



# Treatment compliance

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## The psychological dimension in adults

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**Dr Loredana Dinapoli Psychologist Psychotherapist  
UOC Radioterapia Oncologica Gemelli ART**

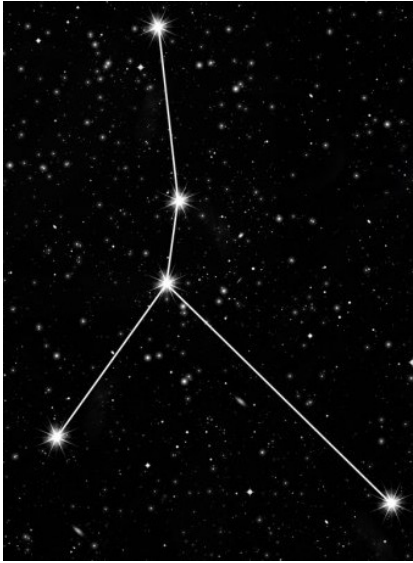
**Gemelli**



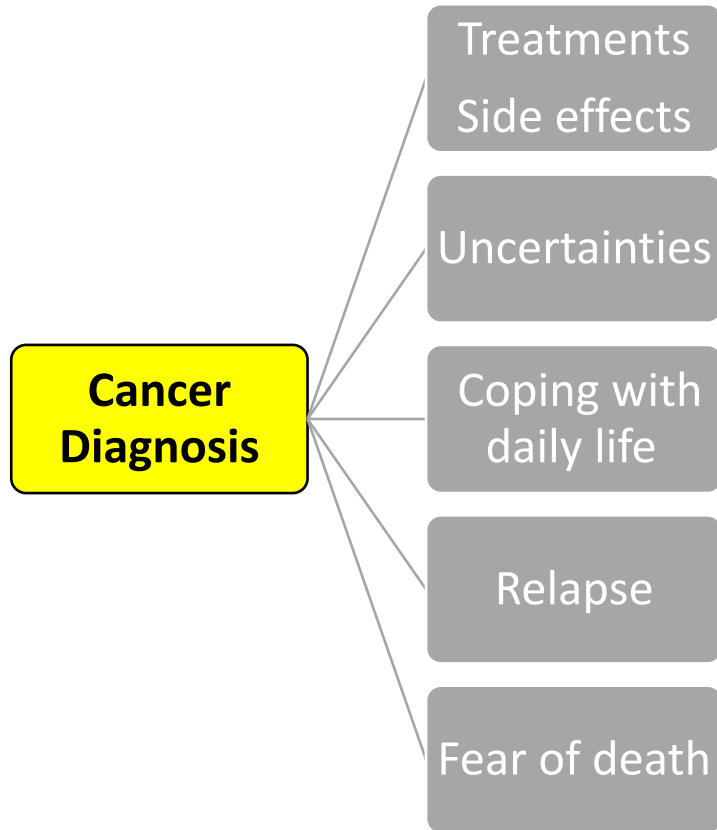
Fondazione Policlinico Universitario A. Gemelli  
Università Cattolica del Sacro Cuore

**ART**

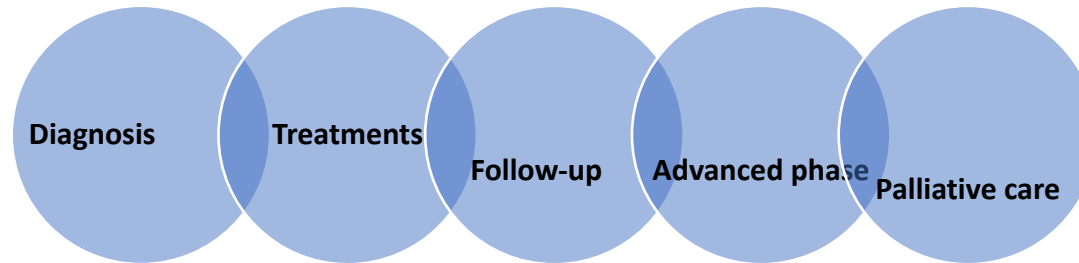
Advanced Radiation  
Therapy



Cancer Constellation



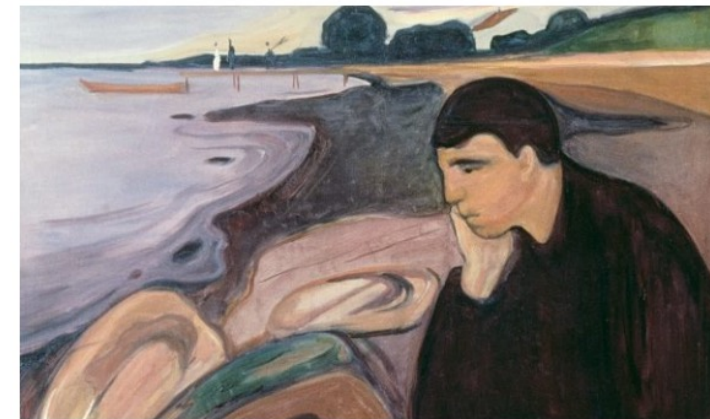
**Psychological distress**, an indicator of psychiatric disorders, such as **anxiety and depression**, is accepted as an important result of **harsh experiences** caused by disease and treatment



# RADIOTHERAPY, IN ALL ACTIVE PHASES OF CURE



*Melancholy*  
E. Munch



## SPECIFIC PSYCHOLOGICAL REQUIREMENTS

# Anxiety Depression 26% while starting RT

## Requirements during RT

Support Care Cancer

**Table 2** Frequency of affective disorders, suicide ideation/risk, anxiety disorders, and adjustment disorders, before radiotherapy, at the end of radiotherapy, and at the 1-month follow-up

Psychopathological disorders. Structured interview MINI and DSM-IV-TR	Onset of RT <i>N</i> = 232%	End of RT <i>N</i> = 130%	Follow-up <i>N</i> = 130%	Cochran's <i>Q</i> test significance	Sig. McNemar T1–T2 T1–T3 T2–T3
Affective disorder	7.3	4.6	4.6	<i>p</i> = .33	<i>p</i> = .50 <i>p</i> = .38 <i>p</i> = 1.0
Suicide ideation/risk	13.8	8.5	8.5	<i>p</i> = .39	<i>p</i> = .18 <i>p</i> = .42
Anxiety disorders	14.2	15.34	17.7	<i>p</i> = .86	
Adjustment disorders	10.3	9.2	6.2	<i>p</i> = .47	
Grouped disorders (excluding overlapped disorders) <sup>a</sup>	32.3	26.9	26.9	<i>p</i> = .25	

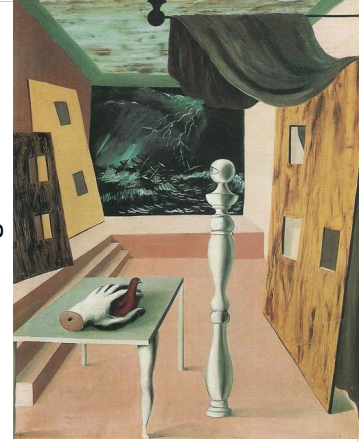
T1 onset of radiotherapy, T2 end of radiotherapy, T3 1-month follow-up

<sup>a</sup>Overlapped: patients with suicide ideation/risk that suffer from mood, anxiety, or adjustment disorders

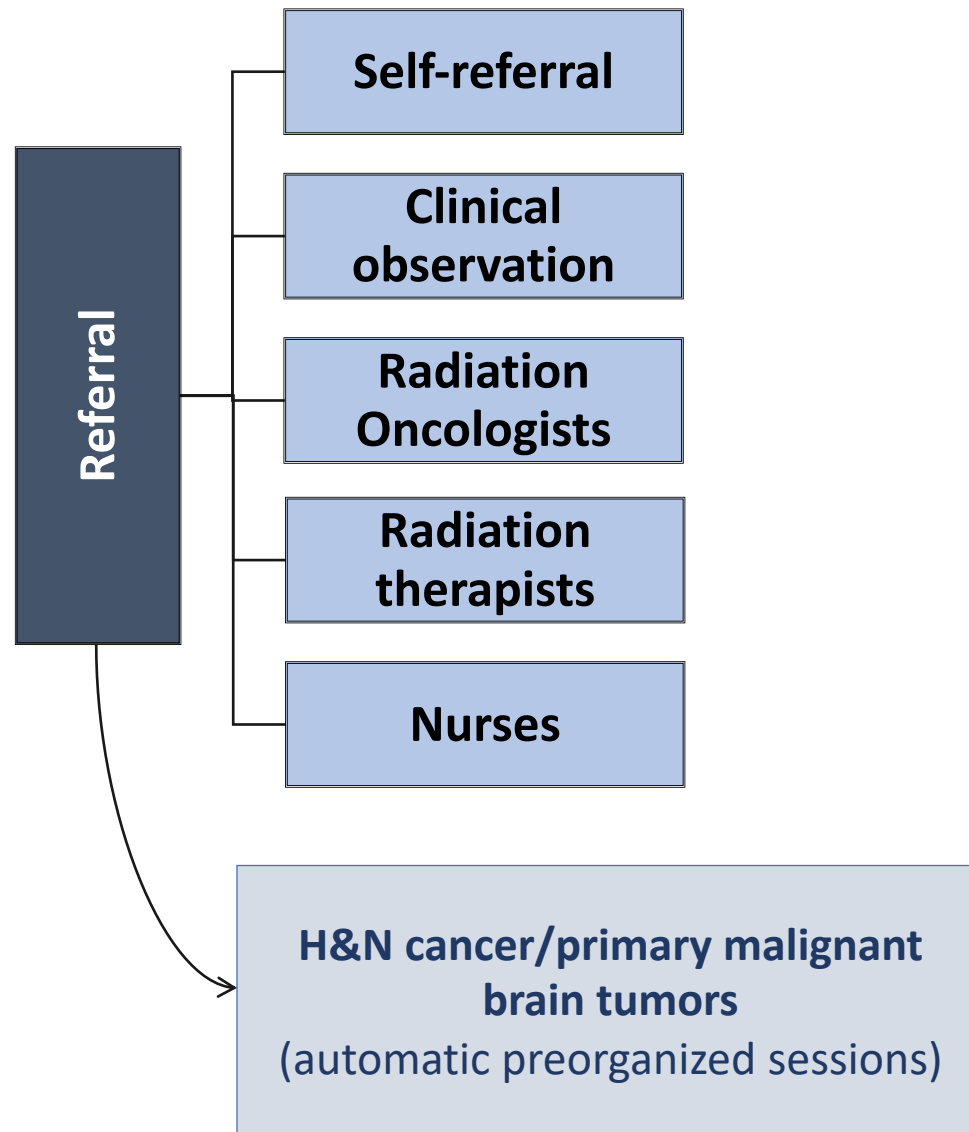
**Table 4.** Associations of QoL with variables determined using the multivariate regression analysis

	Beta	t	R <sup>2</sup>	Adjusted R <sup>2</sup>	p value
Before initiating radiotherapy					
Resilience	0.447	2.288	0.199	0.161	0.033
Immediately after radiotherapy					
Financial difficulty	-0.524	-2.816	0.274	0.239	0.010
3 months after radiotherapy					
Presence of chronic diseases	-0.549	-3.547	0.559	0.513	0.002
Nausea and vomiting	-0.419	-2.705		0.014	

The Difficult Crossing  
R. Magritte



# Psychological service for adult patients at Gemelli ART



*The Escape Ladder*  
J. Miró

# Psychological service for adult patients at Gemelli ART

## ✓ Personalized Psychological support

Minimum = 3 sessions ('**typical**' schedule)

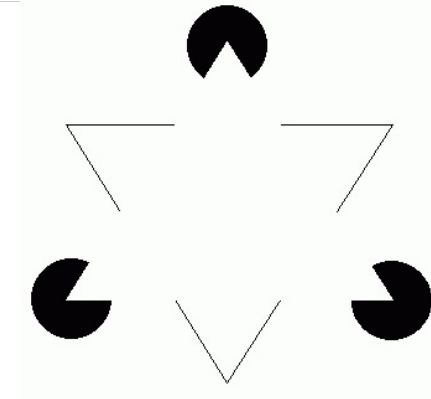
Maximum = 8 sessions ('**intensive**' schedule)

50' minutes

The **psychotherapeutic approach** = Gestalt psychotherapy:

- (a) relational and non-authoritarian
- (b) experiential and present-centered
- (c) **humanistic** and non-pathologizing
- (d) uses the sensation of the body as a foundation for connecting to moment-to moment experiences.

The objective of Gestalt psychotherapy is to help patients become more **authentic**, **integrated**, and **aware** of their experiences



*The triangle of Kanizsa*

# Personalized Psychological Support

Three stand-alone phases:

**1. processing emotions** related to the cancer diagnosis/recovering psychological well-being

1° SESSION **SCREENING**= SELF-ADMINISTRATION OF

**DISTRESS THERMOMETER**

**HOSPITAL ANXIETY AND DEPRESSION SCALE**

**2. addressing RT** with emotional and cognitive coping strategies to manage side effects and psychological effects

**3. organizing personal strategies** at the end of RT treatment to support restarting everyday life and/or beginning a new therapeutic approach.

Supportive Care in Cancer  
<https://doi.org/10.1007/s00520-021-06000-7>

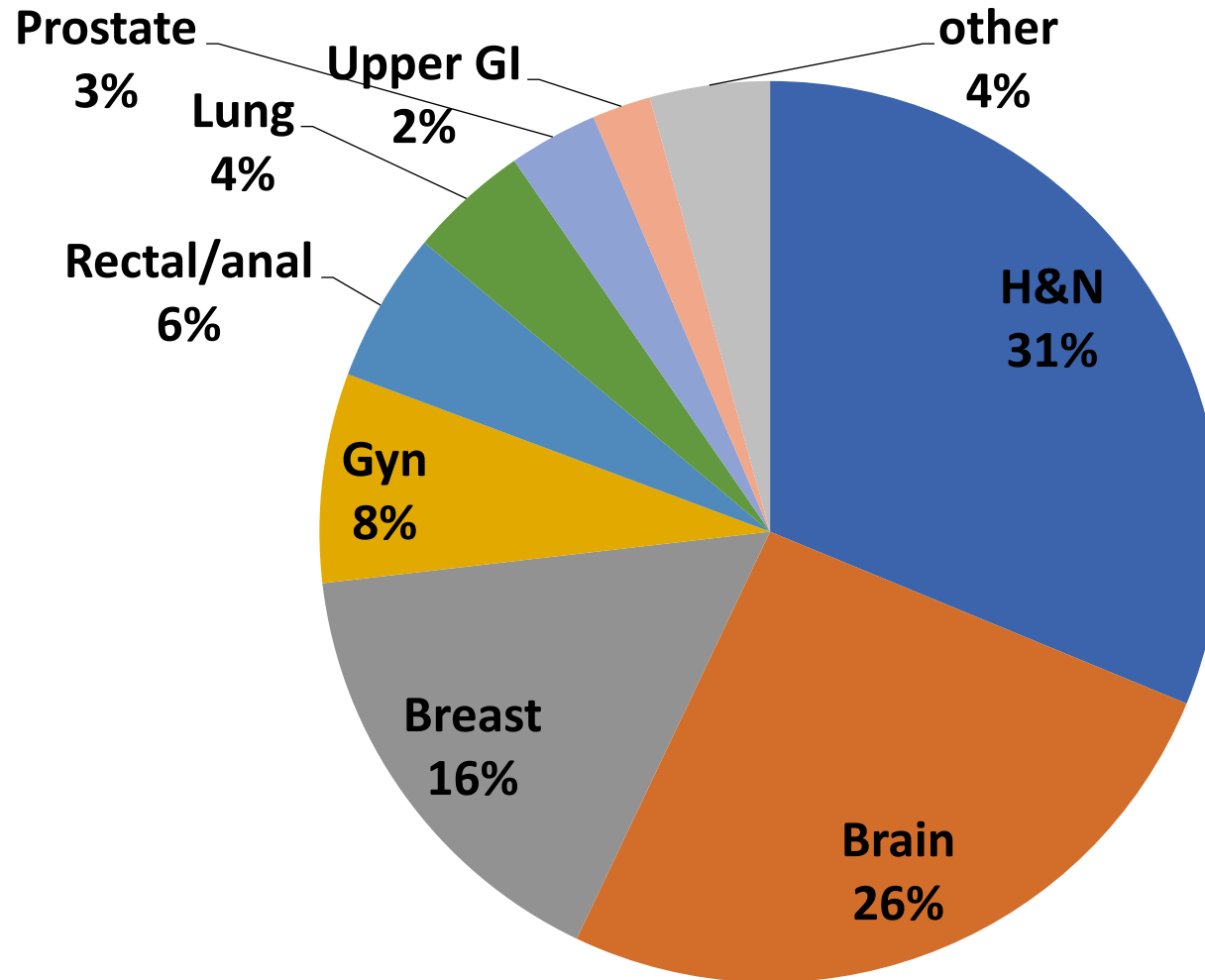
ORIGINAL ARTICLE



Personalised support of brain tumour patients during radiotherapy based on psychological profile and quality of life

Loredana Dinapoli<sup>1,2</sup> • Silvia Chiesa<sup>1</sup> • Nicola Dinapoli<sup>1</sup> • Roberto Gatta<sup>3</sup> • Francesco Beghella Bartoli<sup>1</sup> • Serena Bracci<sup>1</sup> •  
Ciro Mazzaella<sup>1</sup> • Maria Zoe Sanfilippo<sup>3</sup> • Giovanni Sabatino<sup>4,5</sup> • Simona Gaudino<sup>6</sup> • Giuseppe Maria Della Pepa<sup>7</sup> •  
Vincenzo Frascino<sup>1</sup> • Vincenzo Valentini<sup>1,3</sup> • Mario Balducci<sup>1,3</sup>

**% of patients attending  
Psychological service**



**~ 300 patients/year**



# «Mask» Anxiety/Claustrophobic patients

Received: 6 July 2018 | Revised: 9 January 2019 | Accepted: 11 January 2019  
DOI: 10.1002/pon.5000

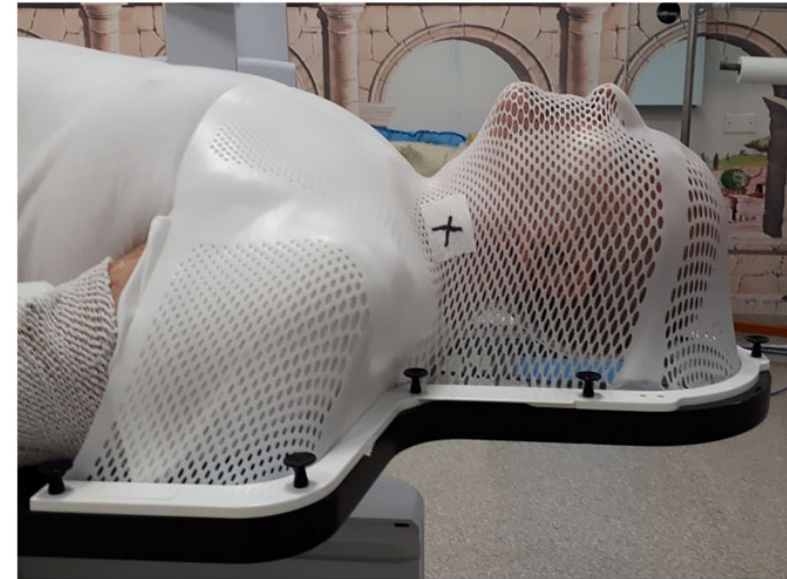
CLINICAL CORRESPONDENCE

WILEY

Efficacy of an eye movement desensitization and reprocessing (EMDR) intervention for a head and neck cancer patient with intolerable anxiety undergoing radiotherapy

Loredana Dinapoli<sup>1</sup> | Mariangela Massaccesi<sup>1</sup> | Giuseppe Colloca<sup>1</sup> | Angela Tenore<sup>1</sup> | Nicola Dinapoli<sup>1</sup> | Vincenzo Valentini<sup>1,2</sup>

**EMDR\*** approach for  
treatment of traumatic  
experiences in cancer



«Having to wear the shell»

**\*Eye Movement Desensitization and Reprocessing**

WHO 2013

# PSYCHOLOGICAL IMPACTS DURING COVID-19 QUARANTINE IN ITALIAN FEMALE CANCER PATIENTS: A MONO-INSTITUTIONAL EXPERIENCE

L. Dinapoli, L. Boldrini, N. Dinapoli, A. Tenore, V. Masiello, E. Marconi, S. Chiesa, M.A. Gambacorta, M. Balducci, V. Valentini, D. Chieffo

Vol.4 (2021), pag. 54 - 59



- **Online support** during the first days of lockdown
- **Female patients** selected because received *intensive* support during RT

## Interview

- **Stronger**, because they already fought cancer, stay **at home** from work, **work on their emotions** to find ways to gain **mastery** and **resilience**
- Cultivating **hobbies**, the same they relied on during cancer treatments (like decoupage, relaxation techniques and meditation, housework, indoor sports)
- Remaining **active**, using routines to organize time at home

# Ongoing Research Protocols

❑ **Spirituality** *Spirituality, resilience and psychological profile of glioblastoma patients during radiotherapy*

❑ **Modesty** *Evaluating breast cancer patients modesty during radiotherapy. A multicentric study*

❑ **Spirit** *Psychological support in Interventional Radiotherapy*

# Spirituality

- ✓ **Spirituality** is “a framework that provides people with a sense of ultimate purpose and meaning in life”.
- ✓ **Resilience** is the “ability to withstand adversity and bounce back and grow despite life’s downturns”.

Investigate **spirituality, resilience** and psychological profile in glioblastoma (GBM) patients undergoing RT and their influence on **survival**

- ✓ Multicentric observational protocol (oral communication IPOS 2021)
- ✓ Tests: **Spirituality (FACIT-SP12); Resilience (CD-RISC)**.
- 104 patients: 68 male, 36 female, median age 59.
- Median FUP was 338 days.

Spiritual in art W. Kandinsky



# Spirituality

## Data Analysis

### Meaningful prognostic factors in GBM:

	P-Value log rank test
1. Age cutoff > 65	<b>0,005</b>
2. Sex	0,500
3. Surgery type: gross total resection, partial resection, biopsy	0,800
4. Methylation MGMT	0,100
5. PF: ECOG	0,300
6. RT dose (RTD): long course (RTD $\geq$ 60 Gy) vs short course (RTD<60 Gy)	0,400

### Tests results for spirituality and resilience

7. FACIT-SP12	<b>0,008</b>
8. CD-RISC	<b>0,006</b>

Overall survival (OS) analysis was measured by Kaplan Meier log-rank test (KMLR) in univariate setting, and Cox Proportional Hazards (CPH) in multivariate setting.

Fig. 1: FACIT-SP12

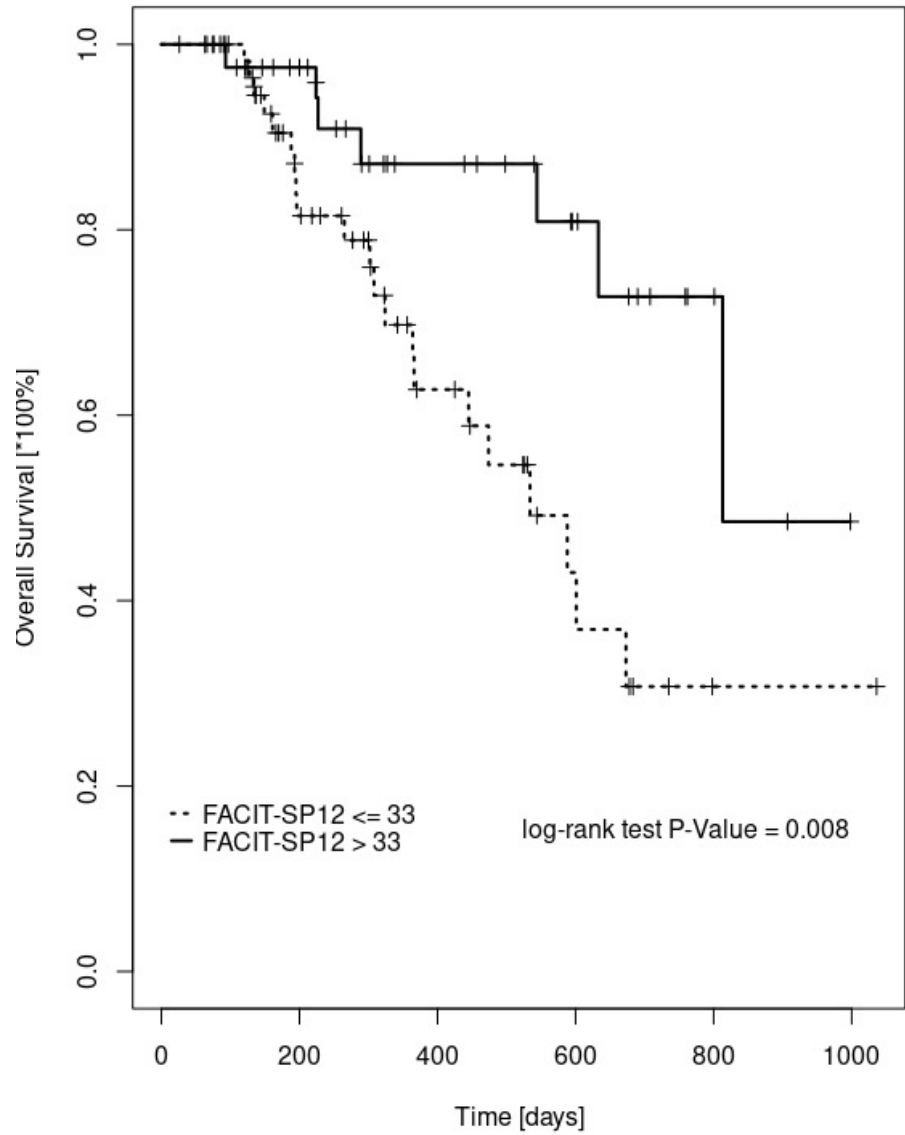
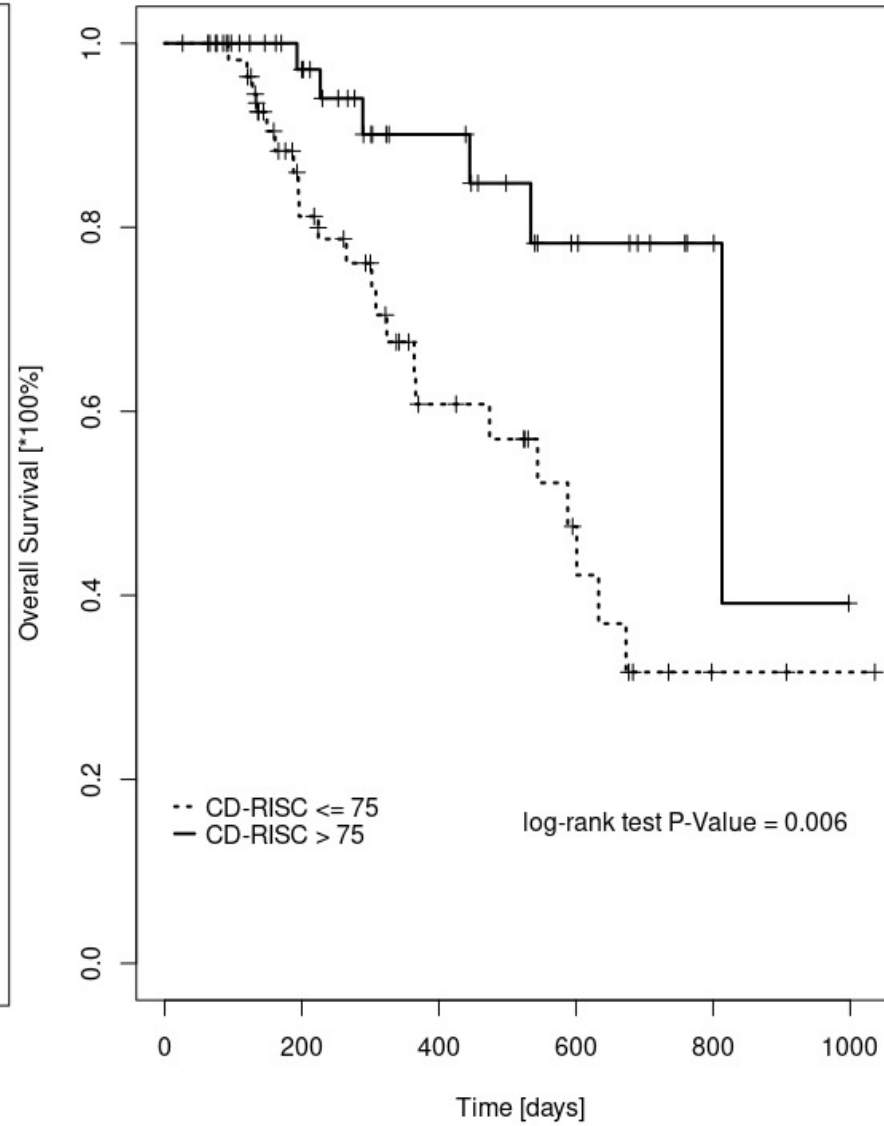


Fig. 2: CD-RISC

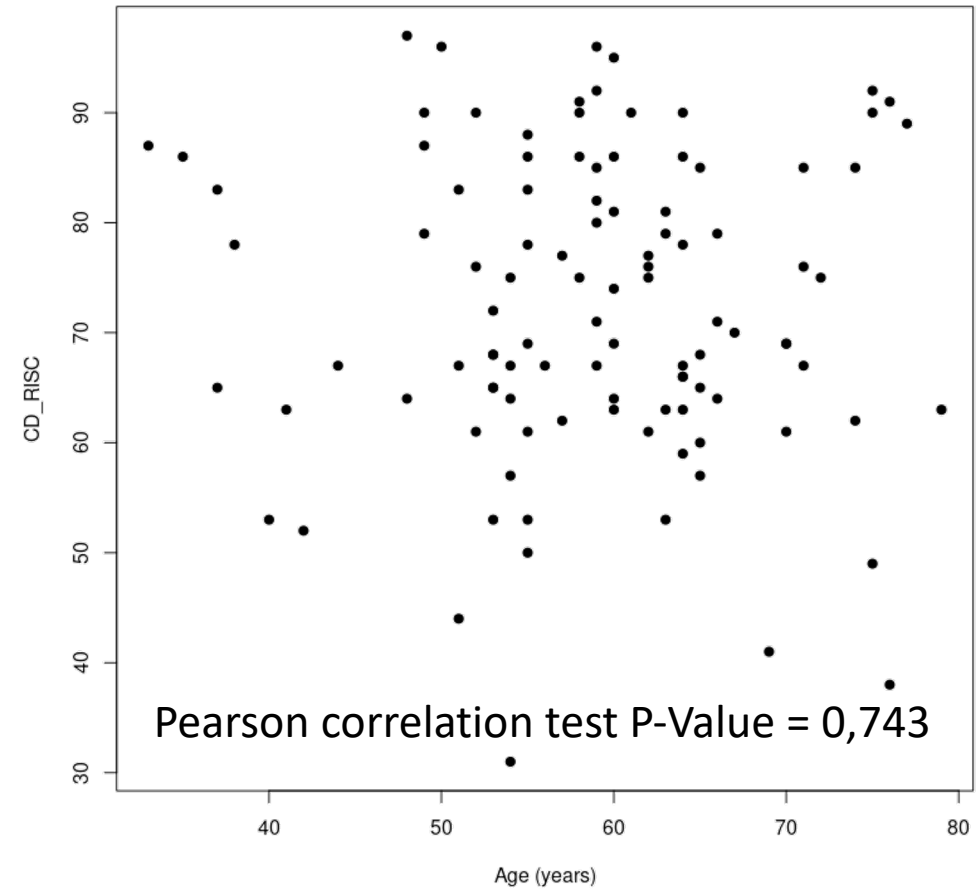
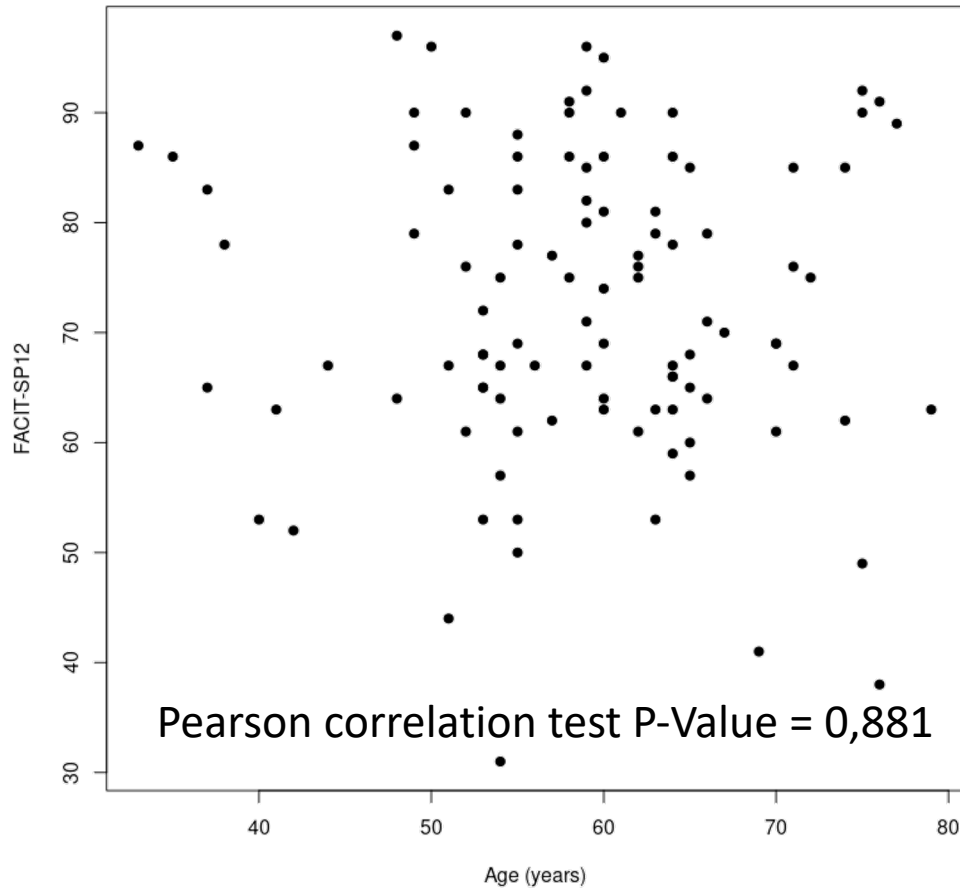


Patients with lower spirituality and lower resilience **survived shorter** than patients with higher spirituality and higher resilience



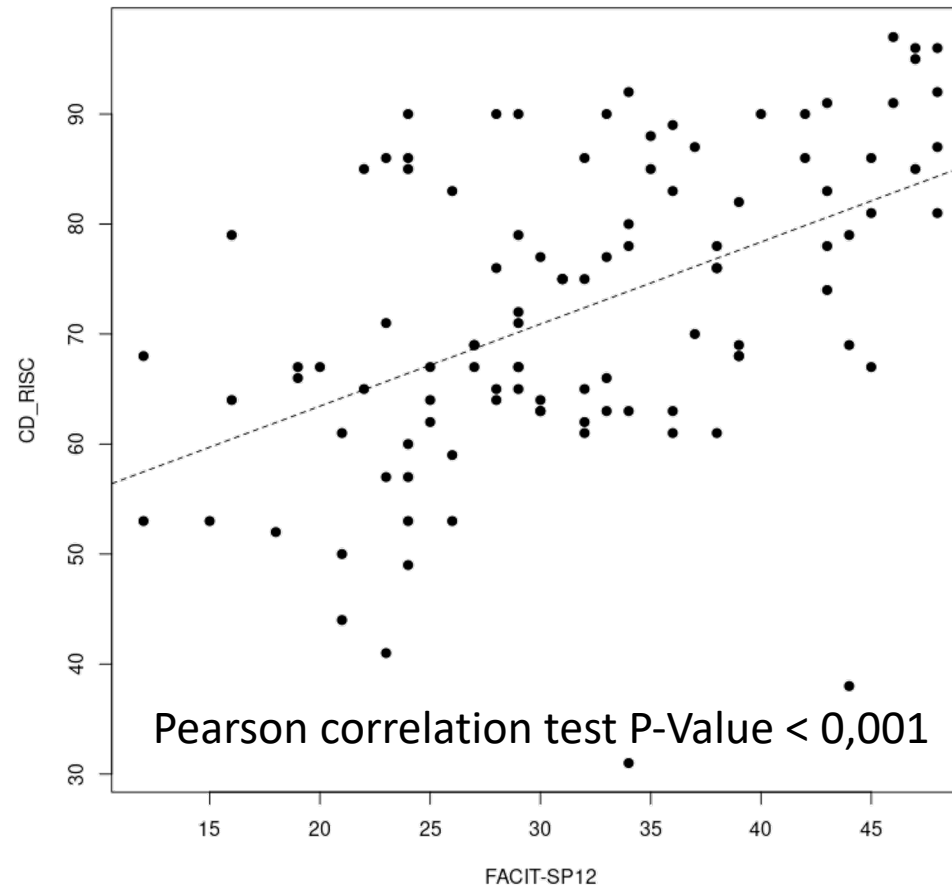
# Spirituality Results

Are elderly patients less resilient or spiritual?



# Spirituality Results

Are FACIT-SP12 and CD-RISC correlated?





# Spirituality

## Results

### Results of multivariate Cox model analysis

	coef	hazard-ratio	P-Value
Age	0,0646	1,0668	0,0666
CD-RISC>75	-1,2054	0,2996	0,00909
Concordance 0,732			

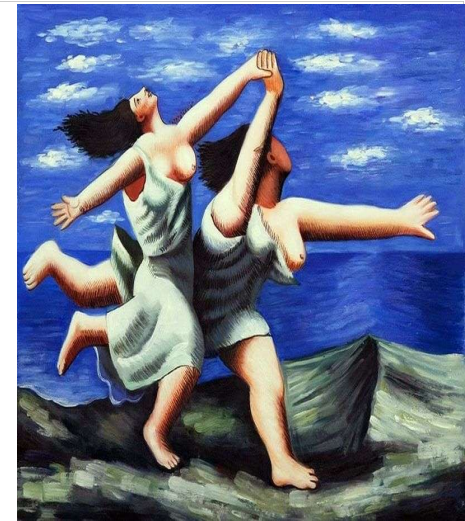
# Spirituality

## Conclusions

- ◆ Psychological support in GBM patients should integrate the **empowerment of resilience**, in order to elicit **spiritual resources** and help patients to better cope with such a dismal diagnosis.
- ◆ Profiling spirituality and resilience in GBM patients during RT can give insights to identify **novel characteristics in GBM** patients for prognostic evaluation.
- ◆ According this experience the **mechanistic relationship** between resilience and better prognosis is worth to be further biologically investigated too.

# Modesty

Great attention is paid in patients **positioning** and clinical **conditions** monitoring during irradiation  
Little concern has been reserved in literature to patients' **modesty** and **body perception** during RT.



Two women running on the beach  
P. Picasso

## Primary objective

to describe how **nudity and modesty** are **perceived by patients** undergoing RT for **breast cancer**.

## Secondary objective

to collect **suggestions** from **patients**, in order to improve treatment experience quality and perception to profile patients based on their answers and scores.

# Modesty

- Multicentric observational protocol (oral communication IPOS2021/poster highlight ESTRO 2021)
- **245 patients** have been enrolled since August 2020 in three Italian institutions

Patients mean age was 56±10.5 years

All the patients have completely filled a **specific original questionnaire**

**78% not embarrassed** being bare chest during RT

**40%** exposing themselves undressed has **become more difficult after cancer surgery.**

Religious feelings, RT staff sex and age did not appear to influence modesty.

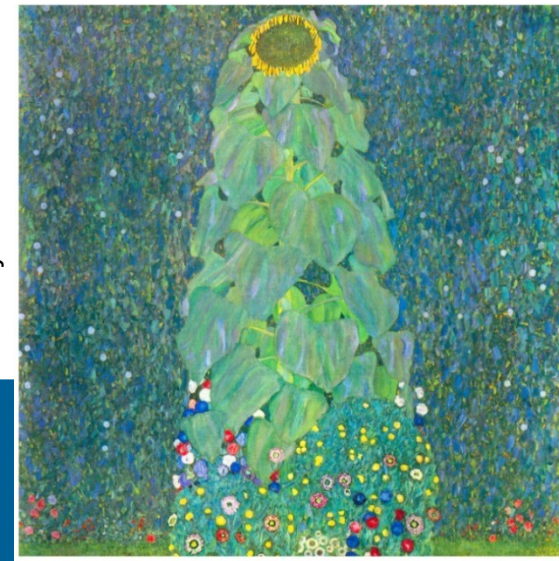
## SUGGESTIONS

- Presence of at least **one female member in the staff** during RT sessions
- Presence of **the same staff members** during the entire course of RT
- Reducing **distance** from dressing room to treatment couch

# Spirit *Psychological support and interventions for cervical cancer patients candidates to IRT*

- ❑ **Background:** brachytherapy causes anxiety and distress for most women/anxiety levels taking a long time to reduce/30% having acute stress disorder
- ❑ **Objective:** supporting support IRT patients in the three phases of the procedure (pre - peri and post procedure) with the aim of reducing the **stressful impact of IRT** and possible short and long term **psychological consequences**
- ❑ **Methods:** baseline and retest assessment with DT and NRS for IRT anxiety
- ❑ **Psychological Intervention:** patient relaxation, psychoeducation, teaching techniques of stabilization

The sunflower G. Klimt



31 patients with cervical cancer candidates to intrauterine IRT

Mean age 56,7 (range 28-88)

10 no significant distress (32.3%)

18 significant NRS for IRT anxiety (58%)

10 out of 18 patients had  
**already been followed**  
during external beam RT

	TO (n=31)	T1 (n=14)
DT	5.6	5.3
NRS	5.2	4.5

### Main issues during psychological sessions:

Expectations regarding the disease/stop treatment

### Limits/Strenghts

IRT as another effort/great trust in the équipe

# The RAMSI (Radioterapia Amica Mia SmileIN™ (SI) My Friend Radiotherapy<sup>SI</sup>)



Article

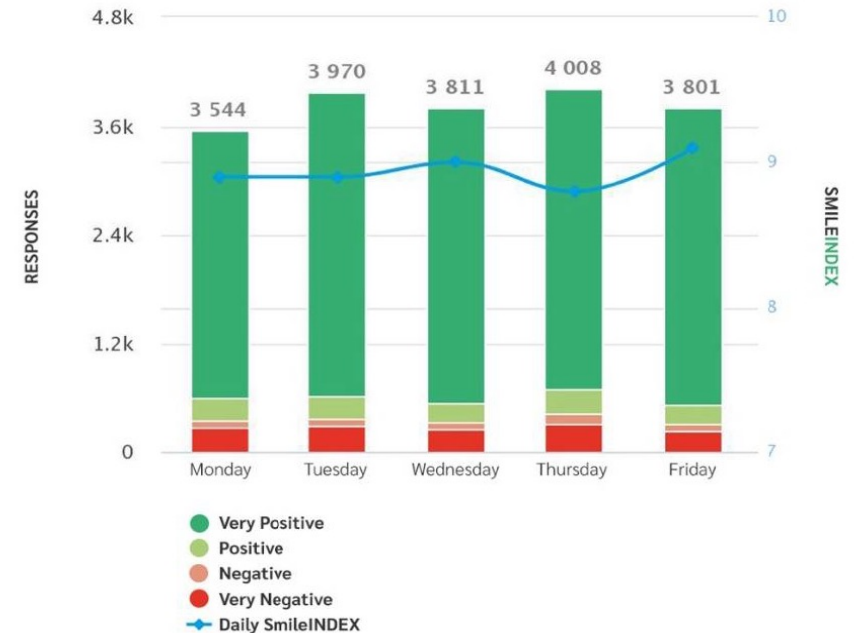
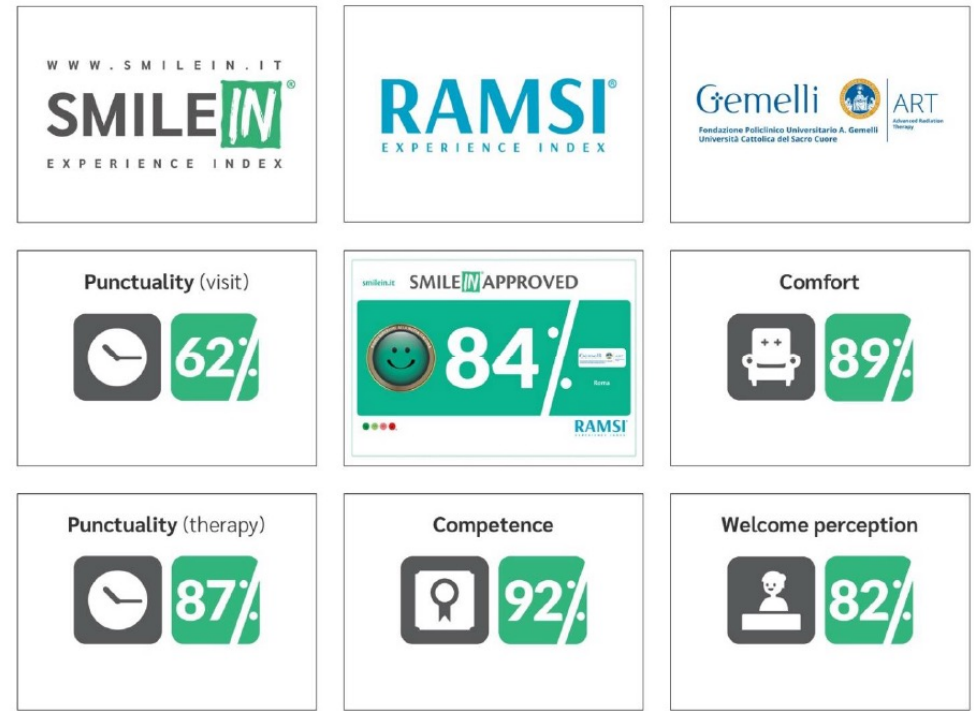
## Patients' Satisfaction by SmileIn™ Totems in Radiotherapy: A Two-Year Mono-Institutional Experience

Giuditta Chiloiro <sup>1,2</sup>, Angela Romano <sup>2</sup>, Andrea D'Aviero <sup>2,\*</sup>, Loredana Dinapoli <sup>2,3</sup>, Elisa Zane <sup>4</sup>, Angela Tenore <sup>2</sup>, Luca Boldrini <sup>1,2</sup>, Mario Balducci <sup>2</sup>, Maria Antonietta Gambacorta <sup>1,2</sup>, Gian Carlo Mattiucci <sup>2</sup>, Pierluigi Malavasi <sup>4,5</sup>, Alfredo Cesario <sup>6</sup> and Vincenzo Valentini <sup>1,2</sup>

1. To evaluate the usability of this technology in terms of simplicity and reproducibility to **detect a patient's empowerment and satisfaction during RT treatment**
2. To define a mono-institutional Radiation Oncology **benchmark**



**implementation of specific corrective actions**





## Psychological benefits of art therapy

**Empowering** individuals to recalibrate their sense of self, the adjustment process, and perceptions of stress

**Reduce negative symptoms**, as well as **increase feelings of energy**

- ✓ **Art therapists** utilize **digital media** for therapy
- ✓ In psychological area, digital technologies could **support** the evaluation of **emotional health**





## Psychological facets

**Psychological effects of art** in cancer patients can be evaluated with validated instruments, to assess:

- ✓ the patient's status in terms of **distress** and **anxiety/depression**;
- ✓ the **enjoyment** of the proposed entertainment;
- ✓ the **astonishment**/artistic suggestion effect;
- ✓ the patient **experience**;





# Take home messages

- ♥ Personalized psychological support
- ♥ Screening for distress
- ♥ Detecting specific issues helped by the équipe
- ♥ Make research to enhance resilience  
psychological well-being and comfort

*Thank you*