   - Led 19 research projects.
   - Published more than 100 publications including journal articles, modules, guidelines, and books.
   - Key opinion leader and member of expert panels in various national and international committees.

Registration Link:

shorturl.at/dDGM5

Meeting Link:

shorturl.at/ayJ02

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HSAAS HOSPITAL SULTAN ABDUL AZIZ SHAH

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GOOD RESEARCH MANAGEMENT PRACTICE 2023 (GRMP)

Series 1 : 23rd - 24th February 2023
Series 2 : 8th - 9th June 2023

Faculty of Medicine and Health Sciences,
Universiti Putra Malaysia

REGISTRATION FEE
RM 150.00/Person

For more Information, please contact:

MR. TAUFIK 03-97692504
MRS. NORSHIDA 03-97692501

SCAN TO REGISTER

Please complete the registration before **10th February, 2023**

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GOOD RESEARCH MANAGEMENT PRACTICES (GRMP) 2023

RULES AND REGULATIONS

1. The registration fee **IS NOT REFUNDABLE** after ten (10) days of payment has been made.

2. All participants **MUST** complete the selected session to get GRMP certificate.

3. Any amendments regarding the workshop are subject to the organizer.

4. The organizer has the right to **CANCEL** the registration if the rules are not followed.

Annual Scientific Meeting 2023

(Gems of General Practice that Sustaineth and Sootheth in Storms)

&

9th Asia Pacific Primary Care Research Conference

(Research in The New Norm)

SAVE THE DATE

Venue: Sheraton Petaling Jaya Hotel

Date: 2 - 4 June 2023 (Friday, Saturday & Sunday)

Key Dates

REGISTRATION DATES' RATE for:
- ASM/APPCRC Conference
- Research Championship

Early-bird registration rate - until **30th April 2023**
Standard registration rate - starts **1st May 2023**

RESEARCH CHAMPIONSHIP ABSTRACT SUBMISSION
Deadline: 1st April 2023

ABSTRACT SUBMISSION:
Deadline: 1st April 2023

ANNUAL SCIENTIFIC MEETING (ASM)
2nd - 4th June 2023

9th ASIA PACIFIC PRIMARY CARE RESEARCH CONFERENCE (APPCRC)
- Pre-conference Workshop Research Championship - **2nd June 2023**
- ASM & APPCRC 2023 conference- **3rd - 4th June 2023**

Click [HERE] to view tentative of the Programme

REGISTRATION

For More Information :

https://www.afpm.org.my/asm-appcrc2023

COMING SOON

The World Conferences on Research Integrity foster the exchange of information and discussion about responsible conduct of research

READ MORE ABOUT THE WCRI FOUNDATION

The 8th World Conference on Research Integrity in Athens, Greece, will be held on location and online from 2 to 4 June 2024.

For more information, read [HERE]

METASCIENCE 2023 CONFERENCE

A global gathering for knowledge sharing, community building, and opportunities to define a roadmap of research and intervention priorities to accelerate science.

May 9-10, 2023

In-person conference at the National Academy of Sciences Building
Washington, DC

REGISTER NOW $85 for students, $150 for non-students

Streaming option will be available for limited sessions
Registration coming soon

April-May 2023

Free virtual symposia pre-conference events
Registration coming soon

Click here for the Agenda of the Programme

Clarivate™

MARCH 29TH 2023 11:00 AM IST

Webinar: Systematic Reviews in Evidence Based Medicine

STARTS IN 1 DAY.

A Systematic review (SR) is a review of evidence-based studies and aims to support clinical researchers find out the best available evidence to a specific research (clinical) problem.

SR requires an exhaustive and systematic search of literature to ensure that all relevant evidence is included. A very important step for a systematic search is to select the databases you want to search within, and to formulate the right research question.

A well-formulated question will guide many aspects of the review process, including determining eligibility criteria, searching for studies, collecting data from included studies, and presenting findings.

In this webinar, we will discuss about the various steps involved in a SR.

For more details, kindly click [HERE]