

The background features a stylized landscape with rolling hills in shades of green and blue. On the left, there are two flowers: a purple one with a pink center and an orange one. The text is centered on the right side of the image.

# THE TRINIDAD AND TOBAGO EXPERIENCE

*Towards Improved Breast and  
Cervical Programs*

*Dr. Dylan Narinesingh*

# The Caribbean

The Bahamas

N

Atlantic Ocean

Cuba

Turks & Caicos Islands

Cayman Islands

Jamaica

Haiti  
Dominican Republic

Puerto Rico

US Virgin Islands

British Virgin Islands

Anguilla

St Martin/St Maarten  
St Barts

Saba

St Eustatius  
St Kitts & Nevis

Antigua & Barbuda  
Montserrat

Guadeloupe

Dominica

Martinique

St Lucia

Barbados

Aruba

Curaçao

Bonaire

Grenada

St Vincent & the Grenadines

Caribbean Sea

Trinidad & Tobago



# Demographics

- Population: 1,222,363 (July 2015)
- Sex ratio: 1.03 males/1.00 females
- Life expectancy:
  - male: 68.81 years
  - female: 74.6 years
- Population growth rate: -0.13%



# Demographics

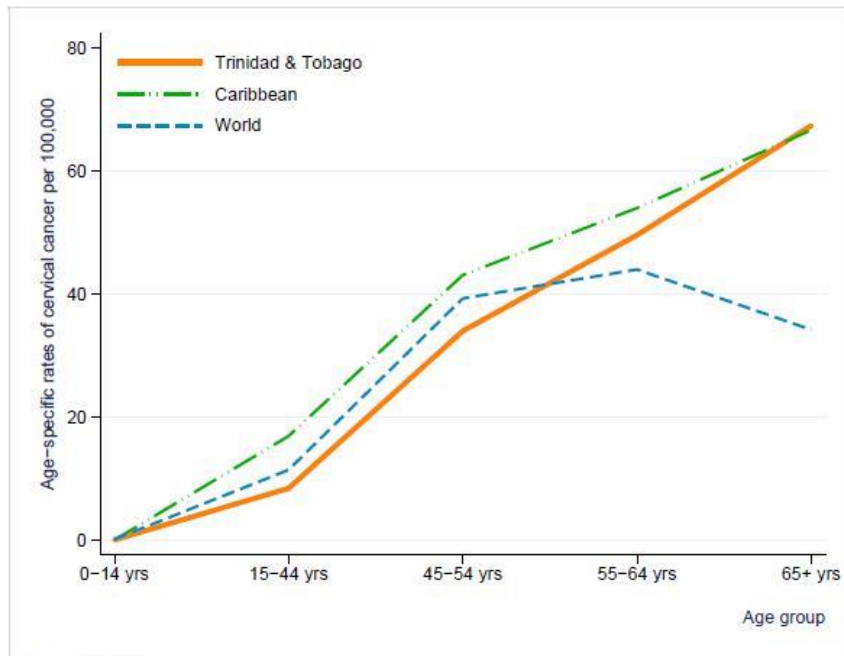
- Health Expenditure: 5.6% of GDP
- Annual government expenditure on chemotherapy drugs 15,000,000.00 USD in 2014-2015
- Chronic non communicable diseases account for 60% of all deaths with cancers being ranked #2

# *Cervical Cancer*



# Age-specific Incidence Rates

Age-specific incidence rates of cervical cancer in Trinidad & Tobago compared to estimates in Caribbean and the World



Rates per 100,000 women per year.

Data sources:

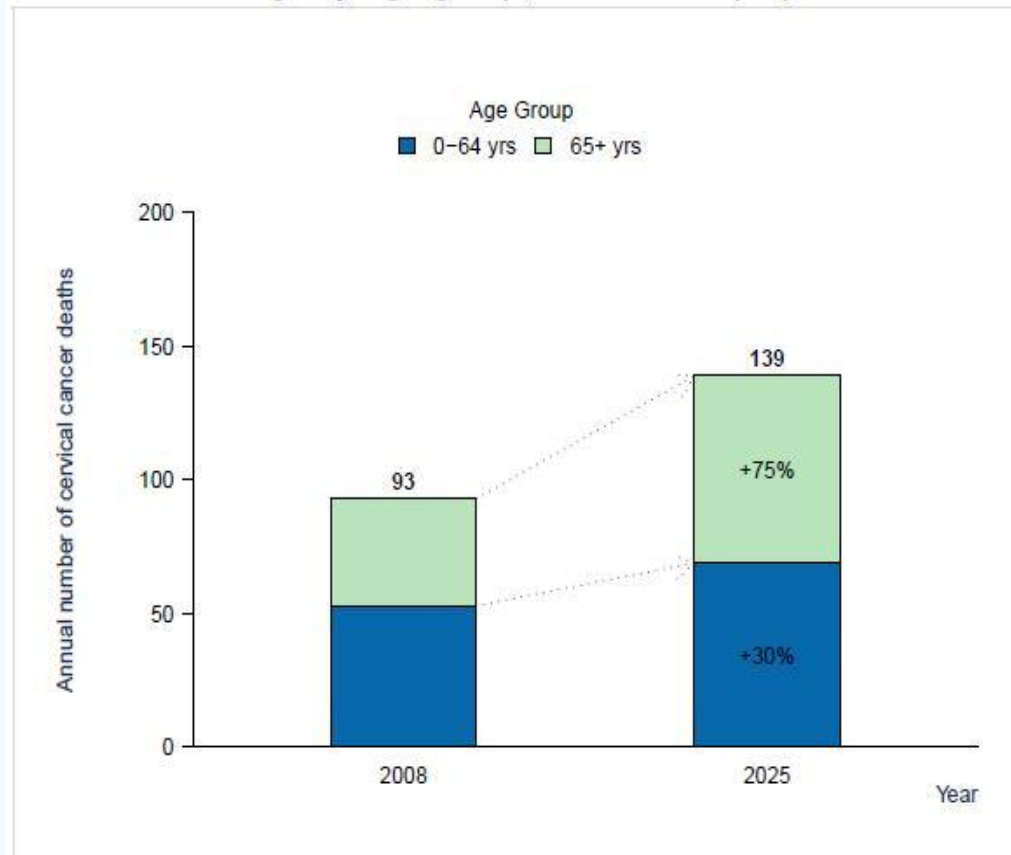
IARC, Globocan 2008. Age-specific data from GLOBOCAN 2008 were obtained from IARC, personal communication. For specific estimation methodology refer to [http://globocan.iarc.fr/DataSource\\_and\\_methods.asp](http://globocan.iarc.fr/DataSource_and_methods.asp).

- Trinidad and Tobago has a population of 533,000 women ages 15 years and older who are at risk of developing cervical cancer.
- Cervical cancer ranks the 2<sup>nd</sup> most frequent cancer among women between the ages of 15 and 44 years of age

# Mortality

- *Current estimates indicate that every year 125 women are diagnosed with cervical cancer and 93 die from the disease.*

Estimated number of deaths of cervical cancer in Trinidad & Tobago by age group, in 2008 and projected in 2025





# TRINIDAD AND TOBAGO GYNAEONCOLOGY SERVICES

- 2 Gynaecology clinics in Trinidad and Tobago
- Weekly Tumor Board Meetings
- Colposcopy services offered at all the major public hospitals



# *The Cost of Cervical Cancer*



# SWRHA

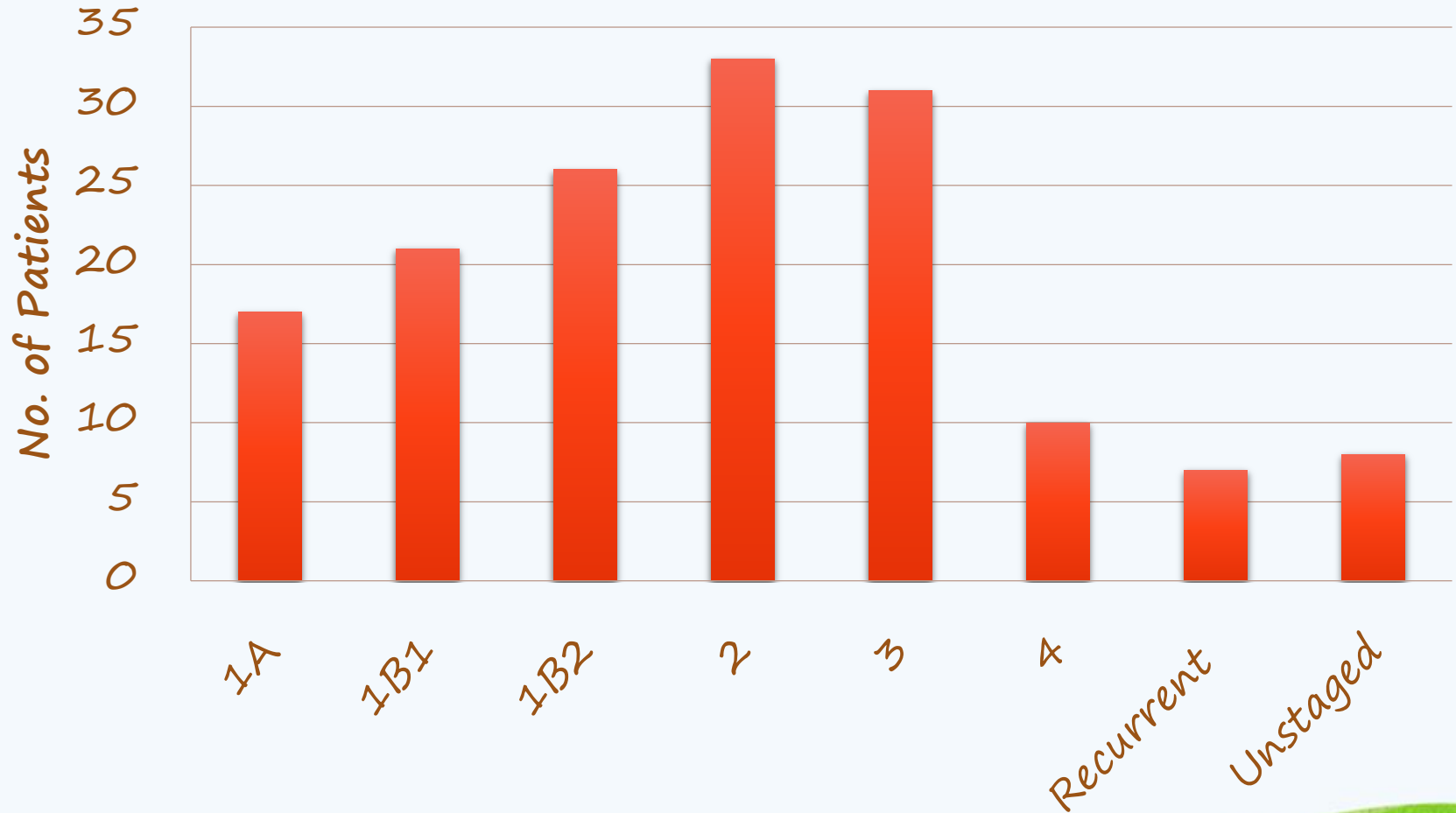
## Southwest Regional Health Authority (SWRHA)



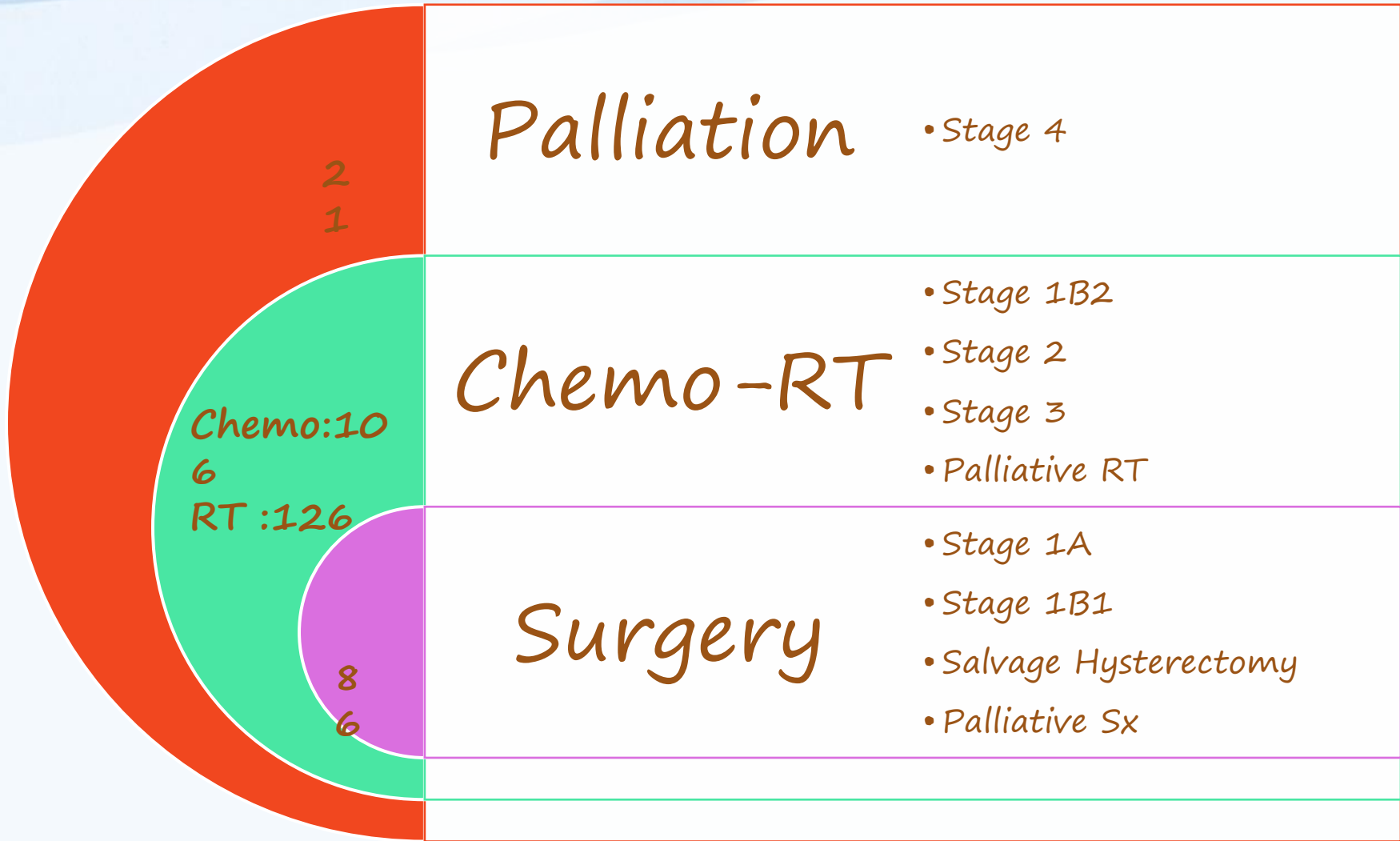
# Study Design

- Retrospective, Cervical Cancer cases presenting between June 2009 – June 2012
- Oncology practice, at San Fernando General Hospital (South West Regional Health Authority), Trinidad and Tobago
- Women between the ages of 20–60, who are sexually active (The target population for cervical cancer screening)

# Distribution of patients by Stage of cancer at presentation







# Palliation

- Stage 4

# Chemo-RT

- Stage 1B2
- Stage 2
- Stage 3
- Palliative RT

# Surgery

- Stage 1A
- Stage 1B1
- Salvage Hysterectomy
- Palliative Sx

# Cost of treatment over period 2009-2012 (Surgical)

Neo-  
adjuvant/Curative  
RHPLND/Post  
chemo Sx

- $86 \times \$40,000.00$   
= \$3,440,000.00

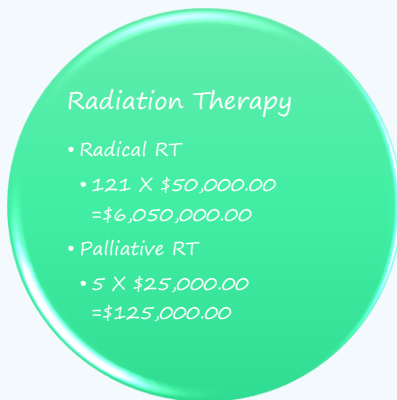
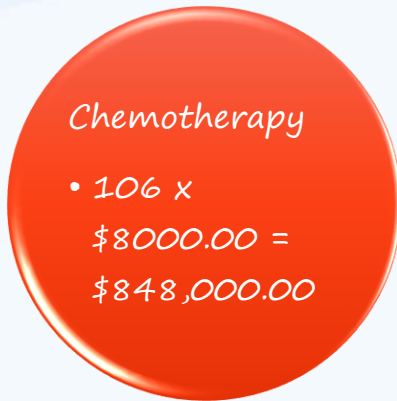
Bed Space

- $86 \times 4 \times \$2000.00$   
= \$688,000.00

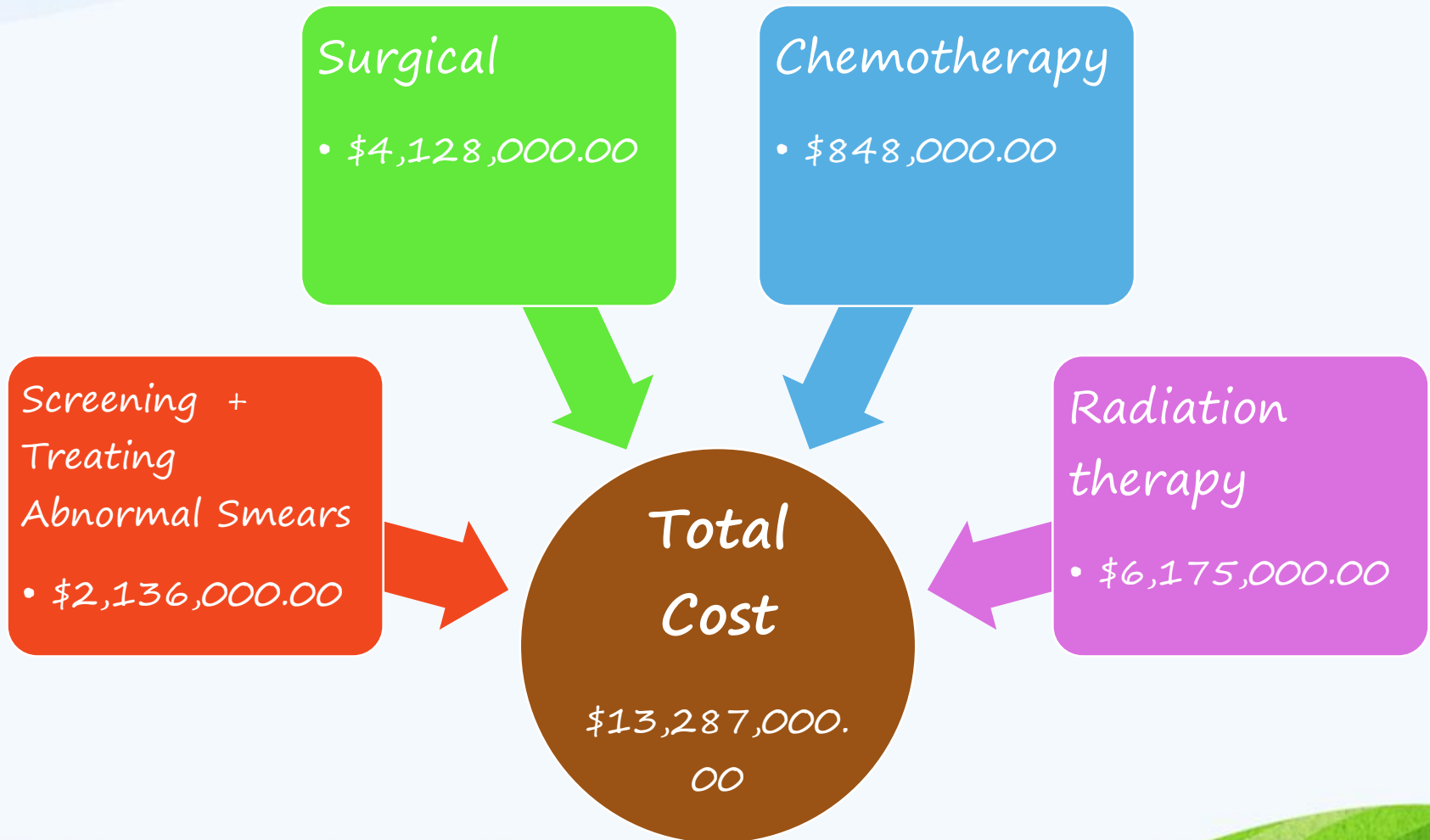
Total Surgical  
Cost

- \$4,128,000.00

# Cost of treatment over period 2009-2012 (Chemo-RT)



# Cost of treating study population





# THE HPV Vaccine



# HPV vaccine administration

- Target population includes school leavers at primary school as well as first formers
- School health unit in counties given the responsibilities to vaccinate
- Parents are sent a note to accompany their child to the health center
- Consent is obtained prior to the administration of the vaccine
- Eligible adults who request the vaccine are facilitated

# KAPB study on human papilloma virus and cervical cancer among Trinidadian women

- cross-sectional survey among 426 women in the reproductive age group
- 58.4% of participants had attained secondary level education
- 76.5% of women knew of cervical cancer
- 25.4% were aware of HPV
- 15.9% knew of the association between HPV and cervical cancer



# Breast Cancer



# BREAST CANCER – Trinidad and Tobago

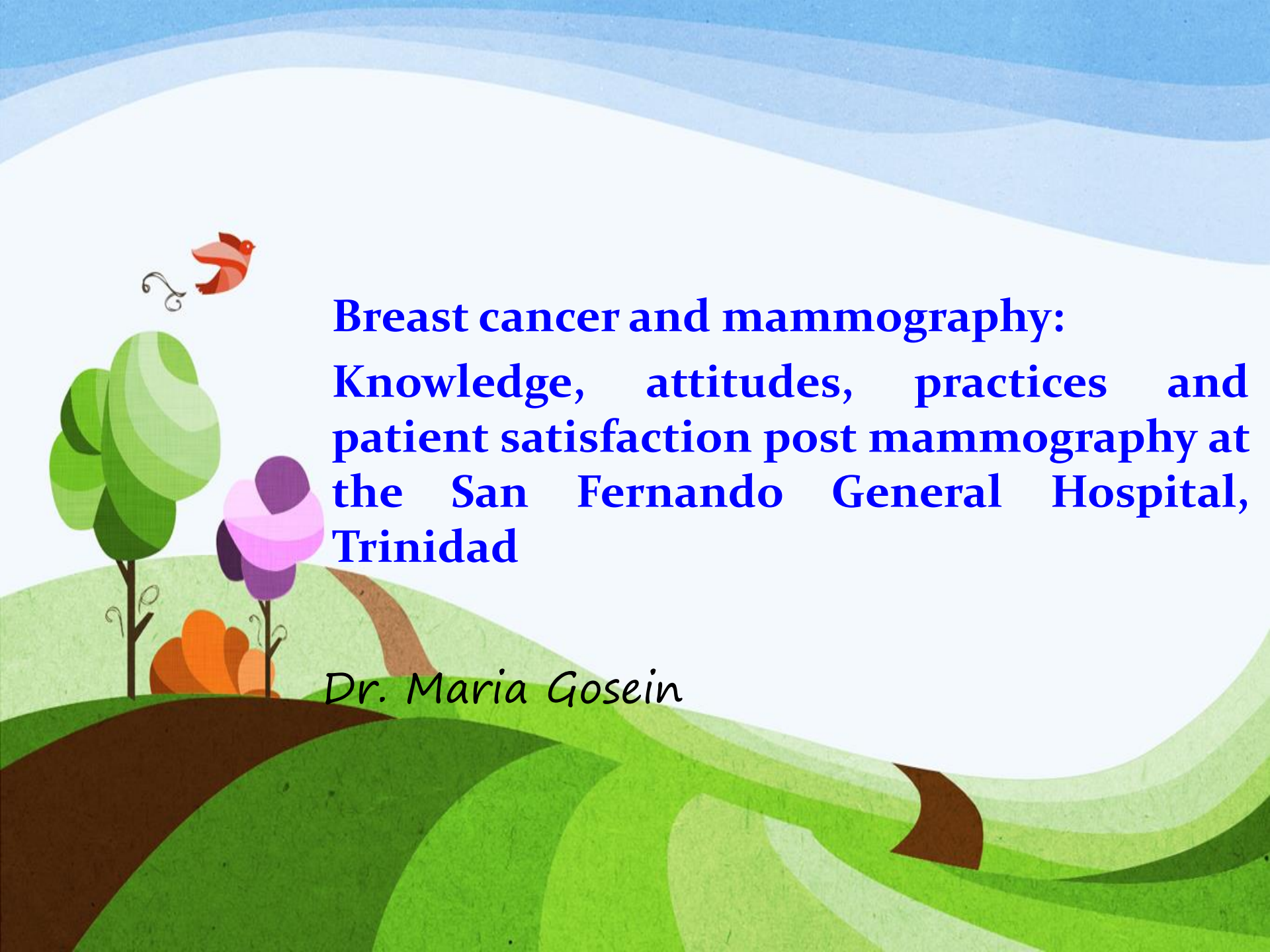
- Most common cancer amongst women in Trinidad and Tobago (23% of cancer deaths among women)
- Mean age at diagnosis is 56 years
- 38% of women present with locally advanced breast cancer
- women of African ancestry have the highest age-standardized BC mortality rates 30.82 per 100,000 in the population
- 12% BRCA (1 and 2) positivity in the native women breast cancer population

# BREAST CANCER - Management

- All major public hospitals have mammography units
- There are 2 specialized public breast cancer surgical units offering breast oncoplastic surgery
- All major public hospitals have surgical tumor board meetings weekly that discuss breast cancer cases
- Reconstructive surgery is offered free of charge in the public service
- All women in the public service requiring post operative radiation to the breast/chest wall will receive 3 DCRT/IMRT treatment



# Breast Cancer Screening



**Breast cancer and mammography:  
Knowledge, attitudes, practices and  
patient satisfaction post mammography at  
the San Fernando General Hospital,  
Trinidad**

*Dr. Maria Gosein*



# Population characteristics

| Characteristic       | Number | Percentage* |
|----------------------|--------|-------------|
| <b>Age</b>           |        |             |
| < 50                 | 108    | 34.4        |
| > 50, <60            | 119    | 37.9        |
| 60+                  | 87     | 27.7        |
| <b>Ethnicity</b>     |        |             |
| East Indian          | 184    | 58.6        |
| African              | 90     | 28.7        |
| Mixed                | 40     | 12.7        |
| <b>Religion</b>      |        |             |
| Christian            | 188    | 59.9        |
| Hindu                | 104    | 33.1        |
| Muslim               | 19     | 6.1         |
| Other                | 3      | 1.0         |
| <b>Education</b>     |        |             |
| None/Primary         | 148    | 47.2        |
| Secondary            | 116    | 36.9        |
| Technical/vocational | 27     | 8.6         |
| Tertiary             | 23     | 7.3         |

|                                  |     |      |
|----------------------------------|-----|------|
| <b>Employment</b>                |     |      |
| Housewife                        | 142 | 45.2 |
| Employed                         | 92  | 29.3 |
| Unemployed                       | 45  | 14.3 |
| Retired                          | 35  | 11.2 |
| <b>Marital Status</b>            |     |      |
| Married                          | 168 | 53.5 |
| Single                           | 54  | 17.2 |
| Widowed                          | 36  | 11.5 |
| Common law                       | 31  | 9.9  |
| Divorced/Separated               | 25  | 8.0  |
| <b>Residence</b>                 |     |      |
| Urban                            | 277 | 88.2 |
| Rural                            | 37  | 11.8 |
| <b>Family History</b>            |     |      |
| None                             | 235 | 74.8 |
| 1 <sup>st</sup> degree relative  | 34  | 10.8 |
| 2 <sup>nd</sup> degree relative  | 35  | 11.2 |
| >2 <sup>nd</sup> degree relative | 10  | 3.2  |

\*Rounded off to 1 decimal place

# Knowledge of mammography

| Response   | Education               |                      |                    |                    | Total<br>N=314 |
|--|-------------------------|----------------------|--------------------|--------------------|----------------|
|  | Primary/None<br>(N=148) | Secondary<br>(N=116) | Tech/Voc<br>(N=27) | Tertiary<br>(N=23) |                |
| <b>If an abnormality is seen on a mammogram, most times it is cancer</b>   |                         |                      |                    |                    |                |
| Agree  | 40 (27.0)               | 14 (12.1)            | 2 (7.4)            | 3 (13.0)           | 59 (18.8)      |
| Disagree   | 59 (39.9)               | 68 (58.6)            | 15 (55.6)          | 13 (56.5)          | 155 (49.4)     |
| Don't know/neutral   | 49 (33.1)               | 34 (29.3)            | 10 (37.0)          | 7 (30.4)           | 100 (31.8)     |
| <i>p-value = 0.013</i>   |                         |                      |                    |                    |                |
| <b>If the mammogram result indicates that you must have another test done, it most likely means that you have cancer</b> |                         |                      |                    |                    |                |
| Agree  | 47 (31.8)               | 23 (19.8)            | 1 (3.7)            | 1 (4.3)            | 72 (22.9)      |
| Disagree   | 56 (37.8)               | 59 (50.9)            | 17 (63.0)          | 17 (73.9)          | 149 (47.5)     |
| Don't know/neutral   | 45 (30.4)               | 34 (29.3)            | 9 (33.3)           | 5 (21.7)           | 93 (29.6)      |
| <i>p-value = 0.001</i>   |                         |                      |                    |                    |                |

No associations:

- 64.7% agreed that non palpable lump can be detected by mammograms
- 43.6% knew that mammograms may not always detect cancer

# Presentation

- Approximately how long did you have these symptoms before going to a doctor?

|                    | Frequency | Percent |
|--------------------|-----------|---------|
| 1 week             | 20        | 17.2    |
| 1 month            | 25        | 21.6    |
| a few months (<6)  | 29        | 25.0    |
| 6 months to 1 year | 19        | 16.4    |
| more than a year   | 23        | 19.8    |

| Response   | Education               |                      |                    |                    | Total      |
|--|-------------------------|----------------------|--------------------|--------------------|------------|
|  | Primary/None<br>(N=148) | Secondary<br>(N=116) | Tech/Voc<br>(N=27) | Tertiary<br>(N=23) | N=314      |
| <b>Whose idea was it for you to get a mammogram?</b> |                         |                      |                    |                    |            |
| Friend/family  | 4 (2.7)                 | 2 (1.7)              | 4 (14.8)           | 0                  | 10 (3.2)   |
| Yourself   | 19 (12.8)               | 47 (40.5)            | 8 (29.6)           | 8 (34.8)           | 82 (26.1)  |
| Doctor   | 124 (83.8)              | 65 (56.6)            | 15 (55.6)          | 15 (65.2)          | 219 (69.7) |
| Other  | 1 (0.7)                 | 2 (1.7)              | 0                  | 0                  | 3 (0.3)    |
| <i>p-value &lt;0.001</i>                             |                         |                      |                    |                    |            |

# Attitudes, practices & beliefs

- 51.9% worried about having pain or discomfort during the mammogram
- 39.5% were concerned about radiation
- 62.4% were afraid of finding cancer
- 67.8% performed SBE (35.4% performed SBE once per month)
  - No association with education level
- Similar number (65.6%) also had CBE

| Response  | Education               |                      |                    |                    | Total<br>N=314 |
|---|-------------------------|----------------------|--------------------|--------------------|----------------|
|   | Primary/None<br>(N=148) | Secondary<br>(N=116) | Tech/Voc<br>(N=27) | Tertiary<br>(N=23) |                |
| <b>I am worried that the compression (squeeze) from the mammogram can cause breast cancer</b> |                         |                      |                    |                    |                |
| Strongly Agree  | 11 (7.4)                | 8 (6.9)              | 2 (7.4)            | 0                  | 21 (6.7)       |
| Agree   | 17 (11.5)               | 10 (8.6)             | 6 (22.2)           | 1 (4.3)            | 34 (10.8)      |
| Don't know  | 61 (41.2)               | 37 (31.9)            | 2 (7.4)            | 7 (30.4)           | 107 (34.1)     |
| Disagree  | 47 (31.8)               | 47 (40.5)            | 12 (44.4)          | 10 (43.5)          | 116 (36.9)     |
| Strongly disagree   | 12 (8.1)                | 14 (12.1)            | 5 (18.5)           | 5 (21.7)           | 36 (11.5)      |
| <i>p-value = 0.044</i>  |                         |                      |                    |                    |                |



# Implications: Doctor driven screening behaviour

- Access to physician who recommended mammography was **strongest predictor** of breast cancer screening
  - awareness campaigns, low income, unemployment, low education level were less important predictors
- Locally, women being screened may depend on the doctor they choose to visit
  - Physicians must be **encouraged to recommend screening** to increase mammography participation rates
  - Clinicians can **become more sensitive to common misconceptions and beliefs**

# Palliative Care





# CAURA PALLIATIVE CARE UNIT



# Palliative Care - Trinidad and Tobago

- Post graduate program at the UWI
- 3 hospices
- Shortage of morphine biggest issue
- All of the health authorities have a palliative care service in various levels of development



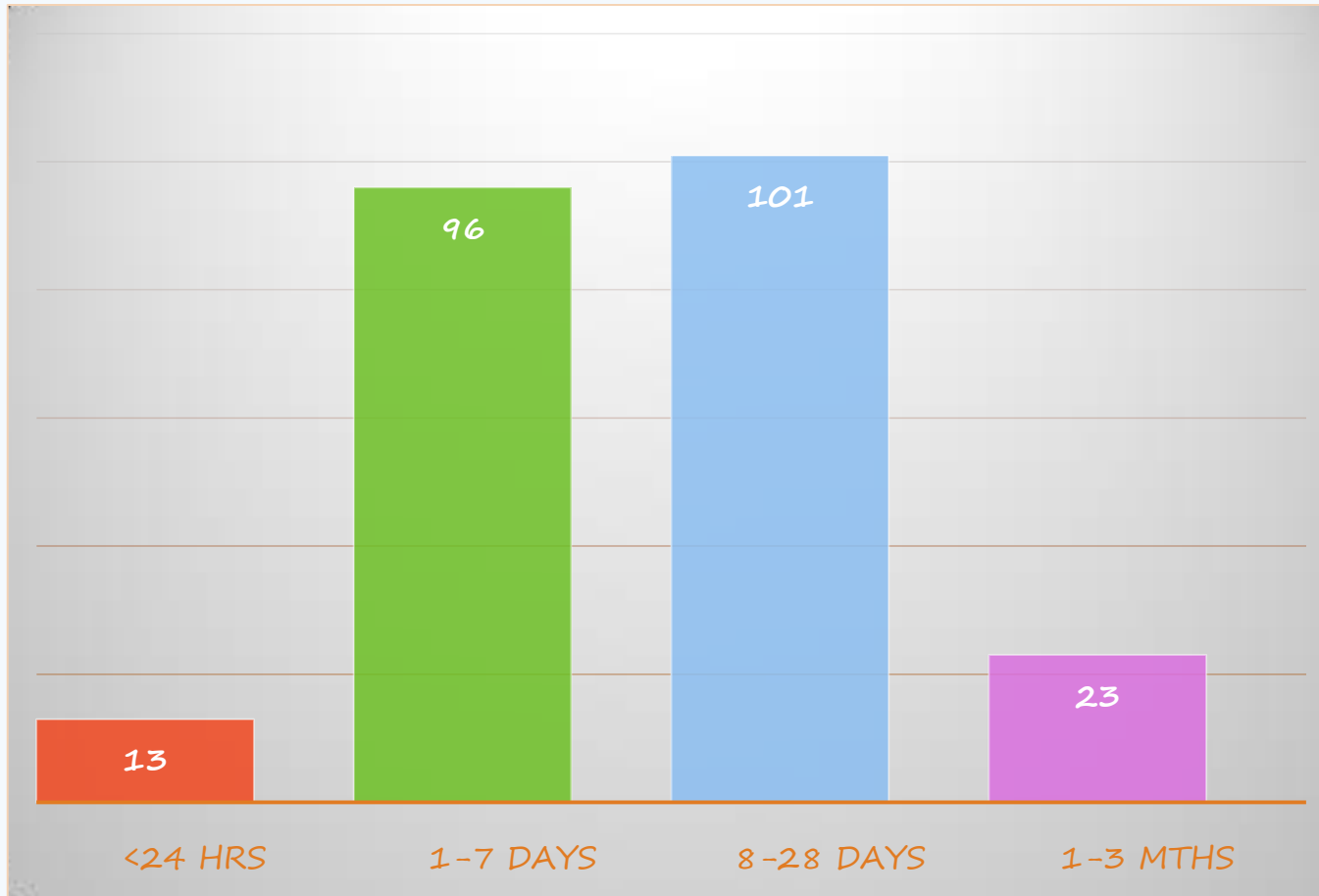
# Admission Statistics 2015

|                                |         |
|--------------------------------|---------|
| Total number of admissions     | 175     |
| Number of admissions per month | 10 - 20 |
| Total number of deaths         | 129     |
| Total number of re-admissions  | 7       |

# Diagnoses

| <i>Diagnosis</i>    | <i>Number of Patients</i> |
|---------------------|---------------------------|
| <i>Breast</i>       | <i>31</i>                 |
| <i>Bronchogenic</i> | <i>28</i>                 |
| <i>Colon</i>        | <i>12</i>                 |
| <i>CVA</i>          | <i>9</i>                  |
| <i>Pancreas</i>     | <i>8</i>                  |
| <i>Prostate</i>     | <i>7</i>                  |
| <i>Ovary</i>        | <i>7</i>                  |
| <i>Gastric</i>      | <i>7</i>                  |
| <i>Rectum</i>       | <i>7</i>                  |
| <i>Dementia</i>     | <i>7</i>                  |
| <i>Other</i>        | <i>38</i>                 |

# Length of in-patient stay



NGO  
PARTICIPATIO  
N:  
TTCS





Policy planning  
and provision of  
services for the  
vast majority of  
the citizenary  
can't be all done  
by the government  
(public sector)



# Trinidad and Tobago Cancer Society

- *Pap smears*
- *Mammograms and breast ultrasounds*
- *Prostate exams*

*via mobile units and at center*

- ❖ *The NGO providing the biggest impact on screening in Trinidad and Tobago*

# Trinidad and Tobago Cancer Society

- *Educational Services for the general public*
- *Advocates for Women's Health Cancer related issues at the government (policy) level*
- *Facilitating workshops and seminars to bring stakeholders together*

# Trinidad and Tobago Cancer Society

- Hospice – Vitas House:
  - 2015 – 78 patients
  - 50 of whom were female
  - 22 days was the average stay



National Symposium  
on Breast and  
Cervical Screening to  
be held in June 2016





TOGETHER WE ASPIRE

TOGETHER WE ACHIEVE