# Quality Training Program

**Systematic assessment of symptoms in oncology outpatient with advanced disease**

**Almudena Martín & Cristina Pangua**

**Infanta Leonor Hospital**

**Madrid, September 14th 2020**

# Institutional Overview

- University hospital belonging to the Madrid Health Service, located in the municipal district of Villa de Vallecas in Madrid.

- Provides coverage to a reference population of more than 307,000 people.

- Oncology Department is made up of 8 medical oncologists, 12 nurses, 6 nursing assistants and 2 administratives.

- The Daytime Hospital is equipped with 27 chemotherapy administration posts: 10 beds and 17 armchairs.

- 886 new outpatients were assisted in 2019.

# Problem Statement

● Patients with advanced cancer spectrum of symptoms that encompasses the physical, psychic and social sphere. The lack of systematic evaluation of these symptoms in clinical practice may lead to an inappropriate medical attention that negatively impacts on the well-being and quality of life of patients, entails an increase in the use of health resources and can even compromise survival.

● By January 2020, we did not use any standardized method to document the symptoms experienced by patients in the Oncology department at Infanta Leonor Hospital. We only collected the most prevalent ones according to the type of tumor or those that the patient reported spontaneously which it involved that a lot of valuable information was missed.

# Team Members

**Project Sponsor:** *Miguel Angel Lara*

**Team leaders:** *Almudena Martín, Cristina Pangua*

- Design a survey with possible causes of the problem.
- Retrospective analysis of medical records to identify and quantify the problem.
- Statistical data analysis.

**Team Members:**

Nurse staff: *Mª Angeles Rodriguez-Calderita, Victorino Díez, Paloma Villoslada, Elizabeth Valencia, Leonor Mª Domenech, Raquel Fernández, Noelia Varona, Leticia Ramos.*

- Fill out a survey in order to identify possible causes of the problem.
- Patient registry.
- Deliver and fill out the questionnaire with the patient on the first visit to the nursing room.
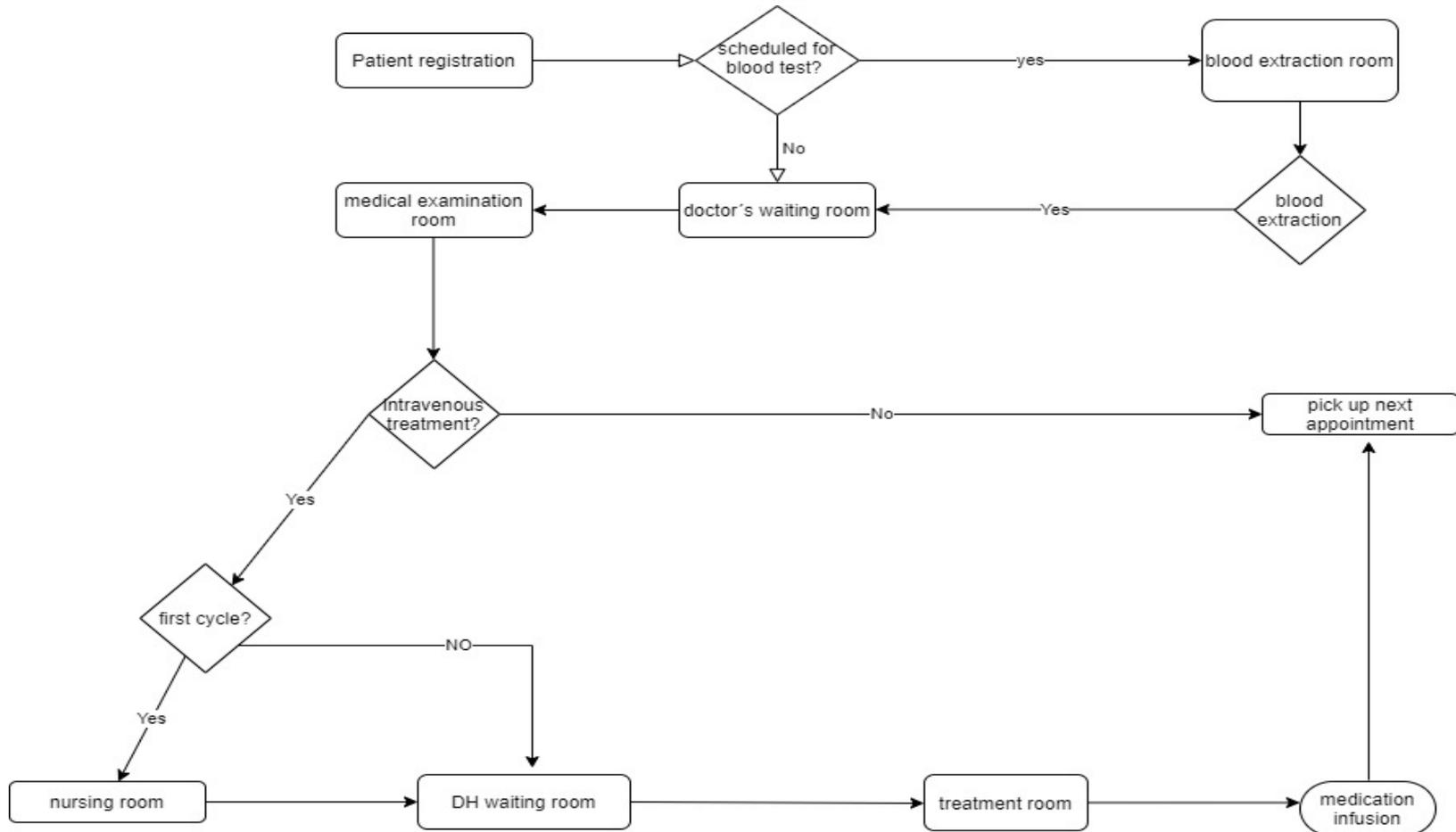- Transcribe the results in the medical record.

# Team Members

**Team Members:**

<u>Medical staff</u> *Mª del Mar Pérez, Ana López, Gloria Serrano, Berta Obispo, Jacobo Rogado (team leaders included):*
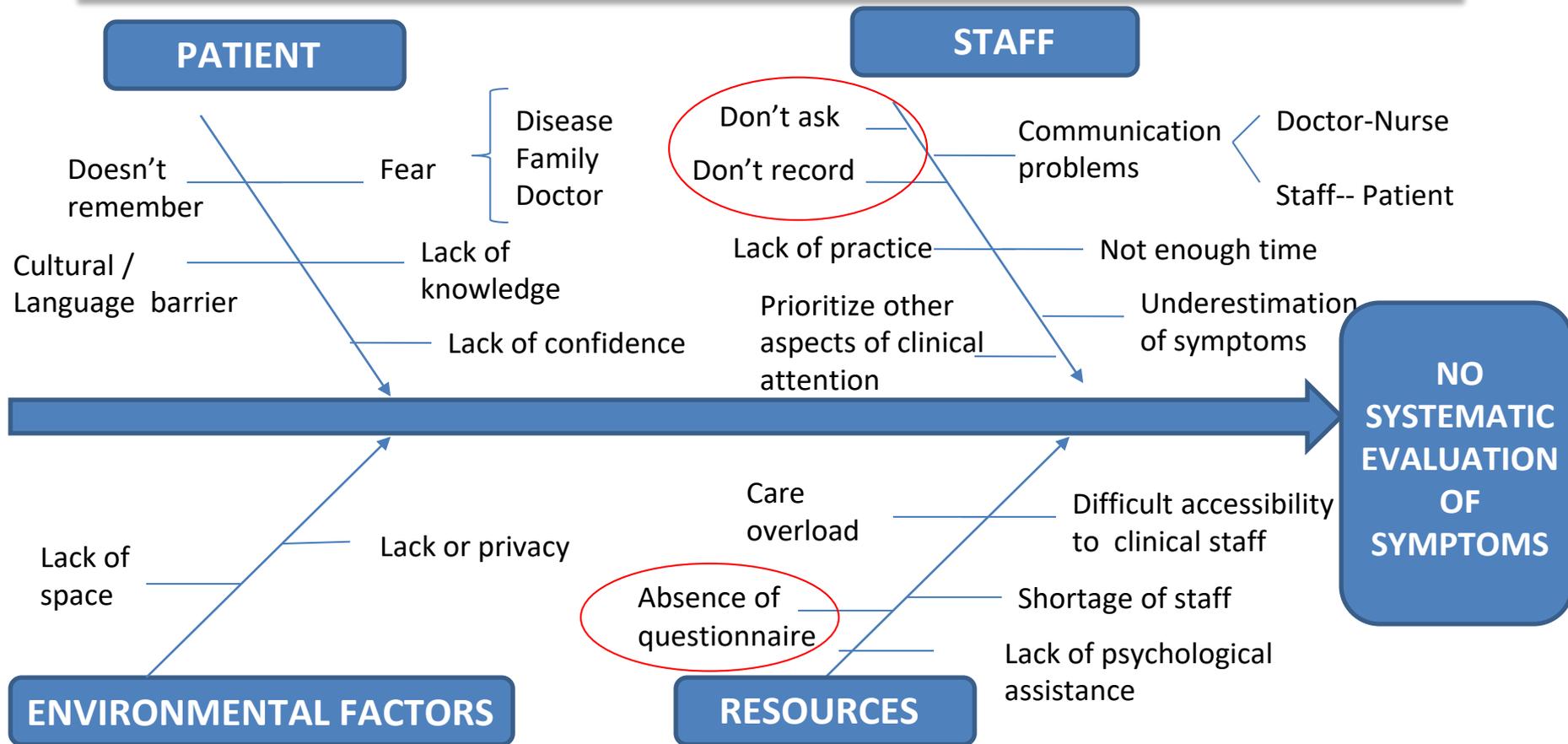
- Fill out a survey in order to identify possible causes of the problem.
- Identify the patient with advanced disease starting intravenous treatment and refer them to the nursing room.
- Collect demographic data and ECOG scale.

**QTP improvement coach:** Paloma Gómez
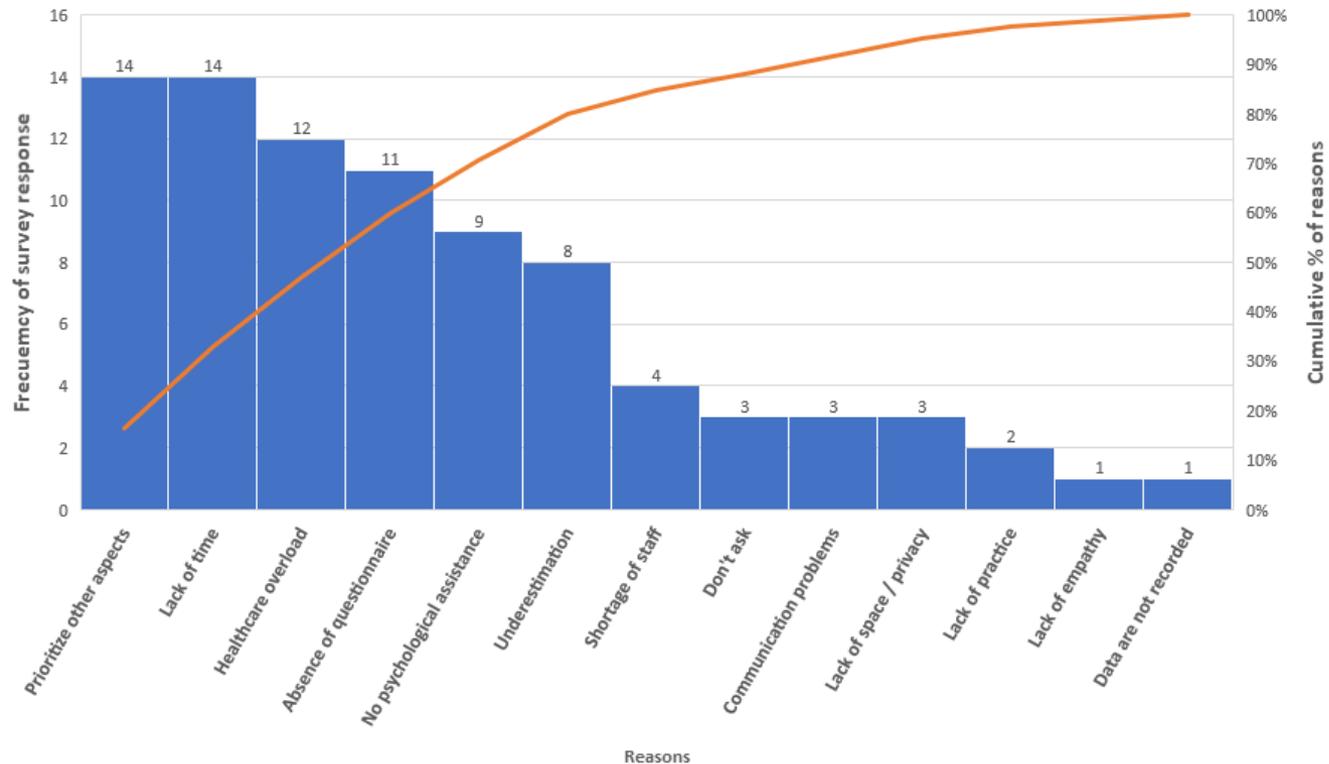
# Old State Process Map

# Cause & Effect Diagram



**PATIENT**

- Doesn't remember
- Fear
- Cultural / Language barrier
- Lack of knowledge
- Lack of confidence
- Disease
- Family
- Doctor

**STAFF**

- Don't ask
- Don't record
- Communication problems
- Doctor-Nurse
- Staff-- Patient
- Lack of practice
- Not enough time
- Prioritize other aspects of clinical attention
- Underestimation of symptoms

**ENVIRONMENTAL FACTORS**

- Lack of space
- Lack or privacy

**RESOURCES**

- Care overload
- Difficult accessibility to clinical staff
- Absence of questionnaire
- Shortage of staff
- Lack of psychological assistance

**NO SYSTEMATIC EVALUATION OF SYMPTOMS**

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# Diagnostic Data



**Reasons why symptoms are not recorded**

Staff survey responses

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# Baseline Data

- From December 2nd 2019 to February 28th 2020, 106 patients were attended in the nurse's office.
- 33 patients with advanced or recurrent disease starting first line therapy were identified.
- Taking symptoms collected in ESAS and HADS as a reference we reviewed these 33 medical records:
  - 91 % of these patients have reported, at least, one symptom.
  - An average of only 2 symptoms per patient were documented.
  - No symptoms were noted down in 3 charts.
- High prevalence of symptoms in cancer patients according to patient-reported outcomes (PRO) standardized questionnaires *(Bubis Lev D. 2018; Walsh D. 2000)*

# Baseline Data
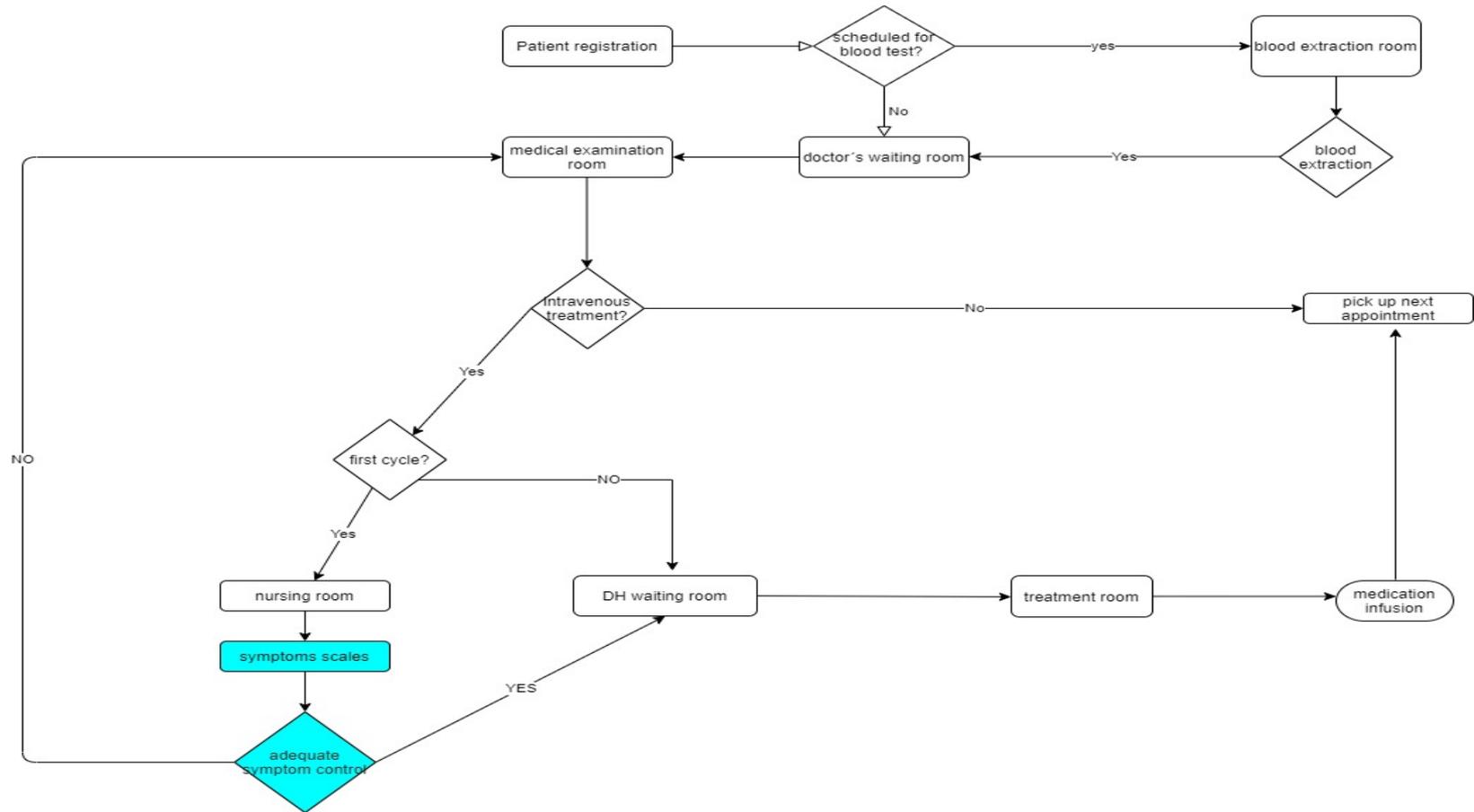
**Documented Symptoms**
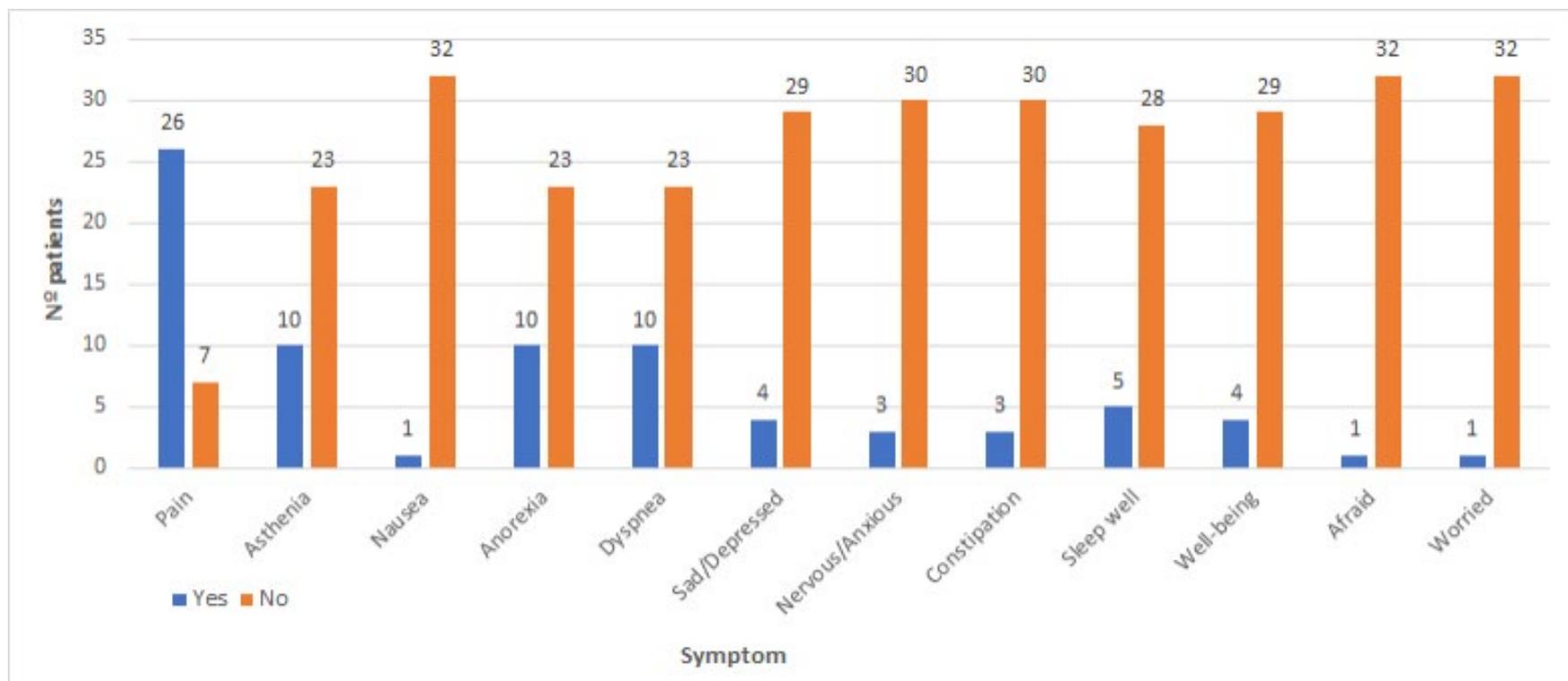
# Aim Statement

By October 30th, we plan to assess and document physical and emotional symptoms in the medical records of 35 % oncology patients starting first line chemotherapy for advanced disease, using the Edmonton Symptom Assessment System (ESAS) and the Hospital Anxiety and Depression Scale (HADS).

# Measures

- **Measure:** percentage of medical charts where patients' physical and emotional symptoms are recorded.
- **Patient population:** patients starting intravenous therapy for recurrent or advanced disease.

  Exclusion patient: patient on oral therapy.
- **Calculation methodology:**
  Numerator: documentation of intervention.
  Denominator: all patients starting iv therapy for recurrent or advanced disease.
- **Data source:**
    - ESAS scale
    - HAD scale
    - Medical record review
- **Data collection frequency:** daily (Monday to Friday)

- **Data quality(any limitations):** patient missed- no identified/ patient refuses to fill out the survey / different people collect the data each week (learning curve) / low number of patients.

# Current State Process Map

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

**Impact**

**High**

- Staff training
- Standardized method (questionnaire)
- Patient screening
- Incorporate data into medical chart

- Increase nursing staff
- Full time nurse
- Clinicians and nurses involvement
- Electronic version of questionnaire

- Remind nurses to collect data regularly
- Remind physicians of patient screening regularly

- Translator device

- More / proper room

**Low**

**Easy**

**Difficult**

**Ease of implementation**

# PDSA Cycle 1 (Test of change)

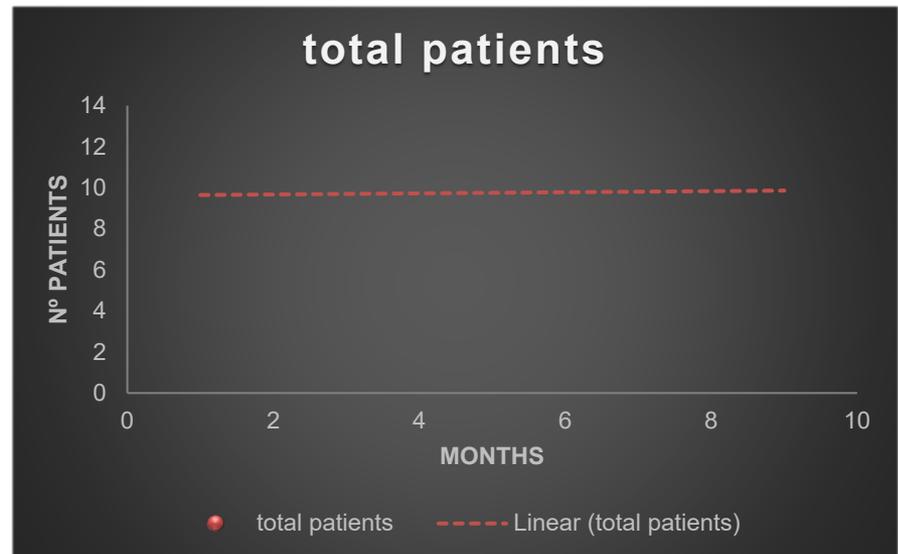| Date of PSDA | Description of Intervention | Results | Action Steps |
|---|---|---|---|
| Feb 17, 2020 | Project presentation | Questionnaire (ESAS-r, HAD) | Educate staff |
| Feb 17 - Feb 28,2020 | Fill out a survey by staff | Identify possible causes | Completed |
| Feb 17 – March 13, 2020 | Train nurses on the implementation of the tool | Learning the method | Continuous education |
| March 2 - Aug 31, .2020 | Patient screening by physicians | Low screening | |
| March 2 – Aug 31, 2020 | Data collection in the medical records by nurses | Not meeting goals | |
| Jul 13 – Aug 31, 2020 | Retrospective analysis of medical records | Quantify the problem | Completed |

# PDSA Cycle 2 (Test of change)

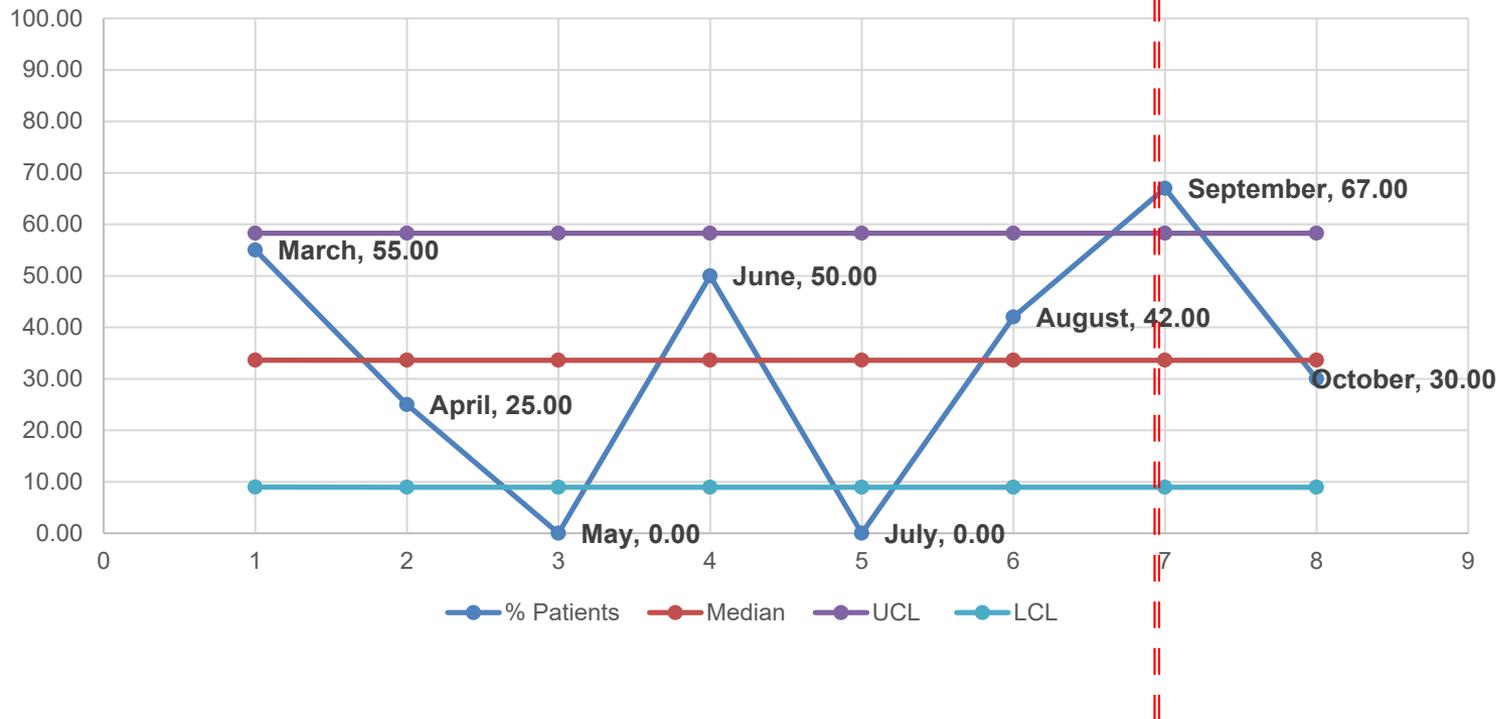| Date of PSDA | Description of Intervention | Results | Action Steps |
|---|---|---|---|
| Sep 1 - Oct 30, 2020 | <u>Physicians</u><br>Reminder whatspps<br>Verbal reminder | Improved screening | Review previous results<br>Evaluation the process |
| Sep 1 - Oct 30, 2020 | <u>Nurses</u><br>Reminder emails<br>Personal reminder | More compliance<br>Increase in reported symptoms | Review previous results<br>Evaluation the process |

# Data scatter plot



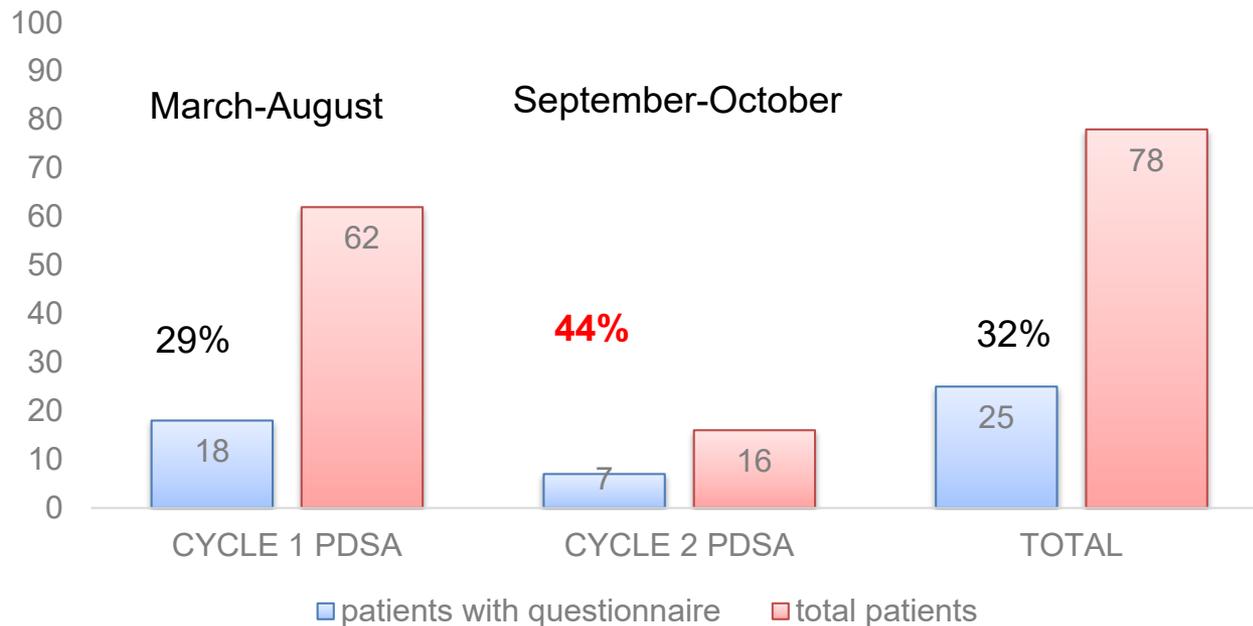**First line therapy patients for advanced disease (March-October)**

# Change data

**Percentage of patients with documented symptoms in medical record**

Intervention



- % Patients
- Median
- UCL
- LCL

March, 55.00
April, 25.00
May, 0.00
June, 50.00
July, 0.00
August, 42.00
September, 67.00
October, 30.00

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# Change data: PDSA Cycle  1 & 2

**Patients attended**



- March-August
- September-October

Chart values:
- CYCLE 1 PDSA: patients with questionnaire = 18, total patients = 62, 29%
- CYCLE 2 PDSA: patients with questionnaire = 7, total patients = 16, **44%**
- TOTAL: patients with questionnaire = 25, total patients = 78, 32%

Legend: ■ patients with questionnaire   ■ total patients

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# Materials Developed

## Left form

**Please circle the number that best describes:**

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No pain | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Worst possible pain |
| Not tired | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Worst possible tiredness |
| Not nauseated | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Worst possible nausea |
| Not depressed | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Worst possible depression |
| Not anxious | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Worst possible anxiety |
| Not drowsy | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Worst possible drowsiness |
| Best appetite | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Worst possible appetite |
| Best feeling of wellbeing | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Worst possible feeling of wellbeing |
| No shortness of breath | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Worst possible shortness of breath |
| Other problem | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |

Patient's Name _____

Date _____ Time _____

Complete by (check one)
☐ Patient
☐ Caregiver
☐ Caregiver assisted

## Right form

**Hospital Anxiety and Depression Scale (HADS)**

**Instructions:** Doctors are aware that emotions play an important part in most illnesses. If your doctor knows about these feelings he or she will be able to help you more. This questionnaire is designed to help your doctor know how you feel. Read each item and circle the reply which comes closest to how you have been feeling in the past week. Don't take too long over your replies: your immediate reaction to each item will probably be more accurate than a long thought out response.

| I feel tense or 'wound up': | A | I feel as if I am slowed down: | D |
|---|---|---|---|
| Most of the time | 3 | Nearly all of the time | 3 |
| A lot of the time | 2 | Very often | 2 |
| Time to time, occasionally | 1 | Sometimes | 1 |
| Not at all | 0 | Not at all | 0 |

| I still enjoy the things I used to enjoy: | D | I get a sort of frightened feeling like 'butterflies in the stomach': | A |
|---|---|---|---|
| Definitely as much | 0 | Not at all | 0 |
| Not quite so much | 1 | Occasionally | 1 |
| Only a little | 2 | Quite often | 2 |
| Not at all | 3 | Very often | 3 |

| I get a sort of frightened feeling like something awful is about to happen: | A | I have lost interest in my appearance: | D |
|---|---|---|---|
| Very definitely and quite badly | 3 | Definitely | 3 |
| Yes, but not too badly | 2 | I don't take as much care as I should | 2 |
| A little, but it doesn't worry me | 1 | I may not take quite as much care | 1 |
| Not at all | 0 | I take just as much care as ever | 0 |

| I can laugh and see the funny side of things: | D | I feel restless as if I have to be on the move: | A |
|---|---|---|---|
| As much as I always could | 0 | Very much indeed | 3 |
| Not quite so much now | 1 | Quite a lot | 2 |
| Definitely not so much now | 2 | Not very much | 1 |
| Not at all | 3 | Not at all | 0 |

| Worrying thoughts go through my mind: | A | I look forward with enjoyment to things: | D |
|---|---|---|---|
| A great deal of the time | 3 | A much as I ever did | 0 |
| A lot of the time | 2 | Rather less than I used to | 1 |
| From time to time but not too often | 1 | Definitely less than I used to | 3 |
| Only occasionally | 0 | Hardly at all | 2 |

| I feel cheerful: | D | I get sudden feelings of panic: | A |
|---|---|---|---|
| Not at all | 3 | Very often indeed | 3 |
| Not often | 2 | Quite often | 2 |
| Sometimes | 1 | Not very often | 1 |
| Most of the time | 0 | Not at all | 0 |

| I can sit at ease and feel relaxed: | A | I can enjoy a good book or radio or TV programme: | D |
|---|---|---|---|
| Definitely | 0 | Often | 0 |
| Usually | 1 | Sometimes | 1 |
| Not often | 2 | Not often | 2 |
| Not at all | 3 | Very seldom | 3 |

Questions relating to anxiety are indicated by an 'A' while those relating to depression are shown by a 'D'. Scores of 0-7 in respective subscales are considered normal, with 8-10 borderline and 11 or over indicating clinical 'caseness'.
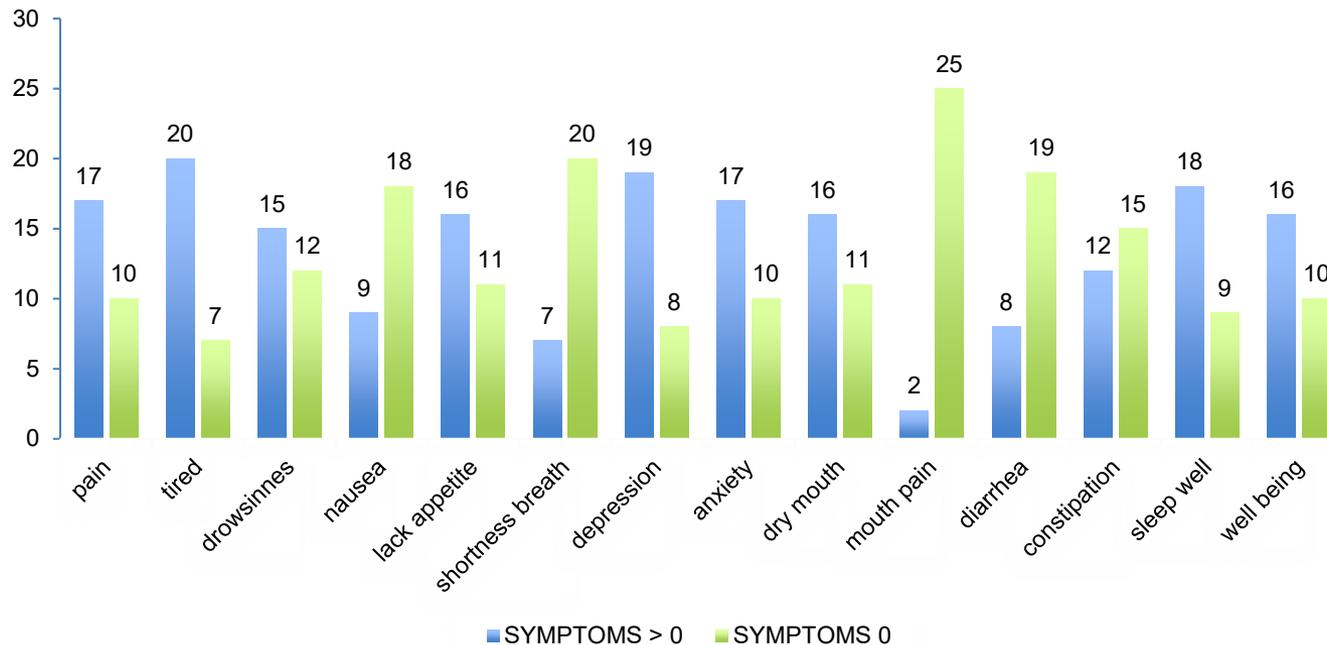
# Materials Developed

| Characteristics patients | N=25 n (%) |
|---|---|
| Age | 66 ( 45 – 86) |
| Sex Male Female | 13 (52%) 12 (48%) |

| Tumor | N=25 n (%) |
|---|---|
| Pancreas | 6 (24) |
| Lung | 5 (20) |
| Bladder | 4 (16) |
| Kidney | 2 (8) |

| Tumor | N=25 n (%) |
|---|---|
| Breast | 2 (8) |
| Mesothelioma | 1 (4) |
| Colorectal | 1 (4) |
| Occult primary | 1 (4) |
| Head & Neck | 1 (4) |
| Endometrium | 1 (4) |
| Prostate | 1 (4) |

# Materials Developed: ESAS-r



**Documented Symptoms**

| Symptom | SYMPTOMS > 0 | SYMPTOMS 0 |
|---|---|---|
| pain | 17 | 10 |
| tired | 20 | 7 |
| drowsinnes | 15 | 12 |
| nausea | 9 | 18 |
| lack appetite | 16 | 11 |
| shortness breath | 7 | 20 |
| depression | 19 | 8 |
| anxiety | 17 | 10 |
| dry mouth | 16 | 11 |
| mouth pain | 2 | 25 |
| diarrhea | 8 | 19 |
| constipation | 12 | 15 |
| sleep well | 18 | 9 |
| well being | 16 | 10 |

■ SYMPTOMS > 0  ■ SYMPTOMS 0

# Materials Developed: ESAS-r

**Intensity of syptoms**



The chart shows intensity (0-10) for each symptom:

| Symptom | Intensity |
|---|---|
| Pain | 3.12 |
| Tired | 3.68 |
| Drowsinnes | 2.56 |
| Nausea | 1.56 |
| Lack appetite | 4.2 |
| Shortness breath | 1 |
| Depression | 3.32 |
| Anxiety | 3.52 |
| Well being | 4.42 |
| Dry mouth | 3.6 |
| Dhiarrea | 1.12 |
| Constipation | 1.64 |
| Sleep well | 4.04 |

Symptoms
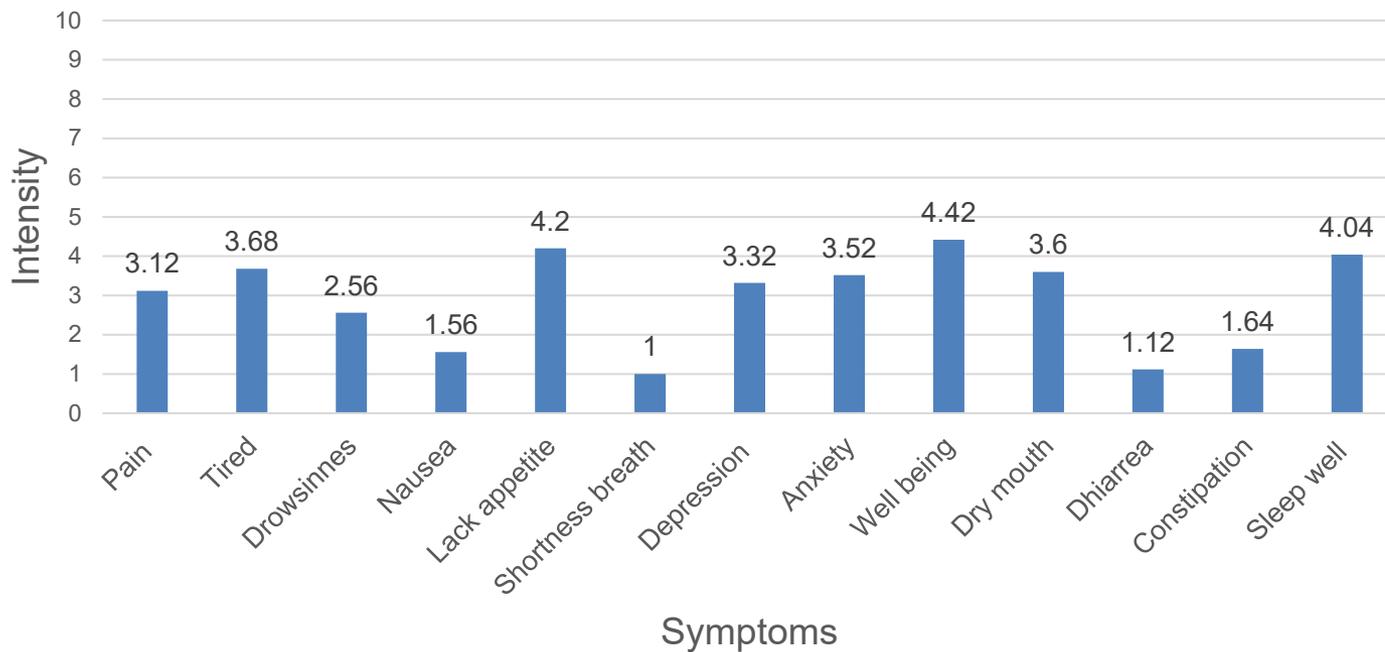
# Materials Developed: HADs



Hospital Anxiety and Depression Scale (HADS)

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| Score | Anxiety n (%) | Depression n (%) |
|-------|---------------|------------------|
| 0-7 | 12 (50) | 15 (62) |
| 8-10 | 6 (25) | 4 (17) |
| ≥ 11 | 6 (25) | 5 (21) |

# Conclusions

- A rate of 29% of patients with documented symptoms was reached after the first intervention , which increased to 44% after the second.

- Well-being and sleep disturbances, lack of appetite and tiredness  where the symptoms that reached the highest intensity on the ESAS scale.

- Almost a quarter of patients scored ≥ 11 on the HAD scale.

- The incorporation of a standardized method allows a more accurate and comprehensive assessment of the patient.

# Next Steps/Plan for Sustainability

- Continue to remind clinical staff of the implementation of the tool.

- Increase the rate of patients with documented symptoms.

- Electronic form of the scales to facilitate the collection of data.

- Evaluate the process regularly and provide feedback to staff to achieve greater involvement.

- Develop procedures to refer patients with high scores for clinical evaluation.

**Cristina Pangua. Clinical oncologist**
**Almudena Martín. Clinical oncologist**

**Hospital Universitario Infanta Leonor**
SaludMadrid
Hospital Virgen de la Torre

# Systematic assessment of symptoms in oncology outpatient with advanced disease

**AIM**: By October 30th, we plan to assess and document physical and emotional symptoms in the medical records of 35 % oncology patients starting first line chemotherapy for advanced disease, using the Edmonton Symptom Assessment System (ESAS) and the Hospital Anxiety and Depression Scale (HADS).

**INTERVENTION:**

PDSA 1 ( Feb 17- Aug 31,2020):
- Fill out a survey by staff
- Train nurses on the implementation of the tool
- Patient screening by phisicians
- Data collection in the medical records by nurses

PDSA 2 (Sep 1- Oct 30, 2020)
- Reminder to physicians and nurses : verbal, whatsapps, e-mails

**TEAM:**

Oncology Department. HUIL:
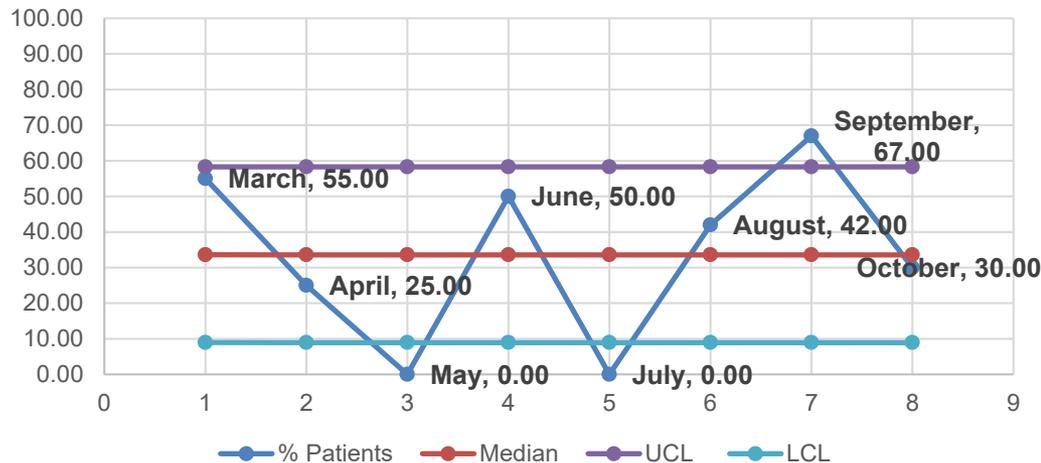- Medical stall
- Nurse Staff

**PROJECT SPONSORS:**
- Dr. Miguel Angel Lara

**RESULTS:**
- PDSA 1: 29% of patients with documented symptoms
- PDSA 2: 44% of patients with documented symptoms

32%

**Percentage of patients with documented symptoms in medical record**



March, 55.00; April, 25.00; May, 0.00; June, 50.00; July, 0.00; August, 42.00; September, 67.00; October, 30.00

Legend: % Patients — Median — UCL — LCL

**CONCLUSIONS:**

▪ A rate of 29% of patients with documented symptoms was reached after the first intervention , which increased to 44% after the second.

▪ Well-being and sleep disturbances, lack of appetite and tiredness where the symptoms that reached the highest intensity on the ESAS scale.

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