"Next-Gen Diagnostics in Lung Health: From Innovation to Implementation"

Host: **International Cancer Patient Coalition (ICPC)** & **Qatar Cancer Society**
Event: *Malaysia Cancer Society Meeting (Lunch Session – 2 Hours)*

Theme: Accelerating adoption of liquid biopsy, NGS, and AI-powered molecular diagnostics in lung cancer care, aligned with WHO resolutions on health financing (EB156(16)) and integrated lung health (EB156/CONF./5)

12.00- 14.00
Sunday, June 22nd, 2025

Context:

Lung cancer remains a leading cause of global mortality, with late-stage diagnosis contributing to poor survival rates. While innovations like liquid biopsy, next-generation sequencing (NGS), and AI-driven molecular diagnostics promise to revolutionize early detection and personalized treatment, their adoption in healthcare systems—especially in low- and middle-income countries (LMICs)—faces significant hurdles. These include high costs, regulatory complexities, infrastructure gaps, and inequitable access.

This session, hosted by the International Cancer Patient Coalition (ICPC) at the Malaysia Cancer Society Meeting, bridges the gap between cutting-edge science and real-world policy. By aligning with WHO resolutions EB156(16) (health financing) and EB156/CONF./5 (integrated lung health), we will explore how governments, healthcare providers, and patient advocates can accelerate the integration of these technologies into national lung cancer programs—ensuring they are accessible, affordable, and actionable for all.

Why This Matters Now

Early detection remains the most powerful intervention to improve survival in lung cancer, yet it remains elusive for millions due to systemic gaps in diagnostics. Cutting-edge tools like **liquid biopsy** and **AI-powered diagnostics** offer unprecedented opportunities to detect disease earlier, monitor treatment response in real time, and personalize care. However, their full potential remains unrealized due to structural and financial challenges.

- **Liquid biopsy** provides a minimally invasive route to earlier detection, replacing traditional tissue biopsies and offering dynamic insights throughout a patient's journey.
- **AI-enhanced diagnostics** can accelerate interpretation, improve accuracy, and support clinical decision-making, especially in low-resource settings.
- Despite these advances, widespread adoption is hindered by:

- **Financial barriers** (e.g., high upfront investment, lack of reimbursement mechanisms),
- **Systemic fragmentation** (e.g., diagnostics not embedded in primary care workflows),
- **Policy inertia** (e.g., slow implementation of updated guidelines despite available evidence).

The Path Forward

This session will focus squarely on **turning innovation into impact** for early detection and diagnosis. By building on global health policy frameworks and showcasing pioneering national efforts, we aim to accelerate the integration of AI and liquid biopsy into lung cancer care pathways. We will:

1. Decode **WHO policy levers**—like EB156(16)'s call for "strategic purchasing of cost-effective diagnostics"—and translate them into actionable strategies for early detection.
2. Highlight **scalable models**, such as Malaysia's AI-NGS pilot and Brazil's liquid biopsy initiatives, which bring innovation closer to the frontlines.
3. **Amplify patient voices** to ensure equity remains at the heart of diagnostic implementation.

Session Objectives

1. **Policy Frameworks:** Link WHO resolutions (EB156(16), EB156/CONF./5) to national strategies that embed liquid biopsy and AI into early detection programs
2. **Financing Models:** Identify sustainable funding pathways for diagnostics through mechanisms like pooled insurance and health taxes.
3. **Equitable Access:** Address disparities in diagnostic availability, particularly in low-rexource and rural settings.
4. **AI Integration:** E Examine how ethical, regulatory, and infrastructural readiness can support the safe and equitable deployment of AI in early diagnosis.

AGENDA

Setting the Scene:

- **Hadi Mohamad Abu Rasheed**, *Head of the Cancer Awareness and Professional Development Department, Qatar Cancer Society* (Confirmed)
- **Denis Horgan**, *ICPC Secretary General* (Confirmed)

Voices from Regions

- **Zainab Shinkafi Bagudu,** *MedicAid Cancer Foundation* ((Confirmed)
- **Dr. Maricar Sabeniano,** *Philippines Cancer Society.* (Confirmed)
- **Mandy Thoo**, *National Cancer Society Malaysia (tentative)*
- **Ms. Ishtar Espejo Castellá**, *Executive Director, Fundación Aladina* (Confirmed)

1. Precision Medicine: Making It Happen for Malaysia

Speakers:

Dr. A. Rahman A. Jamal , Paediatric Haematology, Oncology and Molecular Biology, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia (Confirmed)

Focus:

- How EB156/CONF./5's push for "evidence-based, cost-effective technologies" applies to liquid biopsy and AI.
- Case studies: AI-assisted NGS interpretation in Brazil's public health system.

2. Breaking Implementation Barriers: and attitude, knowledge and perception toward precision medicine

Speakers

Melissa Lim Siaw Han, *Doctor of Philosophy, UNIMAS* (Confirmed)

Focus:

- EB156(16) in action: Using domestic health budgets to scale NGS

3. Challenges and Strategies for Improving Access to Cancer Drugs & Diagnostics

Speakers:

- ***Kenneth Lee,*** *Professor of Health Economics, Monash University Malaysia (Confirmed)*

Q&A

Focus:

- Mitigating bias in AI algorithms for diverse populations [*PMC11149387* highlights disparities].

Advocacy: Driving Demand for Innovation

Dr Mark Cheong Wing Loong, Deputy Head of School (Education), School of Pharmacy, Monash University Malaysia (Confirmed)

Focus:

- How patient data (e.g., liquid biopsy results) can shape policy (referencing EB156/CONF./5's "social participation").

Closing:

- **Hadi Mohamad Abu Rasheed**, *Head of the Cancer Awareness and Professional Development Department, Qatar Cancer Society(Confirmed)*
- **Denis Horgan**, *ICPC Secretary General (Confirmed)*