

第 64 回日本医学放射線学会学術集会

ラウンドテーブルディスカッション：『画像診断は何のため?』

4月9日 12:20 - 13:50 301号室

JRS Round Table Discussion “Diagnostic Imaging, What For?” 2005.04.09. 12.20-13.50
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Gregory Sorensen MD, Takeshi Iinuma PhD (放医研)、E James J. Potchen MD

私は光栄にもこのような著名な外国の放射線科医に混じって、ラウンドテーブルディスカッションに加わり、下記のタイトルで講演し、討論に加わりました。このようなチャンスが与えられたのは、私が下記の演題を大会長の石垣武男先生にお送りしましたところ、先生から、是非、ラウンドテーブルでやってくれと言われましたのがきっかけです。私以外は非常に著名な外国人の放射線科医ですし、勿論英語でやらなければならないということもあって、やや、躊躇しましたが、思い切って参加し、日本の独特のパラダイムを提案したいと決心しました。

4月9日には無事、講演を済まし、参加した欧米の方々にもある程度、インパクトを与えたようです。とくに、私が注目したのは放射線科医でもあり、経済学者でもあるという Dr. Potchen が示されたデータで、日本は先進諸国の中での医療資源に投じているコストが最低に近い水準にあるにもかかわらず、国民の平均余命が世界一であることに象徴されるように、医療の質は世界のトップレベルであるとされました。彼は医療に関しては世界には様々なアプローチがあり、その多様性は大きいと学ばせ、日本のやり方は非常に参考になると、このラウンドテーブルを締めくくりました。その通りだと思います。私にとっては嬉しい発言でした。

下記の論文は英語のスライドそのものですが、私の考え方は十分にご理解頂けるとおもいます。是非、ご覧頂き、ご意見やご批判を賜れば幸いです。下記のタイトルにある **Preventive Imageology(予防画像医学)**という英語は私の新造語です。

予防画像医学-二次予防の新しいパラダイム

Preventive Imageology- A New Paradigm of Secondary Prevention

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ご質問やご意見があれば下記にメールを下さい。

喜んでお答え申し上げます。

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1. What is Preventive Imageology?

Definition:

Methods of Secondary Prevention of Diseases by means of Imaging Technology

2. Background of this study

- (1)Japan approaches a Society of Old Age and Number of Children becomes small.
- (2)Recent Developments of High-grade, Non-invasive Whole-Body Screening Devices
- (3)Desire of Japanese People to Better Preventive Care of Lifestyle-Related Diseases
- (4)Saving of National Medical Expenditure by Shifting to Preventive Medicine

3. Objective of this study

- (1)Simultaneous Detection of Multi-organ and Multi-disease in One-Stop Test
- (2)Detection of Changes of the Above Information with Age

4. Proposed Imaging Modalities

- (1) Low Dose Whole-Body CT
- (2) Whole-Body PET/CT
- (3) Whole-Body, High-Field MRI

5. Target Diseases to be Detected

Lifestyle-Related Disease :

Cancer, Heart Disease , Neurovascular Disease, Bone Disease(Osteoporosis)

Visceral Fat Obesity leading to Diabetes

6. Proposed Strategy(1) for Secondary Prevention

- (1) Subject: All Japanese, Healthy Men and Women
- (2) 40 Years Old – Baseline Image
- (3) If no Abnormal Findings, 5 Year Interval Screening is recommended until 60 years Old, From 60 years old, 3 Year Interval Screening
- (4) Comparison of Recent Image with Baseline Image

7. Proposed Strategy(2) for Secondary Prevention

- (1) Images of Each Individual are stored as Medical Certificate of Digital Format.
- (2) Each Individual should possess the Images as a National Health Insurance Certificate.
In Japan, All Persons are already covered by National Health Insurance.
- (3) All Medical Facilities including Private Clinic will have a Display Device by which Images are to be Diagnosed.

8. Nobel Technology to be Developed

- (1) Remote Image Diagnosis for Consultation by Specialist
- (2) Computer Assisted Diagnosis(CAD) for Whole-Body Image.
- (3) Fast and Comprehensive Network for Medical Information Exchange throughout Japan

9. Innovation for Japanese National Health Insurance System(1)

- (1) All Japanese People are already covered by National Health Insurance.
- (2) However, Health Insurances do not pay for Preventive Medicine at present.
- (3) Health Insurance System should be changed to cover Primary and Secondary Prevention.

10. Innovation for Japanese National Health Insurance System(2)

- (1) Health Insurance should subsidize an Expenditure for Imaging of Secondary Prevention.
- (2) If a Person does not undergo Imaging Procedure intentionally, Insurance Compensation-Rate may be reduced when the Person will have Illness.
- (3) If Primary and Secondary Preventive Practice prevail throughout Japan.
Total Medical Cost may be decreased.

11. Future Investigations for Implementation of the New Paradigm

- (1) Pilot Test by a Selected Group of 10,000 persons
- (2) Accuracy of Disease Detection and Its Stage Distribution
- (3) Estimation of Adverse Effect of Screening Test
- (4) Rough Calculation of Cost-Effectiveness

12. An Example of Imaging Device: Low Dose Lung Screening CT

It can detect following Life-style Related Diseases

- (1) Lung Cancer: Main Target
- (2) Coronary Artery Calcification
- (3) Early Detection of Pulmonary Emphysema
- (4) Osteoporosis for Women
- (5) Detection of Visceral Fat Obesity

13. Concluding Remarks

In Japan, we try to establish a New Strategy for Primary and Secondary Prevention in order to cope with The Old-Age Society.

Nobel Imaging Methods will play an Important Role in Secondary Prevention.

Radiology and Radiologists are Key Components of this New Paradigm