

ASCO's Quality Training Program

Project Title: REDUCTION IN TIME BETWEEN CERVICAL CANCER DIAGNOSIS AND TREATMENT

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Institutional Overview

- IMIP is a tertiary health Care Center.
- 2016: 6,829 new cancer patients treated: drugs, surgeries, radiation, and bone marrow transplantation.
- Ten buildings, 1,200 beds, 53 thousand square meters.
- Faculty: 1200 physicians and 400 fellows: cancer care, teaching, clinical/ translational research and homecare.

Problem Statement

For 135 patients treated in 2016/2017, the median time between cervical cancer diagnosis and treatment was 107 days.

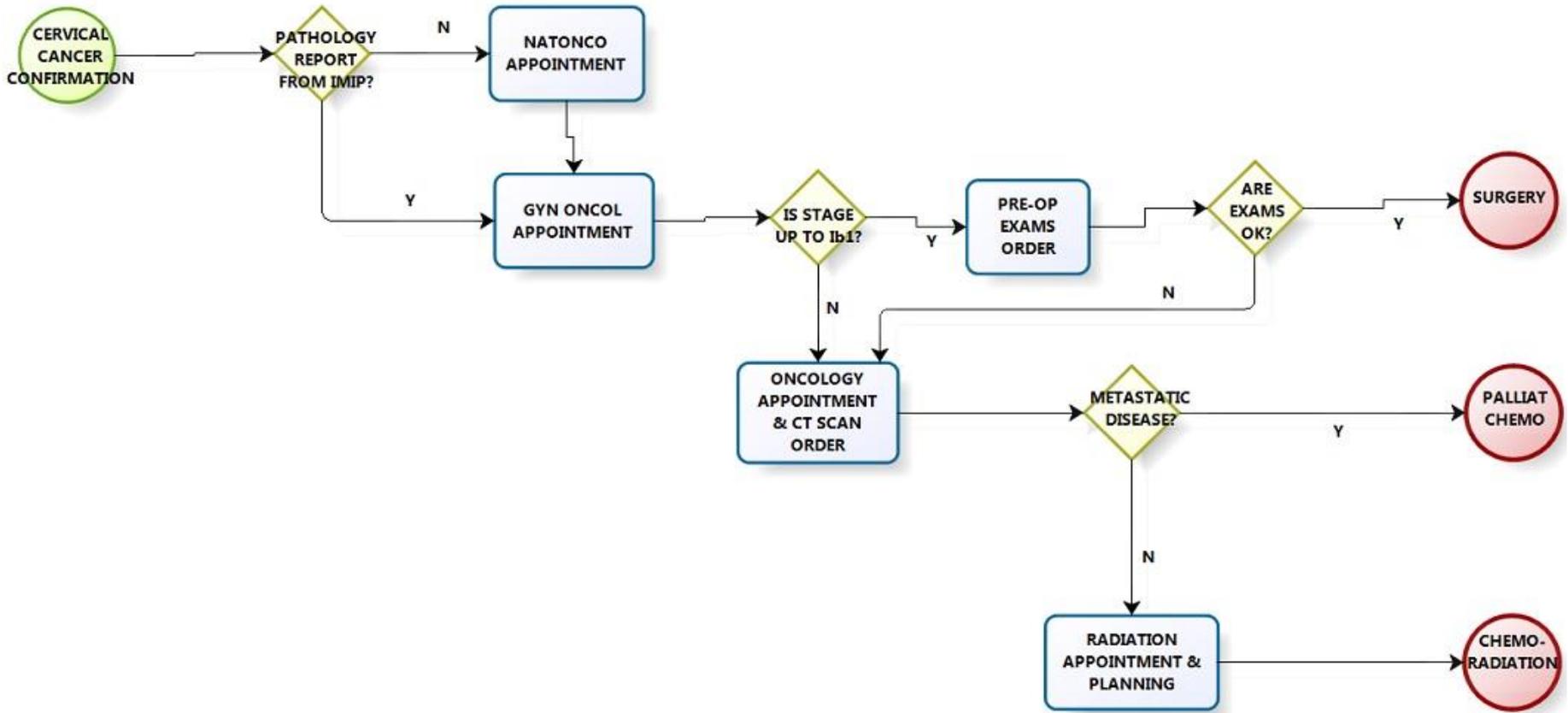
Brazilian Health Regulations suggest 60 days as a limit.

Baseline Data

Electronic file identified 292 patients by ICD C53 (cervical cancer) in 2016/2017:

1. Removed 32 patients with no biopsy or treatment: "Follow-up procedures"
2. Therefore 260 biopsies and/or treatments
 - 62 patients: not start treatment until June 2017 (excluded).
 - 198 patients were treated.
 - 63 patients have biopsy from outside (excluded).
 - 135 patient treatments for analysis: 37 surgery, 87 chemotherapy, 11 radiation and 11 palliative chemotherapy

Process Map



Aim Statement

By September 30th, IMIP will decrease the median number of days between cervical cancer diagnosis and treatment to less than 60 days

Measures

- Measure: time from cervical cancer confirmation to start of treatment
- Patient population: cervical cancer patients diagnosed and / or treated at IMIP.
- Calculation methodology: we analyzed a group of 135 patients treated in 2016/2017
- Data source: electronic records, paper charts and surveys
- Data collection frequency: data was collected prospectively since August the first 2017
- Data quality: since intervention started on August and interval might be over 60 days we used estimated dates for treatment start based on existing patient appointments.

Diagnostic Data - sample

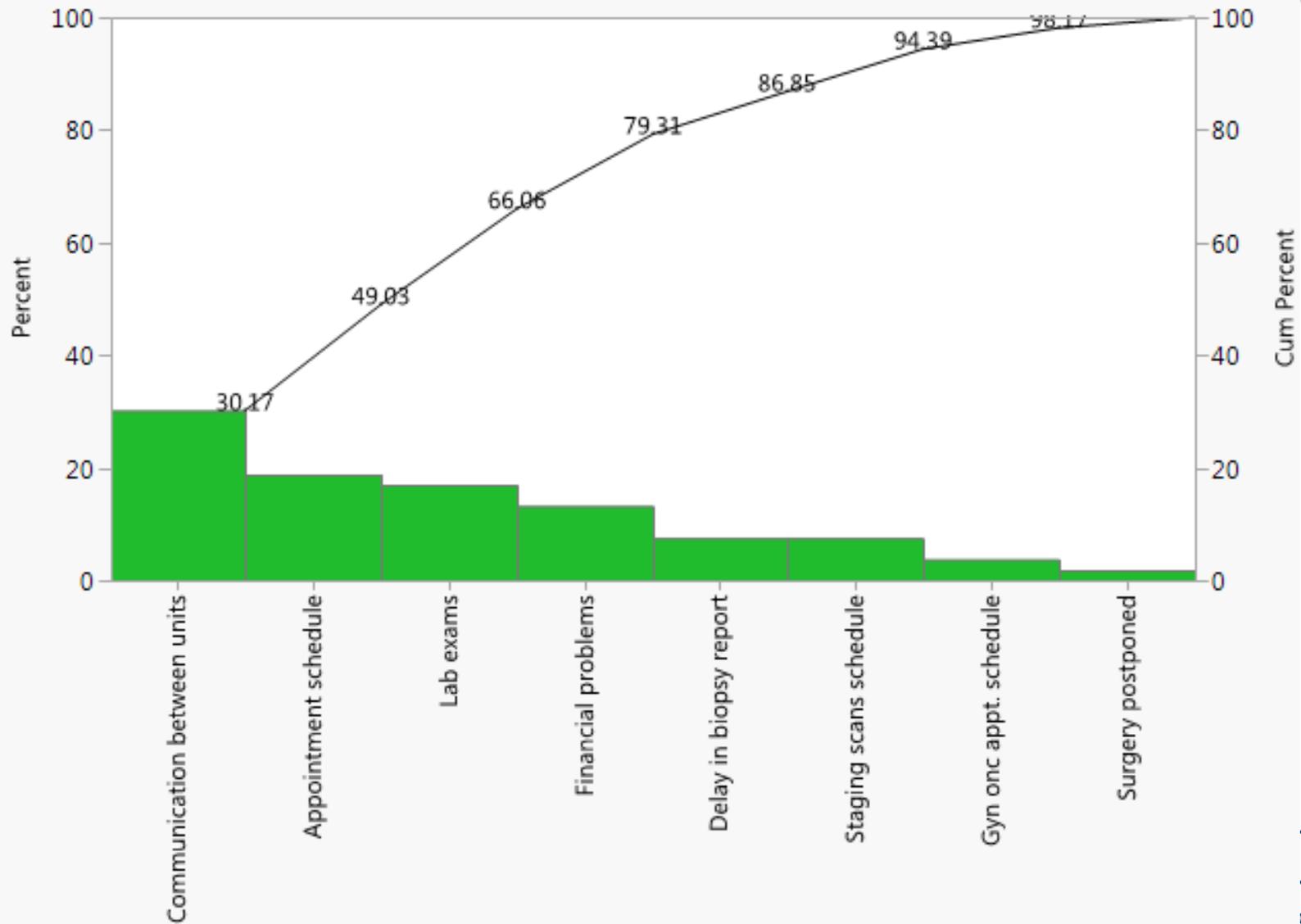
- **Time 1:**
 - Biopsy to Gynecology appointment OR
 - Biopsy to clinical oncology appointment
- **Time 2:**
 - Gynecology appointment to surgery OR
 - Clinical oncology appointment to staging scan
- **Time 3:**
 - Staging scans to start of chemoradiation OR
 - Staging scan to palliative chemo

Interval biopsy-treatment

Mean 97 days (2-357)

		BIOPSY IMIP	OUTSIDE IMIP	TIME 1	TIME 2	TIME 3
TOTAL OF PATIENTS	40	26	14			
SURGERY	3	3	0	20 (6-34)	35.5 (16-55)	NA
CHEMORADIATION	26	16	10	15.5 (0-104)	42 (1-191)	35 (1-191)
PALLIATIVE CHEMO	2	1	1	8	UNAVAILABLE	49
NOT STARTED	9	6	3	NA	NA	NA

Diagnostic Data - interview



Cause & Effect Diagram

Next slide

Resources

Communication

Absence of a tool to collect and analyze patient information

No integrated electronic file

Imaging machine shortage

Radiation machine shortage

No formal communication between units

Absence of patients navigation method

No appointment schedule center

Treatment delay (> 60 days)

No employees process flow training

Absence of established flowchart

No appointment considering priorities

Treatment in separate buildings

Long time for staging scans results

High professional turnover

Patients' limited education

Radiologists and nurses shortage

Methods

People

Cause and Effect - priorities

Ease of implementation (1 - 5 scale): 1 = Difficult to fix; 5 = Easy to fix

Impact (1 - 5 scale): 1 = Low impact to issue if addressed; 5 = High impact to issue if addressed

Causal Factor	Effect	Ease	Impact	Score
Absence of patient navigation method		4	5	20
No formal communication between units		4	5	20
No appointment schedule center		4	5	20
Absence of established flowchart		5	4	20
No employees process flow training		4	5	20
Long time for staging scans results		5	4	20
Patients do not understand their diagnosis		4	4	16
Nursing shortage		3	5	15
Absence of directions signalization		5	3	15
Absence of a tool to collect and analyze patient information		4	3	12
No integrated electronic file		4	3	12
No appointment considering priorities		3	4	12
Limited professional qualification		4	3	12
No unit clerk training		4	3	12
Imaging machine deficit		4	3	12
Treatment in separate buildings		2	3	6
High professional turnover		2	3	6
Radiologists shortage		2	3	6
Radiation machine deficit		1	5	5

Prioritized List of Changes (Priority/Pay –Off Matrix)

Impact	High	Patient navigation	Appointment schedule center Time for staging results Employees process flow training
	Low	Establishment of a flowchart	Communication between units Cervical cancer alert from pathology

Easy

Difficult

Ease of Implementation

PDSA Plan (Test of Change)

Date of PDSA Cycle	Description of Intervention	Results	Action Steps
07/24/17	Discussion with stakeholders	Build flowchart	Establish communication
08/07/17	Patient navigation	Earlier appointments scheduling	Data collection prospectively using formal template
09/29/17	Data analysis	Interval biopsy-treatment reduction detection	QTP project presentation preparation

Materials Developed

- Data collection form that has been used by the nurses allowing patient navigation process.

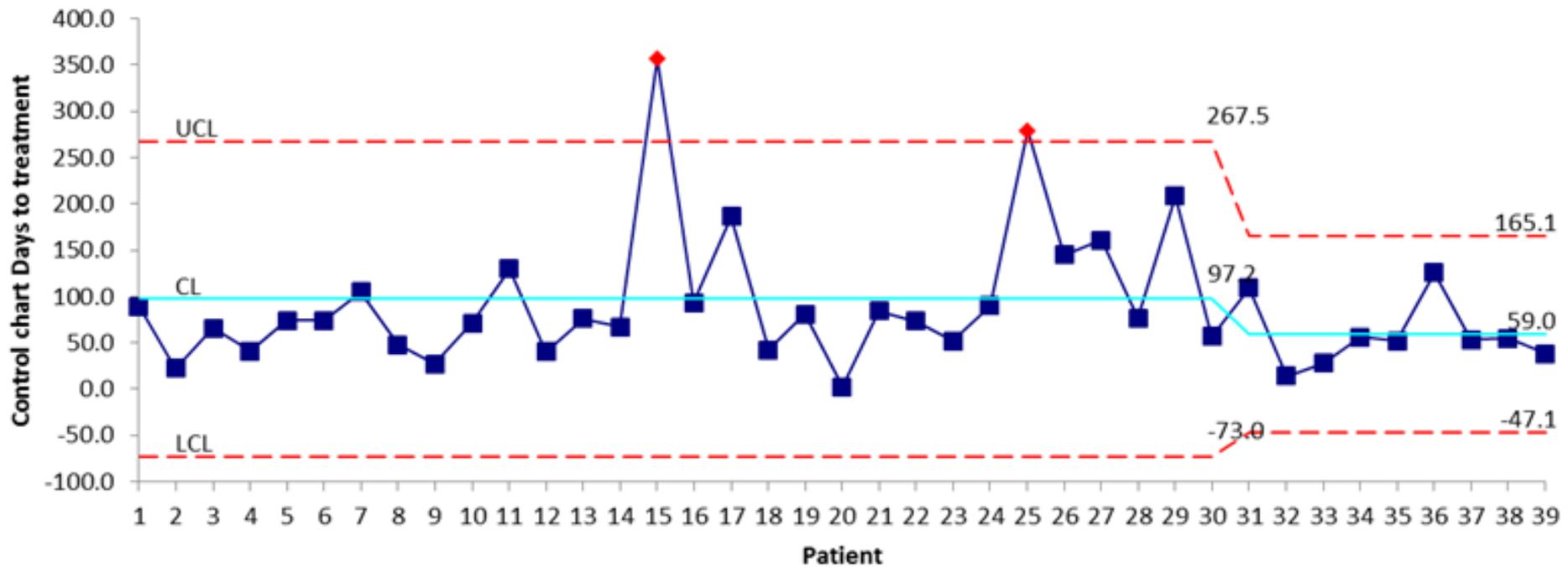
<p>Oncology Services at IMIP - Cervical cancer</p> <p>Tracking form _____ Date completed: ____/____/____</p> <p>Social date _____</p> <p>Identification _____</p> <p>Name: _____</p> <p>Record number: _____ Date of birth: ____/____/____ Age: () years</p> <p>Gender: () Male () Female</p> <p>Contact phone number: _____</p> <p>Category: _____ Contact: _____</p> <p>What is your biggest wish? _____</p> <p>If you are in a situation where you cannot make any decisions, who would you name? _____</p> <p>Have children?</p> <p>(1) Yes (2) No</p> <p>How many? _____</p> <p>If yes, did your children receive HPV vaccine?</p> <p>(1) Yes (2) No</p> <p>How sisters and/or brothers?</p> <p>(1) Yes (2) No</p> <p>How many? _____</p> <p>If yes, did your sister and/or brother receive HPV vaccine?</p> <p>(1) Yes (2) No</p>	<p>Education _____</p> <p>What was the last year of study completed? _____</p> <p>(1) Single _____</p> <p>(2) Regularly married _____</p> <p>(3) Has had a stable union for 12 months or more _____</p> <p>(4) Single _____</p> <p>(5) Separated or divorced _____</p> <p>(6) Decline to answer _____</p> <p>Current personal situation _____</p> <p>Occupation _____</p> <p>Retired with another occupation _____</p> <p>Retired without other occupation _____</p> <p>Consistent job _____</p> <p>Working outside of the home _____</p> <p>Self-employed _____</p> <p>Occupation when you were _____</p> <p>Religion _____</p> <p>Catholic (1) _____</p> <p>Evangelical (2) _____</p> <p>Spirit (3) _____</p> <p>Buddhist (4) _____</p> <p>Other _____</p> <p>(5) _____</p> <p>What is the combined income of all the people who live in your home, including you? _____</p> <p>(1) Under _____</p> <p>(2) Black _____</p> <p>(3) White _____</p> <p>(4) Brown _____</p> <p>(5) Indigenous _____</p> <p>(6) Do not know _____</p> <p>(7) Decline to answer _____</p> <p>Residential tenancy: _____</p> <p>(1) Public tenancy (PT) _____</p> <p>(2) Collective tenancy (CT) _____</p> <p>(3) Financial difficulty _____</p> <p>DIAGNOSIS AND TREATMENT</p> <table border="1"> <tr> <td>Was a biopsy of the primary tumor performed?</td> <td>() Yes () No () Unknown</td> </tr> <tr> <td>Date of biopsy</td> <td>____/____/____</td> </tr> <tr> <td>Site of first consultation</td> <td>() Gynaecology () Oncology () Neurology () Radiation oncology () Geriatrics</td> </tr> <tr> <td>Date of first services appointment</td> <td>____/____/____</td> </tr> <tr> <td>Have you been asked for imaging tests?</td> <td>() Yes () No</td> </tr> </table>	Was a biopsy of the primary tumor performed?	() Yes () No () Unknown	Date of biopsy	____/____/____	Site of first consultation	() Gynaecology () Oncology () Neurology () Radiation oncology () Geriatrics	Date of first services appointment	____/____/____	Have you been asked for imaging tests?	() Yes () No	<p>Date of request for the exams: ____/____/____</p> <p>Which methods of examination were used? (check all that apply)</p> <p>() None () Papanicolaou () Cervical () Microscopic () Histopathology</p> <p>Date of the image exams (if requested) - 15 days (result with report)</p> <p>HPV _____</p> <p>PET-CT _____</p> <p>TC _____</p> <p>Ultrasound _____</p> <p>Cystoscopy _____</p> <p>Histopathology _____</p> <p>Stage: FIGO _____</p> <p>(1) I (2) II (3) III (4) IV</p> <p>Date when final staging was established: ____/____/____</p> <p>Select the treatment defined for the disease (check all that apply)</p> <p>() Surgery () Radiotherapy () Chemotherapy () Inductive palliative care</p> <p>SURGERY</p> <p>Request for pre-op exams _____ Date: _____</p> <p>Conducting pre-op exams _____ Date: _____</p> <p>Return visit with exams and scheduling surgery _____ Date: _____</p> <p>Date of surgery: ____/____/____</p> <p>Histology of the surgical specimen</p> <p>() Adenocarcinoma () Squamous () Adeno-squamous () Neuroendocrine () High grade () Low/intermediate () Unknown () Other _____</p> <p>Pathological staging</p> <p>T: () T0 () T1 () T2 () T3 () T4 () Unknown</p> <p>N: () N0 () N1 () N2 () N3 () Unknown</p> <p>M: () M0 () M1 () Unknown</p> <p>Pathological stage of cancer at the time of initial diagnosis</p> <p>() I () II () III () IV () IA () IB () IIA () IIB () IIA () IIB () IVA () IVB () IVB () Unknown</p> <p>RADIOGRAPHY</p> <p>Routing to RDT _____ Date: _____</p> <p>Scheduling the exam in RDT _____ Date: _____</p> <p>Set Consultation in RDT _____ Date: _____</p> <p>Interval RDT</p> <p>() Colwell () Cervical 1D () Cervical 2D () IMRT</p> <p>Start date: ____/____/____</p>	<p>THE DATE</p> <p>START/STOP DATE: _____</p> <p>Start date: ____/____/____</p> <p>End date: ____/____/____</p> <p>CHEMOTHERAPY</p> <p>Proceeding to Oncology Scheduling the consultation on the Oncology Scheduling Consultation</p> <p>Date: _____</p> <p>Date: _____</p> <p>Date: _____</p> <p>QT type</p> <p>() Platinum mono () Platinum combination () Other () Unknown</p> <p>Start date: ____/____/____</p> <p>End date: ____/____/____</p>
Was a biopsy of the primary tumor performed?	() Yes () No () Unknown												
Date of biopsy	____/____/____												
Site of first consultation	() Gynaecology () Oncology () Neurology () Radiation oncology () Geriatrics												
Date of first services appointment	____/____/____												
Have you been asked for imaging tests?	() Yes () No												

Change Data

Interval between biopsy and treatment	Before intervention (N of days)	After intervention (N of days)	Change
Mean	97	59	38
Treatment \leq 60 days (% of pts)	30%	77%	47%

Change Data

Control chart Days to treatment - X Chart



Conclusions

- This patient navigation process reduced by a mean of 38 days the time between cervical cancer diagnosis and treatment and 47% more patients received treatment within 60 days.
- Stakeholders has demonstrated to be willing to improve communication.
- Improved communication allowed shorter intervals between the steps inside the flowchart/process map

Next Steps/Plan for Sustainability

- To keep patient navigation process for patients with cervical cancer and expand to other common cancers
- To train IMIP's employees about the flowchart process
- To create an electronic system/platform to connect the units inside IMIP facilitating patient navigation
- To build an internet platform for cervical cancer patients connecting IMIP to primary care health professionals

REDUCTION IN TIME BETWEEN CERVICAL CANCER DIAGNOSIS AND TREATMENT

AIM: By September 30th, IMIP will decrease the median number of days between cervical cancer diagnosis and treatment to less than 60

INTERVENTION:

- Establishment of a flowchart
- Patient navigation
- Communication between units

TEAM:

- Clinical oncology: Carla Rameri
- Palliative care: Mirella Rebello, Flavia Orange
- Radiation oncology: Ana Fassizoli
- Gynecology oncology: Vandre Carneiro
- Radiology: Filipe Felix, Valeria de Biase

PROJECT SPONSORS:

- Jurema Telles MD, PhD

RESULTS:

Biopsy to treatment interval after intervention

Interval between biopsy and treatment	Before intervention (N of days)	After intervention (N of days)	Change
Mean	97	59	38
Treatment < 60 days (% of pts)	30%	77%	47%

CONCLUSIONS:

- This patient navigation process reduced in 21 days the time between cervical cancer confirmation and treatment.
- Stakeholders has demonstrated to be willing to improve communication.
- Improved communication allowed shorter intervals between the steps inside the flowchart/process map

NEXT STEPS:

- Patient navigation for all cancer patients
- Turn IMIP's employees aware about the flowchart
- Electronic system to connect IMIP's units
- Internet platform to connect IMIP to primary care health professionals