

# Summer Medical Education Institute University of Hawaii

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6<sup>th</sup>-year, School of Medicine





# About this program

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- University of Hawaii
  - John A. Burns School of Medicine(**JABSOM**)
- August 20-24, 2018
- Participants: 27 medical students from Japan



# University of Hawaii, JABSOM

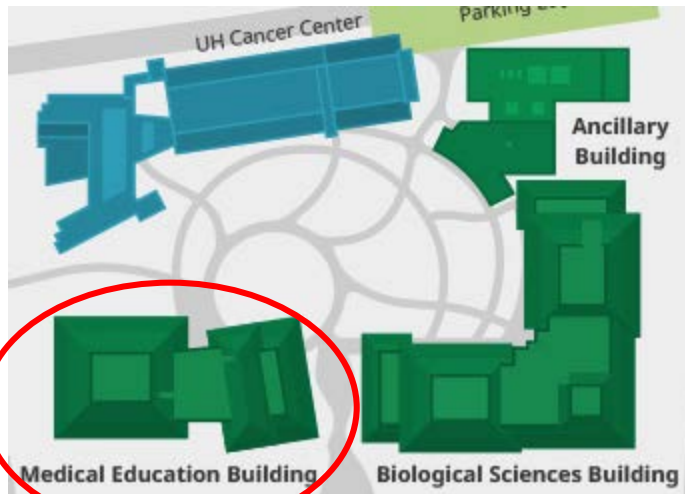


- Located at the center of Kaka'ako waterfront on the island of O'ahu, Hawaii, USA
- School's vision: **A.L.O.H.A.**
  - Attaining Lasting Optimal Health for All
- Focusing on PBL education





# University of Hawaii, JABSOM



- Rich in nature
- Without a university hospital
- Cancer center of National Cancer Institution is placed



# Program contents

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- 9 a.m.- 3 p.m.
- The basic principles of Problem Based Learning (PBL)
- Physical examination focused through clinical reasoning
- Smoking cessation using medical English



←Welcome lunch with JABSOM students



# People of JABSOM

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↓ Professors always wearing an aloha shirt



↓ 10 JABSOM students as tutors for us



# PBL... Problem Based Learning

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- Small-group discussions of clinical cases
- A group consists of five to six students
- With one JABSOM student as a PBL group facilitator
- Part of the educational culture at JABSOM





# PBL

- Step 1: Write out Facts/Problems, Hypothesis, Need to know, Learning Issues of a case
- Step 2: Choose learning issues and research individually
- Step 3: Reconvene in a group and re-analyze the case

<p><u>Facts</u></p> <ul style="list-style-type: none"> <li>63 year old male Filipino</li> <li>* gradually increasing SOB</li> <li>* Swelling in both feet</li> </ul>	<p><u>Hypothesis</u></p> <ul style="list-style-type: none"> <li>↑ PE</li> <li>Heart failure</li> <li>↓ Acute Resp Distress</li> <li>Medications</li> <li>↓ Trauma</li> <li>Pneumothorax</li> <li>↓ COPD</li> <li>Hepatic encephalopathy</li> <li>Lung cancer</li> <li>Good pastures</li> <li>↓ Pneumonia</li> <li>Pulm. embolysis</li> <li>↑ Pulmonary edema</li> <li>↓ Asthma</li> </ul>	<p><u>Need to know</u></p> <ul style="list-style-type: none"> <li>X-ray - enlarged, pulm. edema</li> <li>onset</li> <li>duration - 3 months</li> <li>Characteristics</li> <li>walking distance?</li> <li>Allergies?</li> <li>Occupation</li> <li>Alcohol/Smoking - no hx of smoking</li> <li>Drug use</li> <li>Family history</li> <li>Severity of SOB/swelling SOB is getting worse</li> <li>Alleviating/Aggravating factors-exercise</li> <li>Hospitalizations/Past surgeries</li> <li>Timing</li> <li>no chest pain</li> <li>Swelling in feet/ankles</li> <li>no hx of heart disease</li> <li>HTN - prescribed meds</li> <li>Visibly tachypneic</li> <li>Denies fever, chills</li> <li>productive cough, wheezing</li> </ul>	<p><u>Heart exam</u></p> <ul style="list-style-type: none"> <li>S3? ✓</li> <li>Lungs - crackles</li> <li>Palpate swelling</li> <li>- 3+ pitting edema</li> <li>D-dimer</li> <li>BPT 145/90</li> <li>HR</li> <li>RR ↑ 25</li> <li>% O<sub>2</sub> ↓ 88%</li> <li>Vital capacity</li> <li>ECHO - Left ventricular ejection fraction 25%</li> <li>EKG - LVH, no ST elevation</li> <li>Antibodies</li> <li>Renal function test normal</li> <li>Sputum exam</li> <li>JVD</li> <li>BNP is elevated - AMP</li> <li>PMI displaced downward and laterally</li> <li>Ramipril</li> <li>Spironolactone</li> <li>Carvedilol</li> </ul>	<ul style="list-style-type: none"> <li>- Start</li> <li>IV furosemide</li> <li>morphine</li> <li>nitrates</li> <li>- Palm artery wedge pressure</li> <li>- grade the HE</li> <li>- NYHA</li> </ul>
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Learning Issues

- Process of swelling
- Causes of SOB
- Causes of swelling
- Assessment of SOB
- Process of orthopnea
- Paroxysmal nocturnal dyspnea
- Nocturia
- Treatment of Heart Failure
- Acute vs chronic Heart Failure
- New York Heart - Heart Failure grading
- Pharmacology
- furosemide
- morphine
- nitrates
- Ramipril
- Spironolactone

4 - S3 heart sound

7 - BNP

- Pathophysiology of heart failure and edema
- Physician condolence letter
- Epidemiology of heart failure



# PBL

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## ➤ Advantages

- PBL improves a motivation for **self-directed learning**
- Clinical reasoning is a great way to prepare for clinical evaluation of patients.



## ➤ Disadvantages

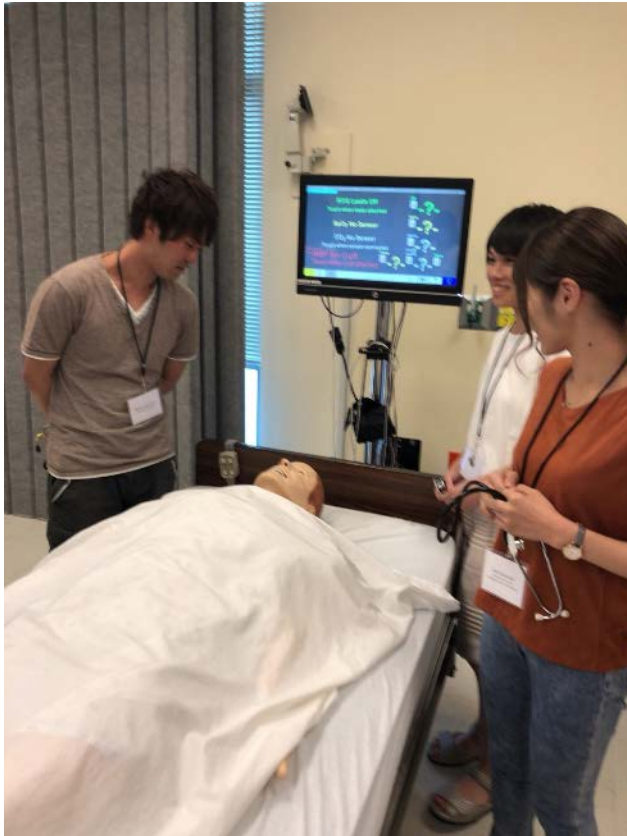
- **Time-consuming**, not efficient
- Difficulty to cover all the medical fields only by PBL

➤ Regular PBL besides classroom lectures or practical training will be very effective.

# Physical examination

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- Cardiac Exam, Lung Exam
  - Take a basic history and perform a physical exam
- ↓ Listen to a speaking simulator's heart sound



↓ Practice room

Do a role play of listening to patient's lungs





# Physical examination

↓ Work in pairs as  
doctors and patients



## Examining the lungs

Questions you can ask patients about lung-related problems:

- Are you having difficulty breathing?
- If so, when does it happen? When you are active? When you are sitting down and resting? When you are lying down or sleeping?
- Do you smoke cigarettes?
- If so, how many cigarettes do you smoke a day? How long have you been smoking?
- Do you think you have a fever?
- Have you been coughing?
- Have you been wheezing?
- Have you ever had any lung problems before?
- Are there any lung problems in your family?

What you can say to your patient while you are listening to their lungs:

- "I'll be listening to you breathe."
- "You'll feel my stethoscope on your back."
- "Please take slow deep breaths through your mouth for me."
- "If you get tired or dizzy let me know, and we can stop."
- "Everything sounds great."
- "Thank you..."



# Smoking cessation

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- How to persuade patients to quit smoking
  - 5A's: Ask, Advise, Assess, Assist, Arrange follow-up
  - Patient-centered communication techniques
  - Medical interview to a simulated patient
- ↓ Use 5A's to JABSOM students playing smoking patients





# Message for next students

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- I recommend this program for the juniors
  - not confident with your English skills
  - want to try to study abroad for the first time
  - in lower grades
  - interested in American medical education





# Acknowledgements

➤ I would like to express my gratitude for all of those who supported me at University of Hawaii and Yokohama City University.



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Thank you for Listening!

