Colorectal Cancer Prevention
Hospital Universitário
São Paulo University

GENERAL STRATEGY
AND RESULTS

Dr Luis Masúo Maruta
Dr. Marcelo Rodrigues Borba
Hospital Universitário (HU) is one of 82 units that compose São Paulo University with 90,000 students and 21,000 employees.
Butantã district’s population (2010) : 428,217
USP Staff and Students
Colorectal Cancer Prevention
Target Population

- Employees and Faculty of São Paulo University (USP) from 50 to 75 years of age
  - Estimated number: 7500 people

- Butantã district’s population (50-75 age) that comes to hospital’s ambulatory for cancer prevention (spontaneous approach - without active campaign)
Colorectal Cancer Prevention Project design (pilot study)

- **Employees of USP**: Receive annual convocation
- **Faculty of USP**: Invitation by campaign
- **Butantã district population**: Spontaneous approach
- **Endoscopy Service Nurse coord and Program coord**: Request FIT to LAB
- **USP Healthy Service**: 
- **HU’s Ambulatory**:
Invitation by Campaign: USP network

USP web  USP news  USP radio

http://www5.usp.br/40544/hospital-universitario-promove-campanha-de-prevencao-do-cancer-colorretal/
Colorectal Cancer Prevention

Hospital Universitário team

Endoscopy Service - 4 Endoscopists + Nurse coordinator
Surgery Department + 5 surgeons
Pathology Department
USP Employees Healthy Service (SESMT)
HU’S Lab

Total: 15 doctors, 3 nurses, 1 secretary and 7 technicians
Colorectal Cancer Prevention
Project support

- Eiken Co Jp – Polymedco Inc USA- Hemagen BR
  - kit FIT and OC sensor
- Tokyo Medical and Dental University – Japan
- Fuji Film Co Jp – GastroCom Ltda – LaborMed Ltda
- Clinicas Las Condes Chile: trainning course
  - Dr. Francisco Lopez (trainning for 3 doctors, 1 nurse and 1 Lab technician on april and august 2013)
Colorectal Cancer Prevention

Multicentric Project

- Hospital Universitário da USP (2013)
  - Dr. Marcelo R. Borba - Dr. Luis M. Maruta
- Fugast Rio Grande do Sul (2013)
  - Dr. Claudio Rolim Teixeira
- Hospital A.C. Camargo SP (2013)
  - Dr. Samuel Aguiar Jr.
- Santa Fé Medical Center - Arapiraca city Alagoas State (2015)
  - Dr. Herbeth Toledo
- Hospital das Clínicas SP (2015)
  Dr. Ulisses Ribeiro – Dr. José Eluf Neto
Colorectal Cancer Prevention

Fecal Occult Blood Test Imunological (FIT)

Eiken FOBT^i Kit - Imunological – specific for human hemoglobin

Qualitative 2013-2014 50 ng/ml hb
Quantitative 2015~ 50-200 ng/ml (adjustable)

We kept quantitative cut value to 50ng/ml hb during pilot study.

Eiken Co - Jp
Polymedco Inc – USA
Hemagen do Brasil Ltda
Sampling Bottle

- Sample cup part
- Filter
- Buffer 2mL
- Scraper
- Spiral groove
- Sampling quantity 10 mg
Set reagent

Set samples

CCR Prevention - Hospital Universitário USP
Quantitative test  OC-SENSOR-DIANA
The advantages of FIT Colorectal screening

1. With its high specificity, dietary restriction is not necessary.

2. With its low cost, and endoscopy examination performed only on the positive examinees, FIT can help to reduce medical expenses.

3. FIT has been demonstrated not only with its detection on an early stage colorectal cancer, but also with its reduction of mortality rate.
Tokyo TMDU meeting - march 2015
– preliminary results presentation
Cases of FIT
from Dec, 10 2013 to June 7th, 2017

A- Number of FITs: 5732 FITs (Atendees: 3869)

B- Positive FIT: 289(5,04%) (C/A)= 289/5732 ≥ 50ng/ml Hg

D- Colonoscopies performed in FIT+: 192 (66,4%)=192/289
   Scheduled (waiting for colonoscopy) : 47(16.2%)=47/289
   Co-morbidity or refused colonoscopy : 50(17,6%) = 50/289
Cases of FIT(+) from Dec, 10 2013 to June 7th, 2017

Colonoscopies performed in FIT+: 192 (66.4%) = 192/289

- Normal or benign disease: 72 (37.50%) (72/192)
- Adenomas (low grade dysplasia/serrated): 105 (54.68%) (105/192)
- “Cancer”: 15 (7.81%) (15/192)
  - High grade dysplasia: 8 (endoscopic treatment) (4.16%)
  - Advanced cancer: 7 (surgical treatment) (3.64%)
Multicentric Cases of FIT
from Dec, 10 2013 to June 7th, 2017

Arapiraca: Santa Fé Medical Centar  
Resp. Dr. Herbeth Toledo

Number of FOBTs: 900  
Positivity: 27 - 3% ≥ 100ng/ml Hg  
Colonoscopy - 27  
Normal - 16 - 61,5%  
Low grade dysplasia adenoma – 4 (14,8%)  
High grade dysplasia adenoma – 4 (14,8%)  
Hyperplastic polip - 3 (11,1%)
ANNUAL FIT

Methodology of screening of colorectal cancer with FIT

- Screening Sensitivity
  Sensitivity of each FIT

- Program Sensitivity
  Sensitivity of repeated tests

Increased sensitivity of the program by continuous examination in spite of the low sensitivity of test
**Critical analysis - FIT by year**

from Dec, 10 2013 to June 7th, 2017

Attendees: 3869 patients
Number of FITs: 5732

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<tr>
<th>Year</th>
<th>Total FITs</th>
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<td>2013-14</td>
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<tr>
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<td>2016</td>
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<tr>
<td>2017</td>
<td>578</td>
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<tr>
<td>TOTAL</td>
<td>5732</td>
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</table>

CASES OF FIT

- 2013-14: 2128
- 2015: 1681
- 2016: 1345
- 2017: 578
Critical analysis: Cases of repeated FITs (after 1 year or more)

CASES OF REPEATED FITS

- 1st FITs: 3869
- 2nd FITs: 878
- 3rd FITs: 672
- 4th FITs: 313

Screening attendees: 100% (3869)
CRC Prevention attendees (estimated): 20.03% (775)
Critical analysis

- **Screening was successful (highlights)**
  - FIT sensitivity (5.04% ≥ 50ng/ml Hg) can be used as an index for future programs
  - The use of FIT for asymptomatic patients became routine in HU’s medical practice

- **Colorectal Cancer Program points to improve**
  - Continuous effort to mobilizing individuals
  - Individuals should be fully aware of procedures to avoid colonoscopy’s rejection after FIT +
Thank you

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