



**Modern Radiation Oncology.
Innovation in personalised
oncology: back to the future**

33° RESIDENTIAL COURSE

BACK TO THE FUTURE: HUMANISTIC GUIDED RT



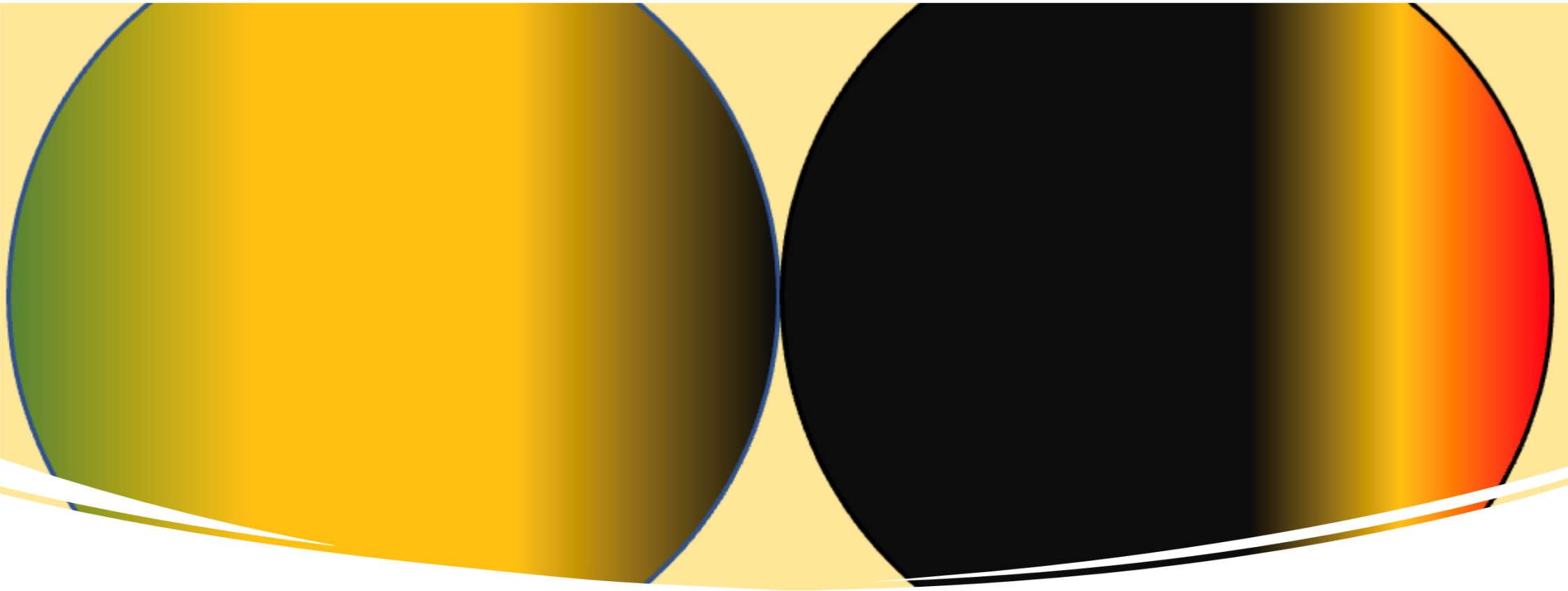
**UNIVERSITÀ
CATTOLICA**
del Sacro Cuore

Vincenzo Valentini

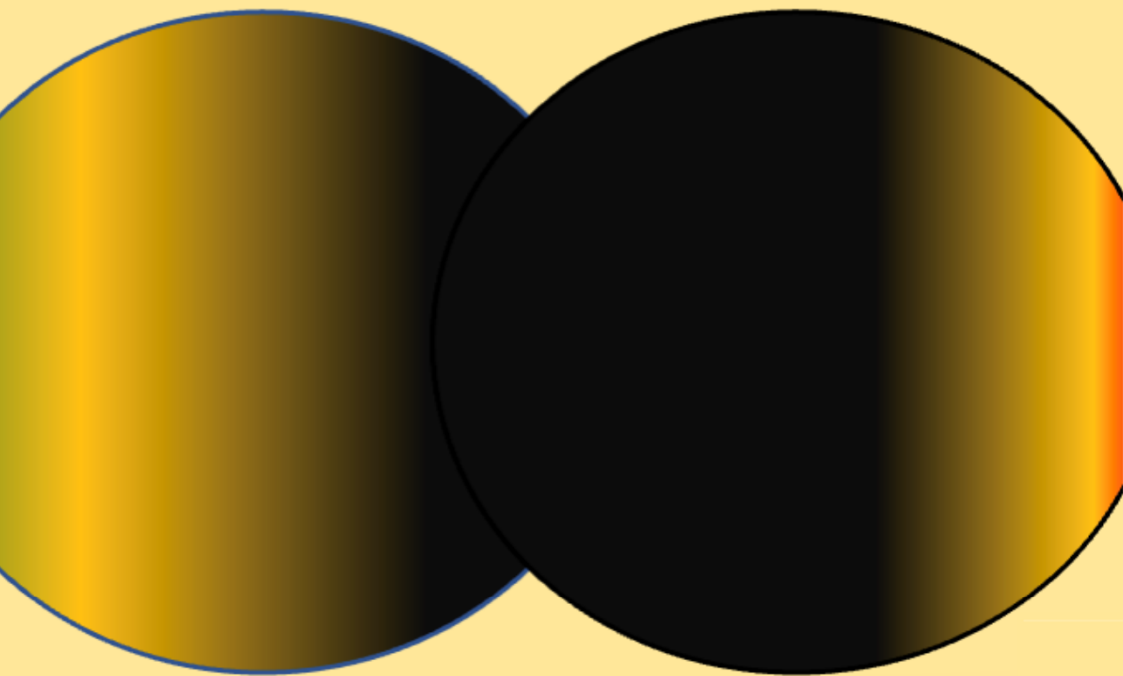




Raffaello Sanzio, 1513 – Gemäldegalerie, Dresda.

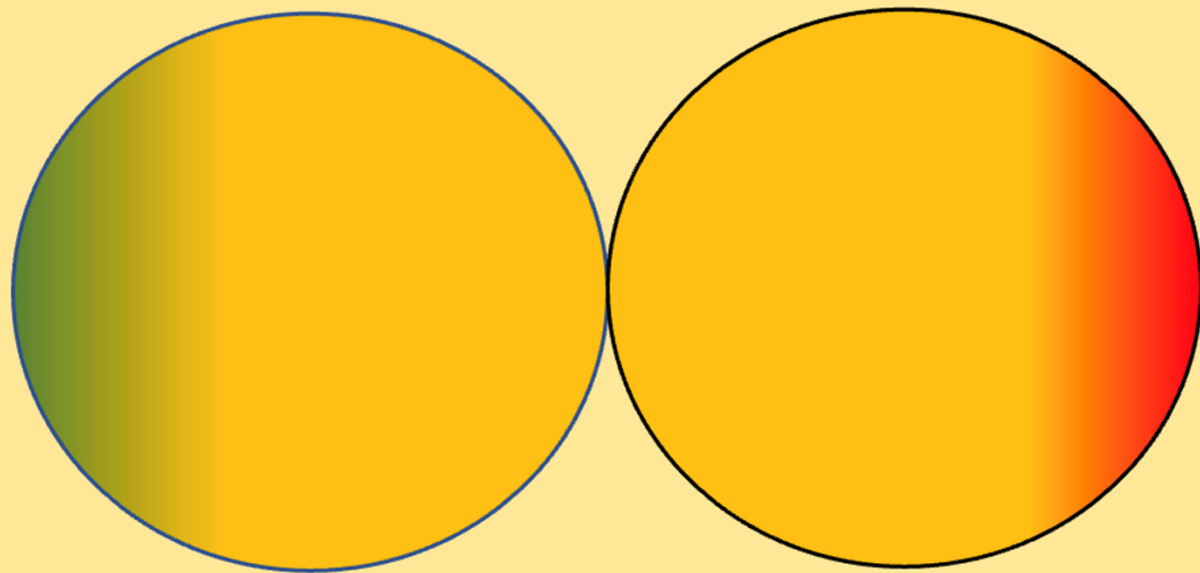


Personal relationships

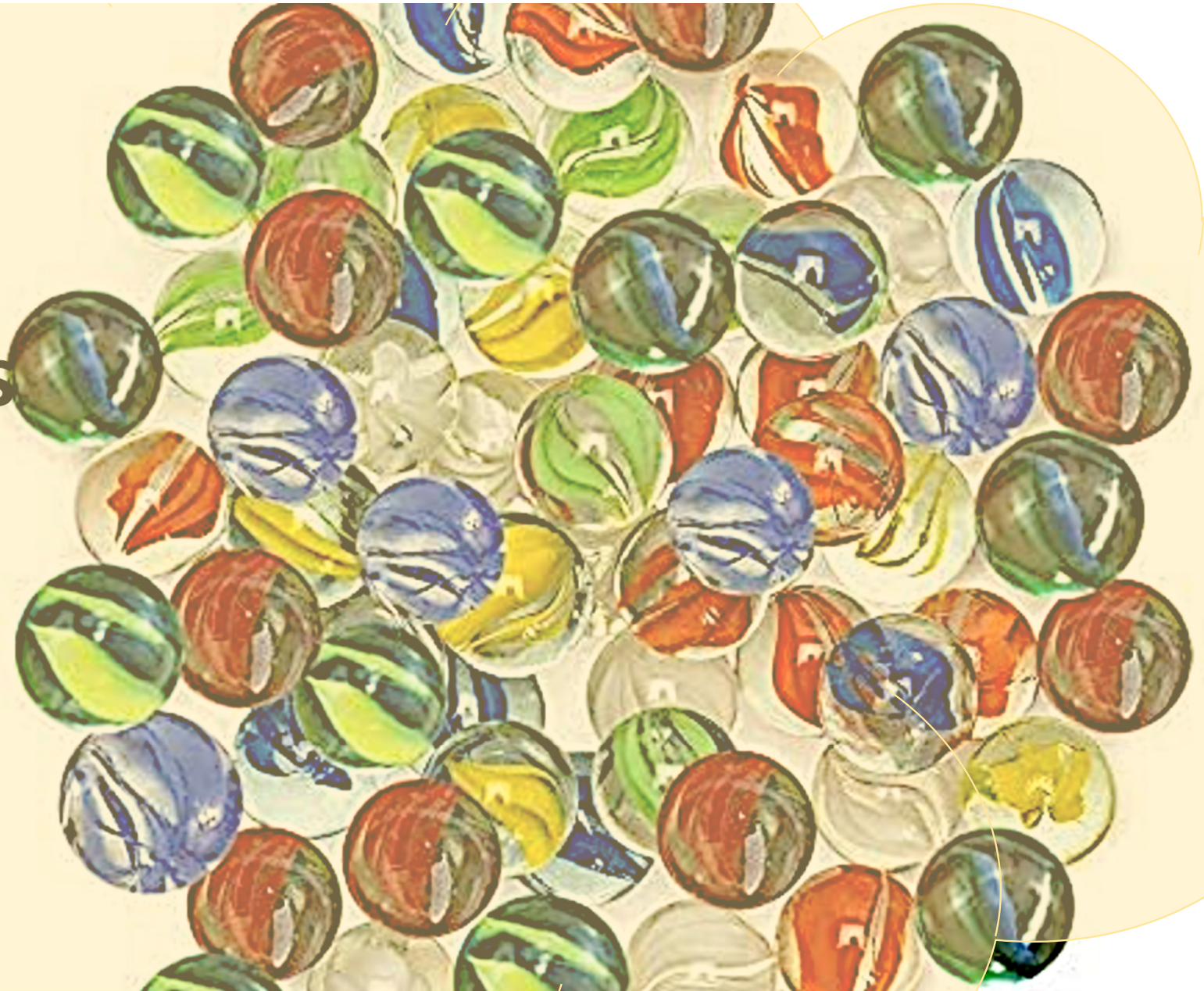


Dominant black

Dominant gold



**Multiple
interactions
and
the enigma
of history**





Pablo Picasso, Mother and Child, 1903

The gesture

Welcoming

Cuddling

Guiding

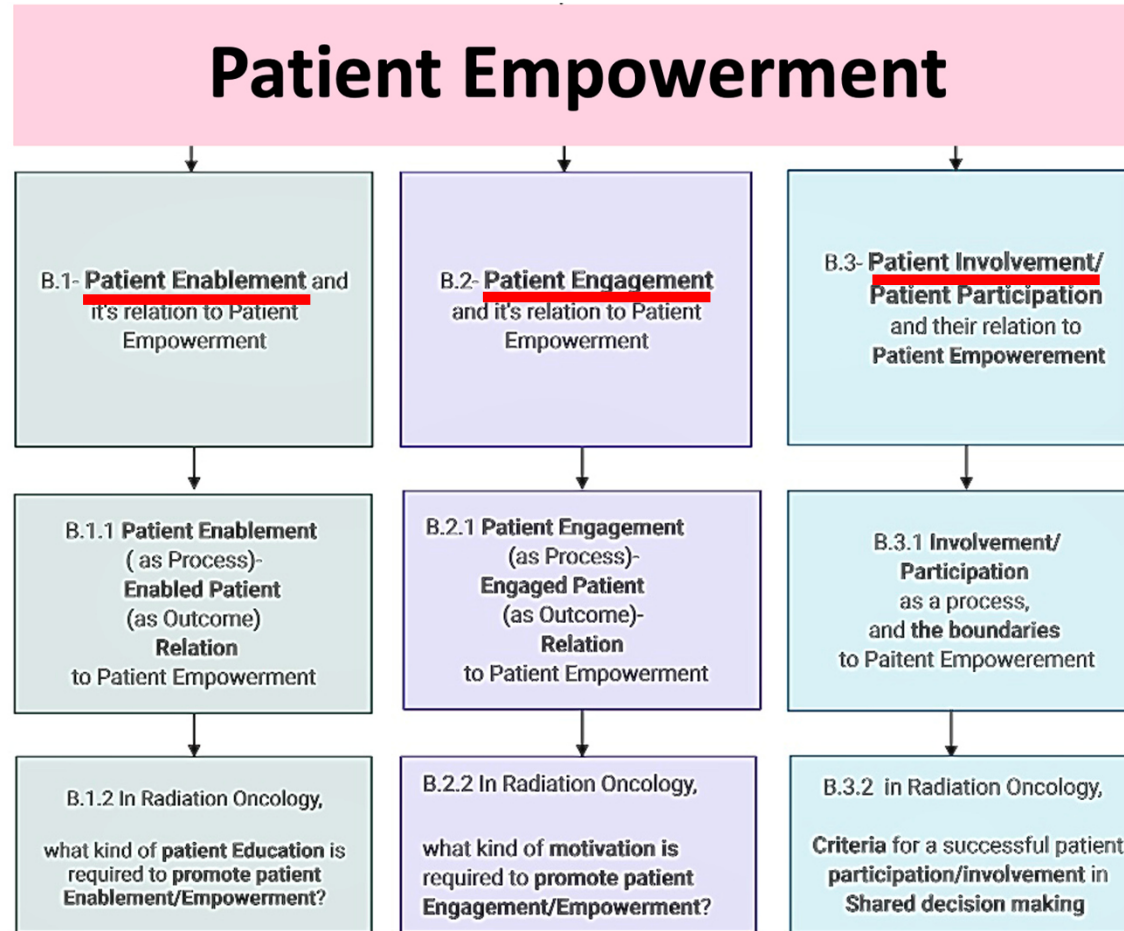
Existential earthquake



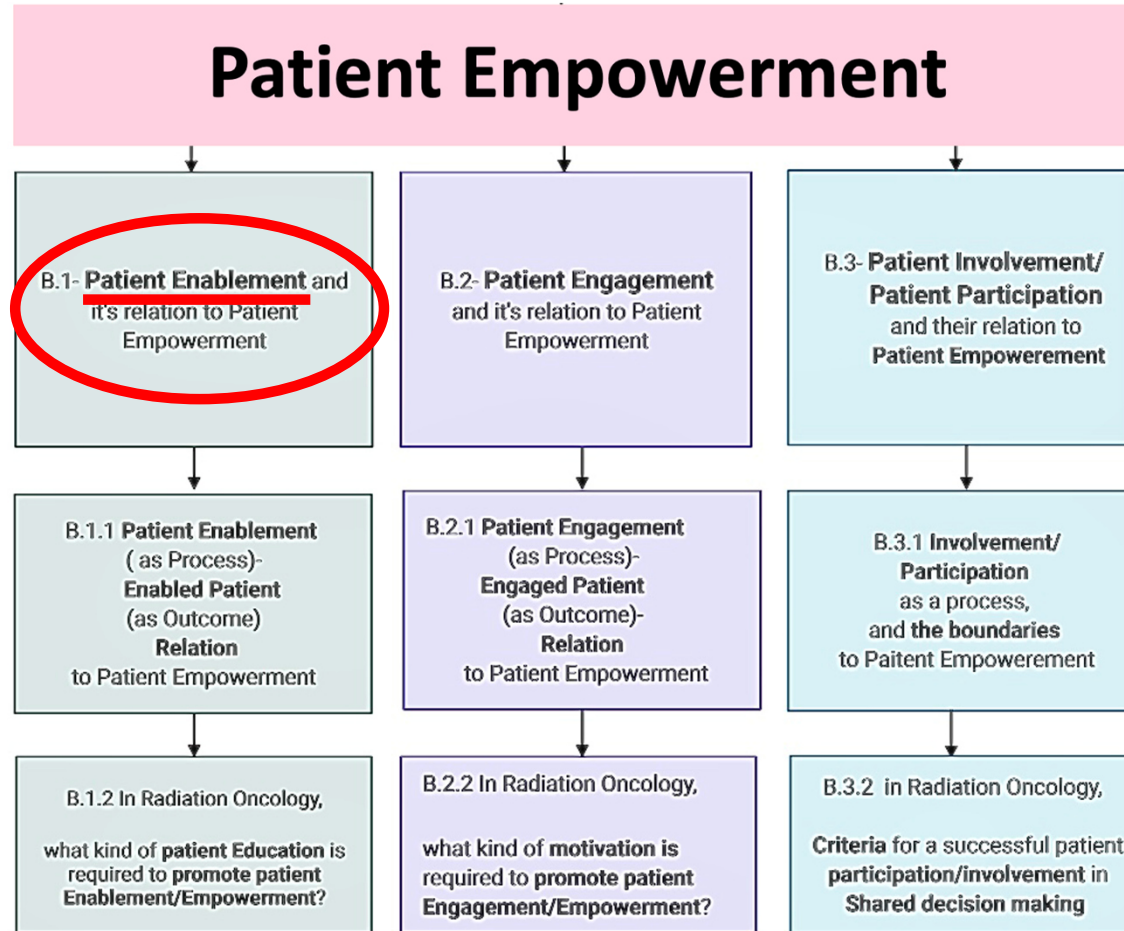
**What
do they need?**



Participative Medicine



Participative Medicine



CLINICAL EXAMINATION: patient background

Consensus on benefits/harms that <i>need not necessarily be addressed</i>	Patients reached consensus in round	Oncologists reached consensus in round
1. Faecal incontinence (short term)	4	3
2. Increased rectal blood loss	4	3
3. Decreased rectal blood loss	4	3
4. Increased blood loss during surgery	4	3
5. Nerve damage (long term)	4	2
6. Skin problems	4	4
7. (Local) Hair loss	4	3
8. Feeling unwell	4	3
9. Less appetite	4	1
10. Cardiovascular problems	4	4
11. Fistula	4	4
Consensus in patients only		
- Bladder dysfunction	4	-
- Abdominal wound healing problems	4	-
- Muscle weakness	4	-
- Fatigue	4	-
Consensus in clinicians only		
- Secondary tumours	-	2
- Small bowel adhesions	-	3
- Urinary incontinence	-	4
- Anastomotic leakage	-	2

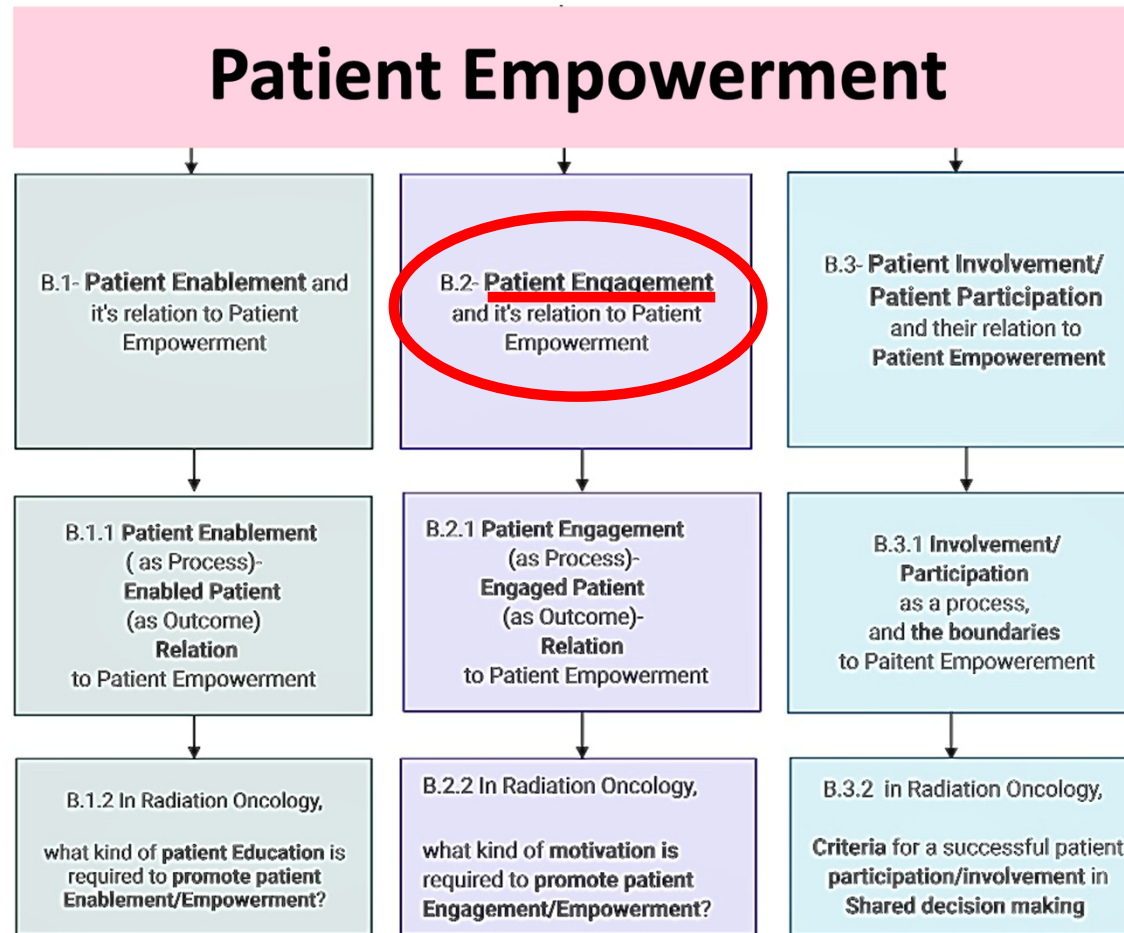
Metaverse in Oncology

home interactive services

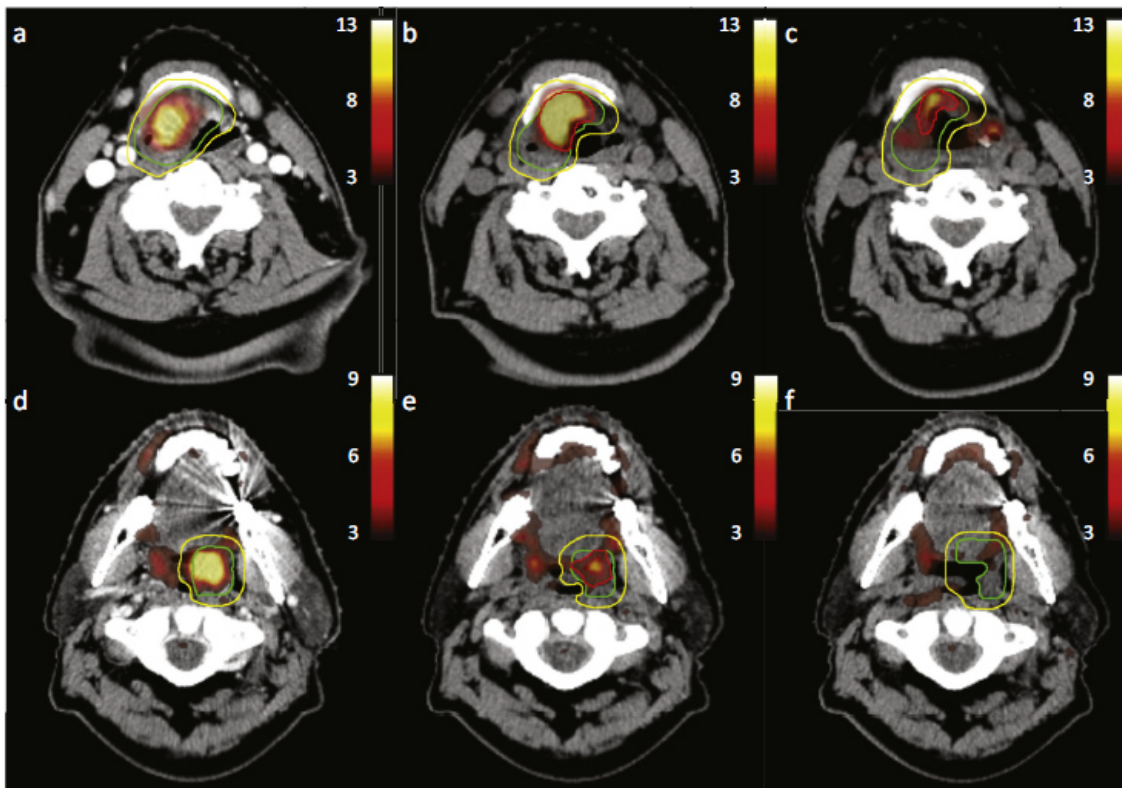


National Museum of Fine Art - Copenhagen

Participative Medicine



IGRT & ADAPTIVE



Boost according to:

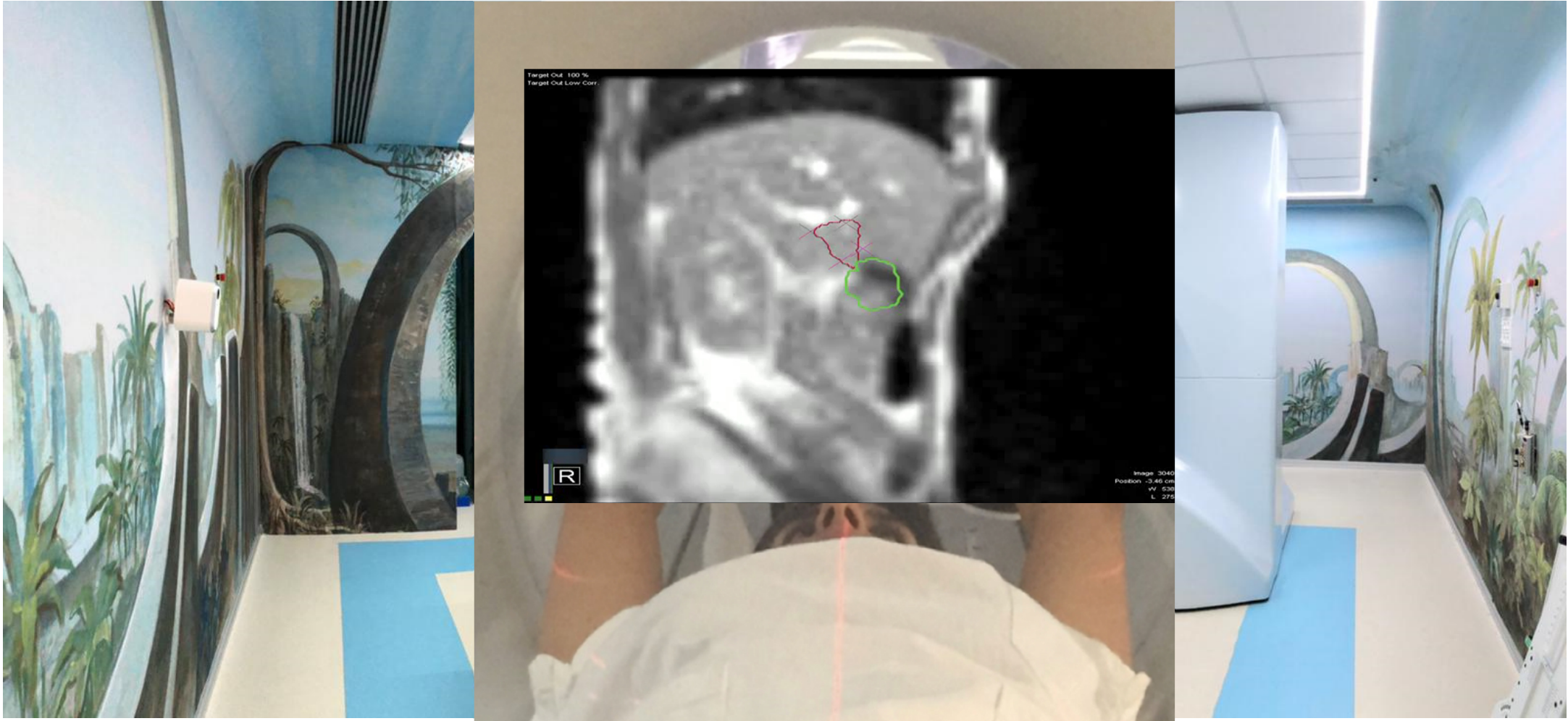
- Staging PET CT
- 2-week PET CT
- 4-week PET CT

70 Gy (cCR at 2w)

74 Gy (cCR at 4w)

78 Gy (cPR, boost according
to 2w & 4w PET)

Patient engagement



Humanistic Guided Oncology

Snowdon and associates found three indicators of longer life when coding the sister's autobiographies: the amount of positive sentences, positive words, and the variety of positive emotions used. The less positivity in writing correlated with greater mortality. There were many



Spirituality and Resilience in Glioblastoma

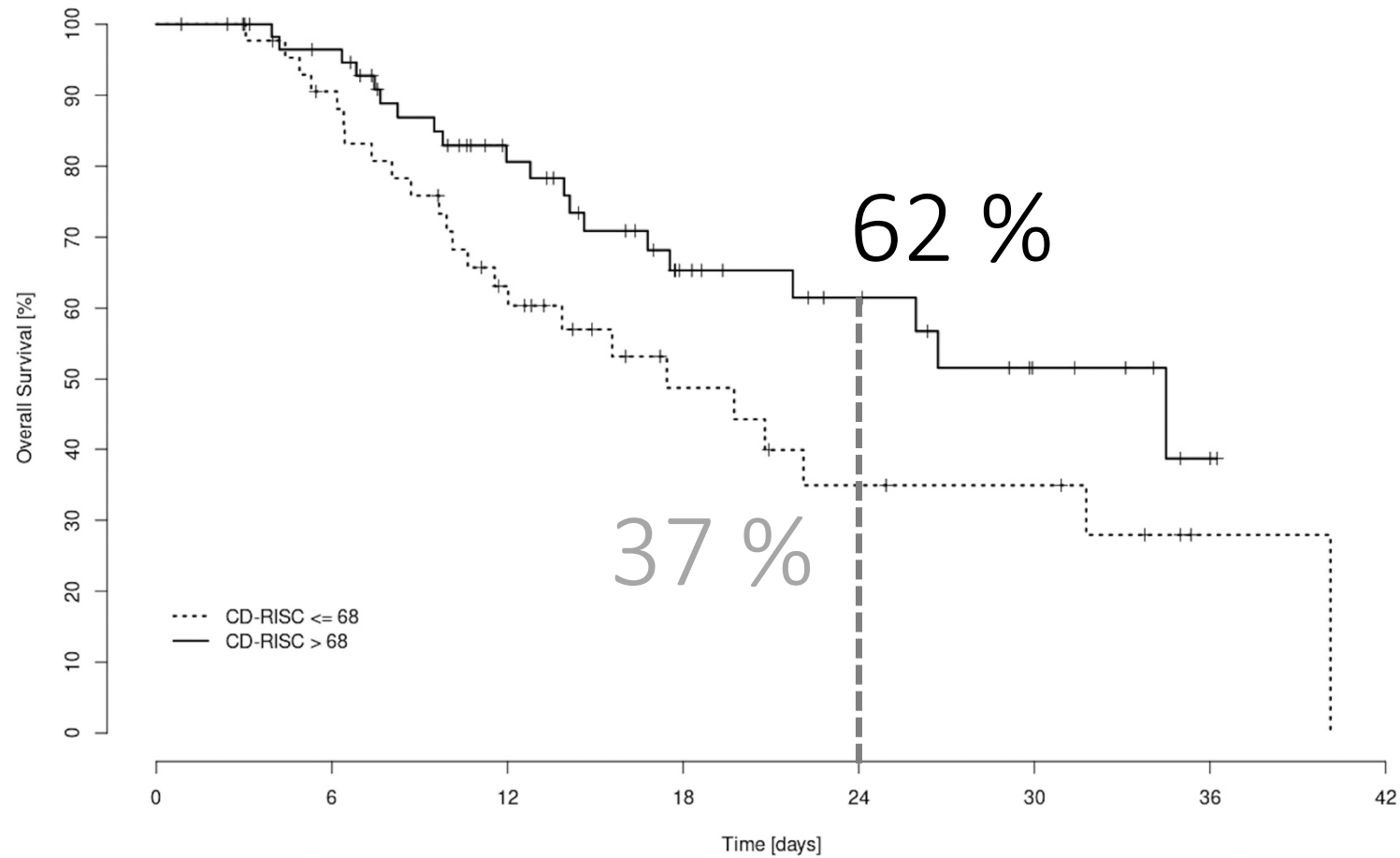
✓ **Spirituality** is “a framework that provides people with a sense of ultimate purpose and meaning in life”

✓ **Resilience** is the “ability to withstand adversity and bounce back and grow despite life’s downturns”

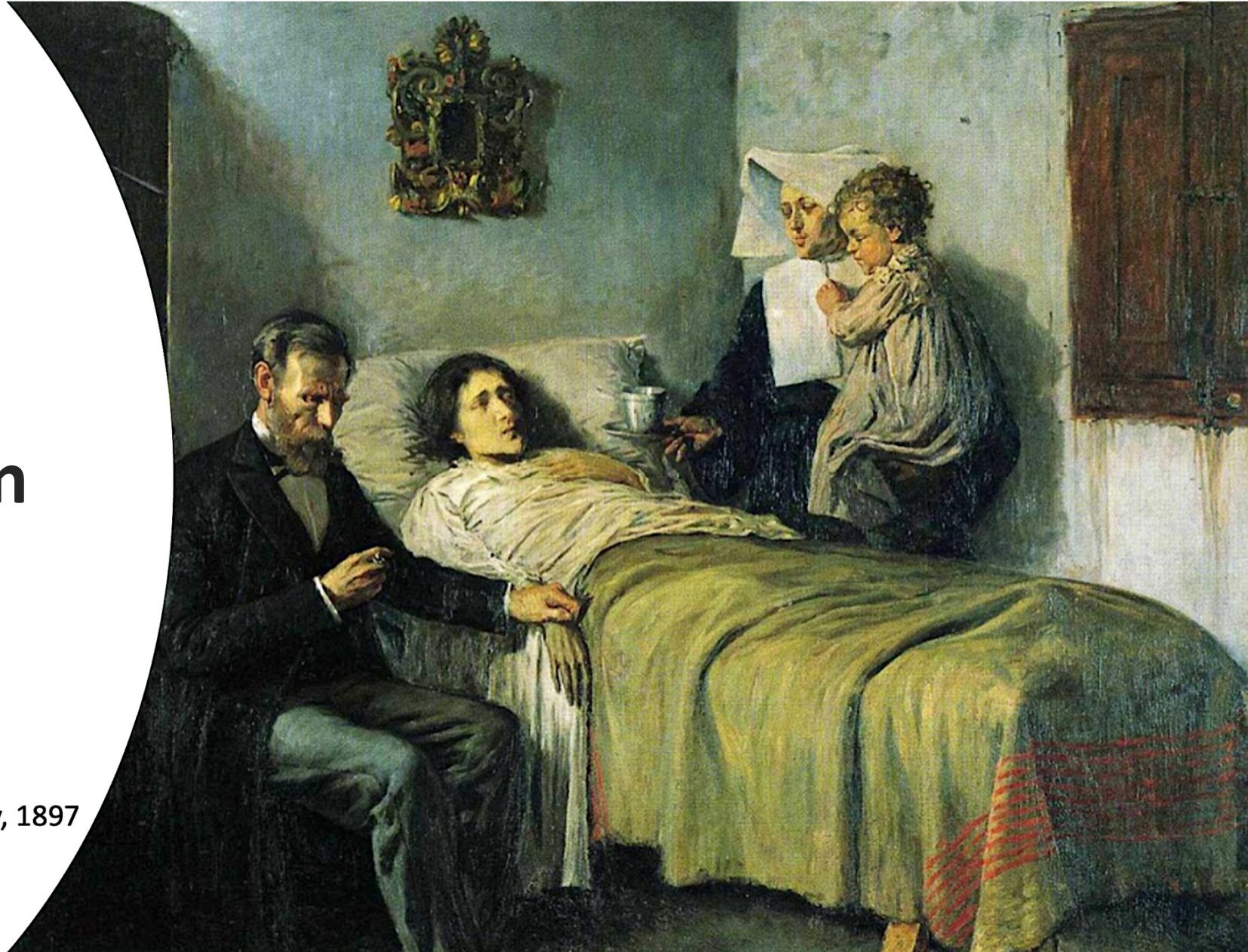
- ✓ Multicentric observational protocol
- ✓ Tests: **Spirituality (FACIT-SP12); Resilience (CD-RISC).**

- 104 patients: 68 male, 36 female, median age 59.
- Median FUP was 338 days.

Spirituality and Resilience in Glioblastoma



Gesture segmentation



Pablo Picasso, Science and charity, 1897

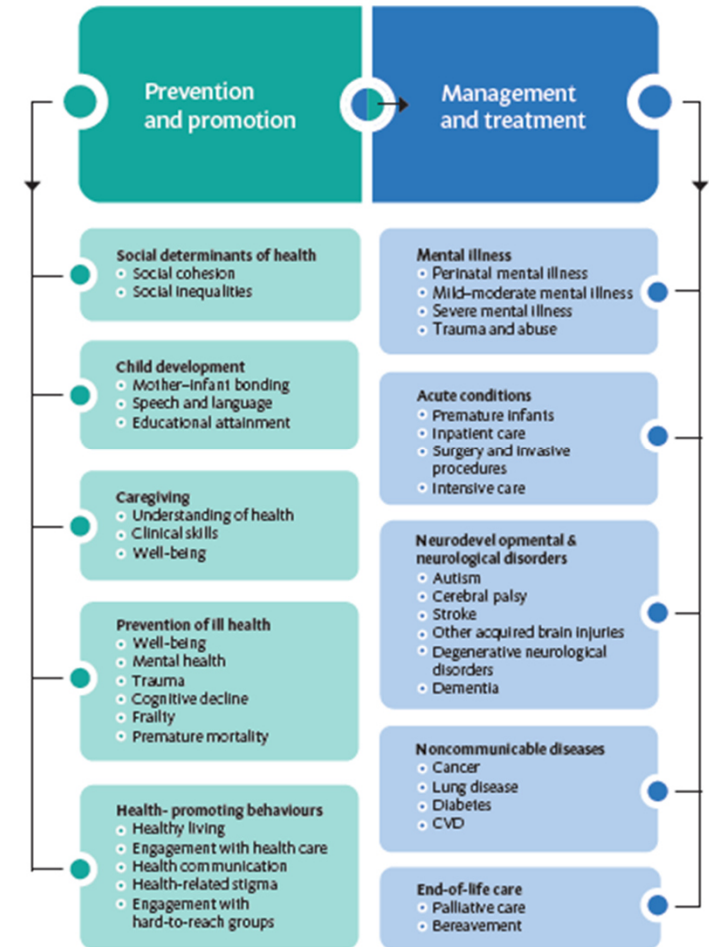


ARTS AND HEALTH | THE W.H.O. REPORT



What is the evidence on the role of the arts in improving health and well-being?
WHO (2019)

Fig. 2. Thematic content for prevention and promotion and management and treatment



PHYSIOLOGICAL BIOMARKERS

Figure 1. Average Salivary Cortisol Levels Before (Dark Grey) and After (Light Grey) Art Making

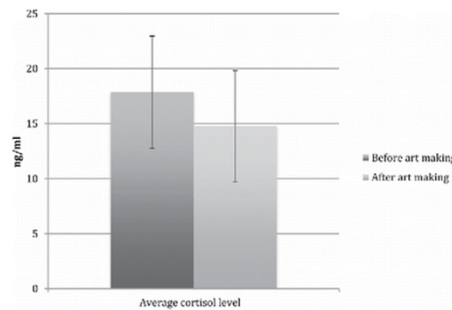
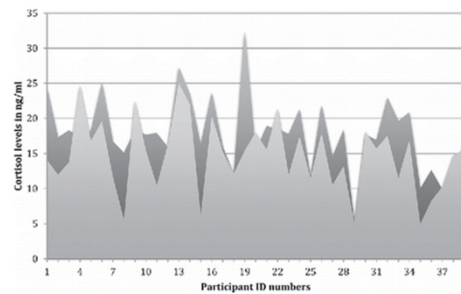
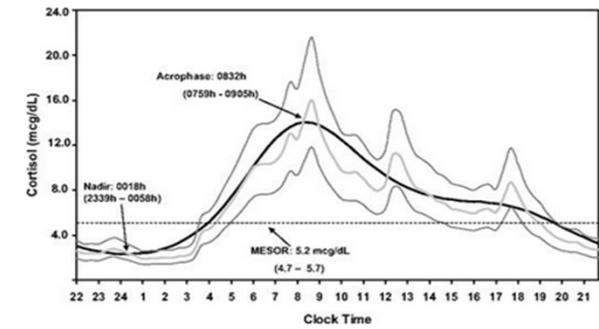


Figure 2. Individual Salivary Cortisol Levels Before (Dark Grey) and After (Light Grey) Art Making



Salivary cortisol levels before and after art making
Kaimal et al., *Art Ther.* (2016)

Fig. 1.



Physiological serum cortisol concentration from 20 min sampling over a 24-h period in 33 healthy subjects' circadian rhythm
Debono et al., *J Clin Endocrinol Metab* (2009)

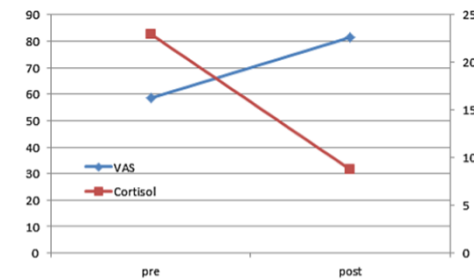


Fig. 4 Wellbeing score (left scale) and salivary cortisol levels (right scale) before and after the experience

Visual Analogue Scale (VAS) on wellbeing and salivary cortisol level
Grossi et al *Cult Med Psychiatry* (2019)

Back to the future....



Casà C et AI - Frront Public Health - 2023





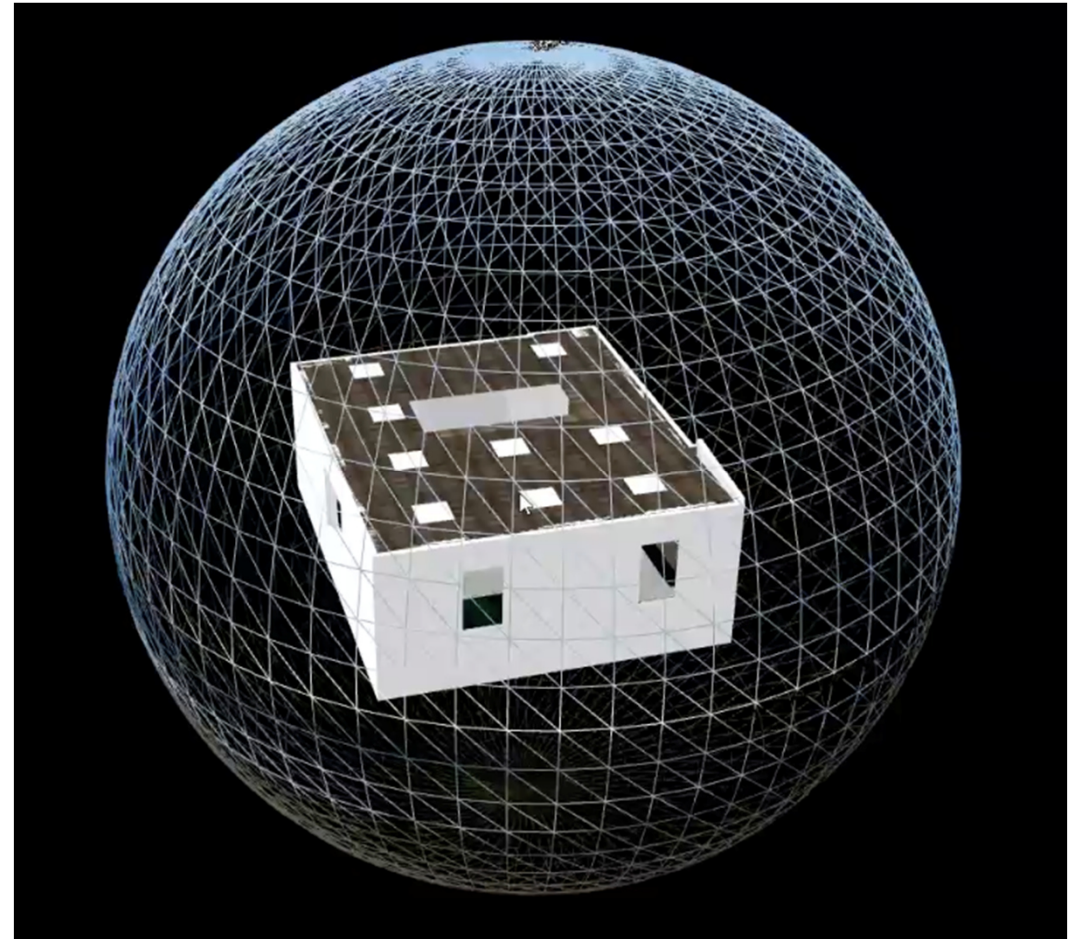
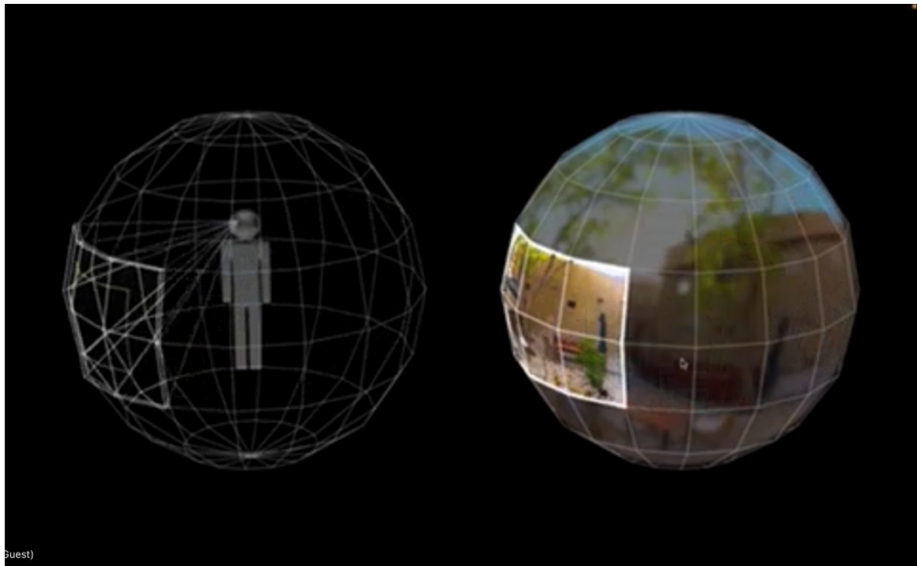
TERENTIUM project



Homo sum, humani nihil a me alienum puto

Nothing that is human is alien to me

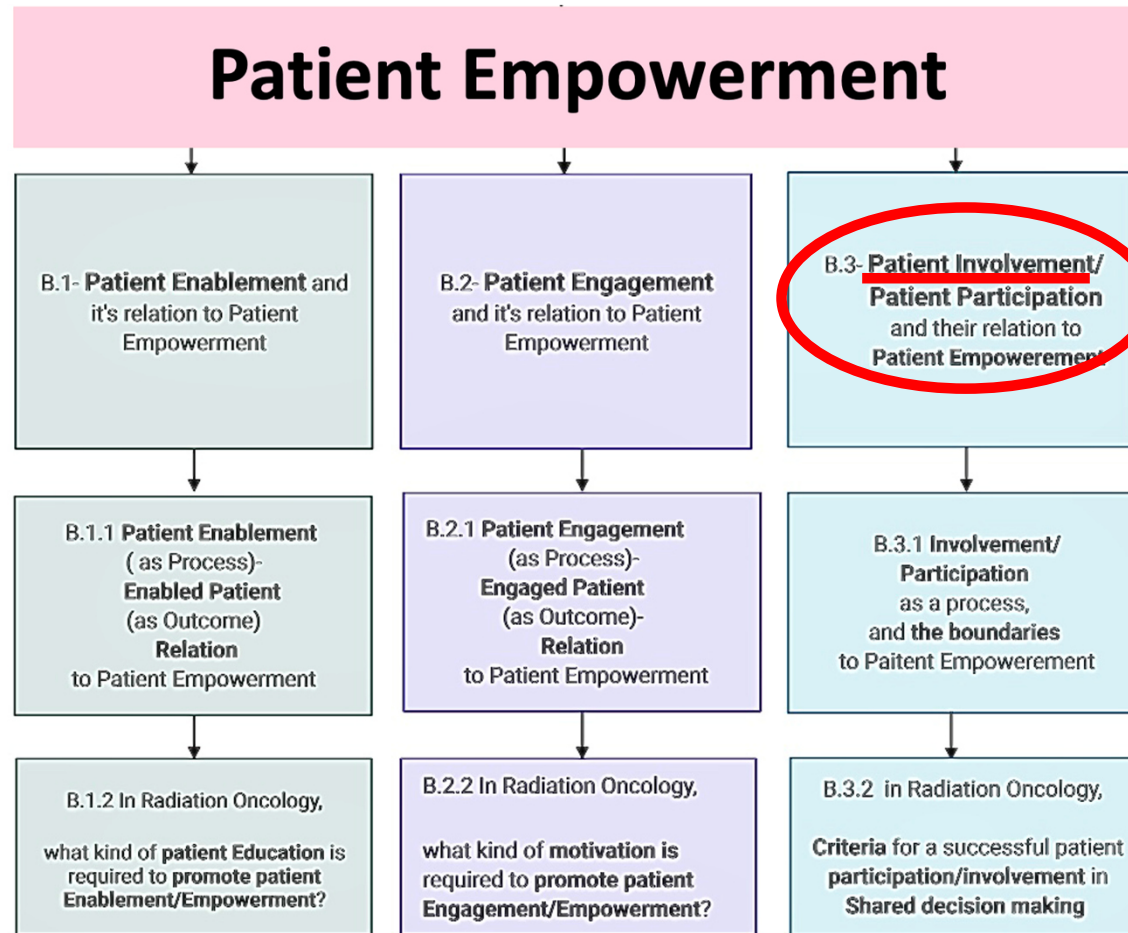
TERENTIUM project



TERENTIUM project



Participative Medicine





- Too many **changes**
- Too much **time!**
- Being **alone?!**
- It's **complicated!**

... a good practice



GEMELLI - ART



Humanistic Guided RT

Personalized against **Precision Medicine**

Two dimension of the human **should be identified:**

Actionable Values (emotion, culture, spirituality..)

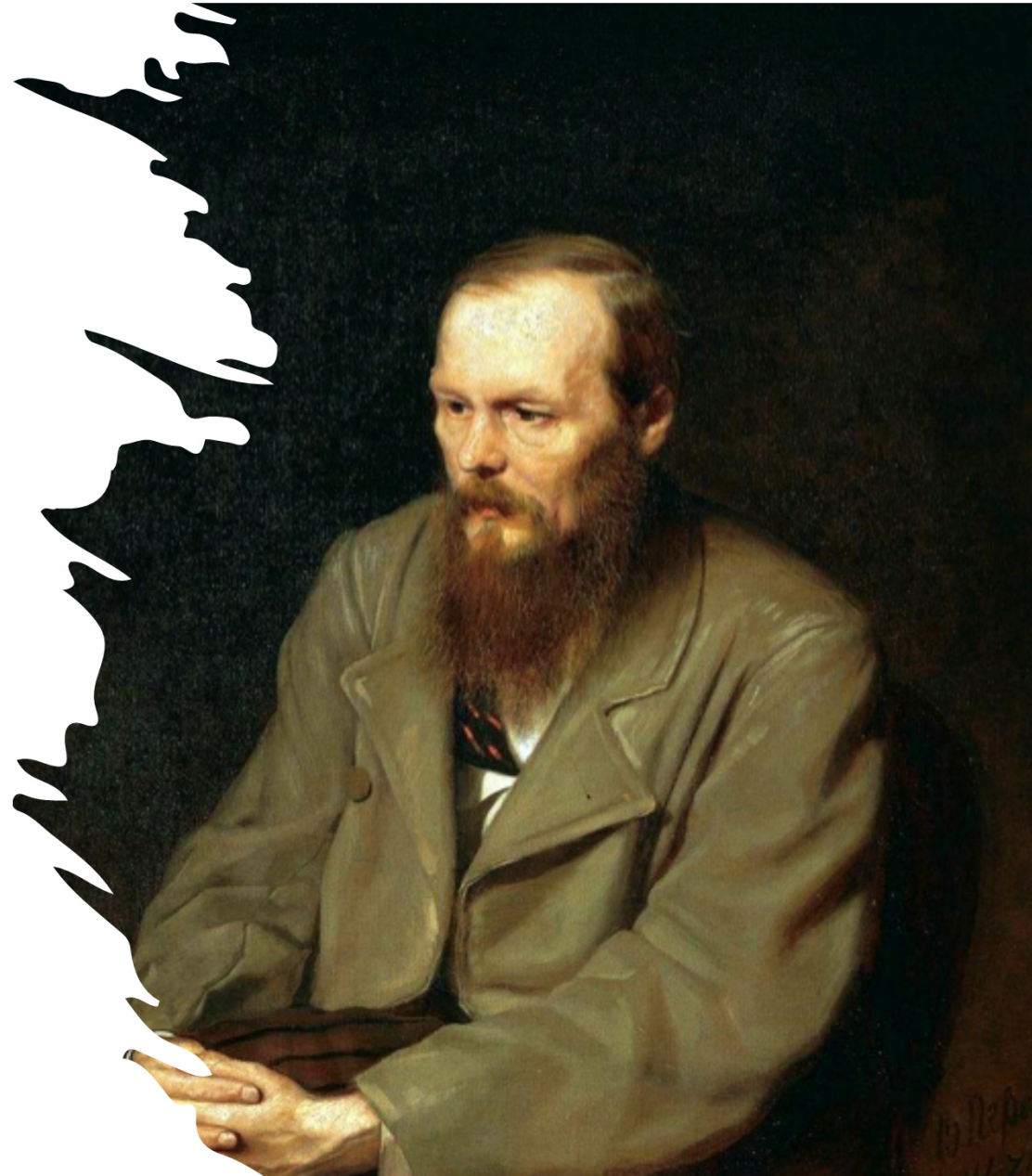
ART suggests **words** to narrate the **sense of the life**

Given World (science, deterministic rules, adaptation ..)

SCIENCE enables you to **live and interact** with the **world**

Precision Medicine

Beauty will save the world

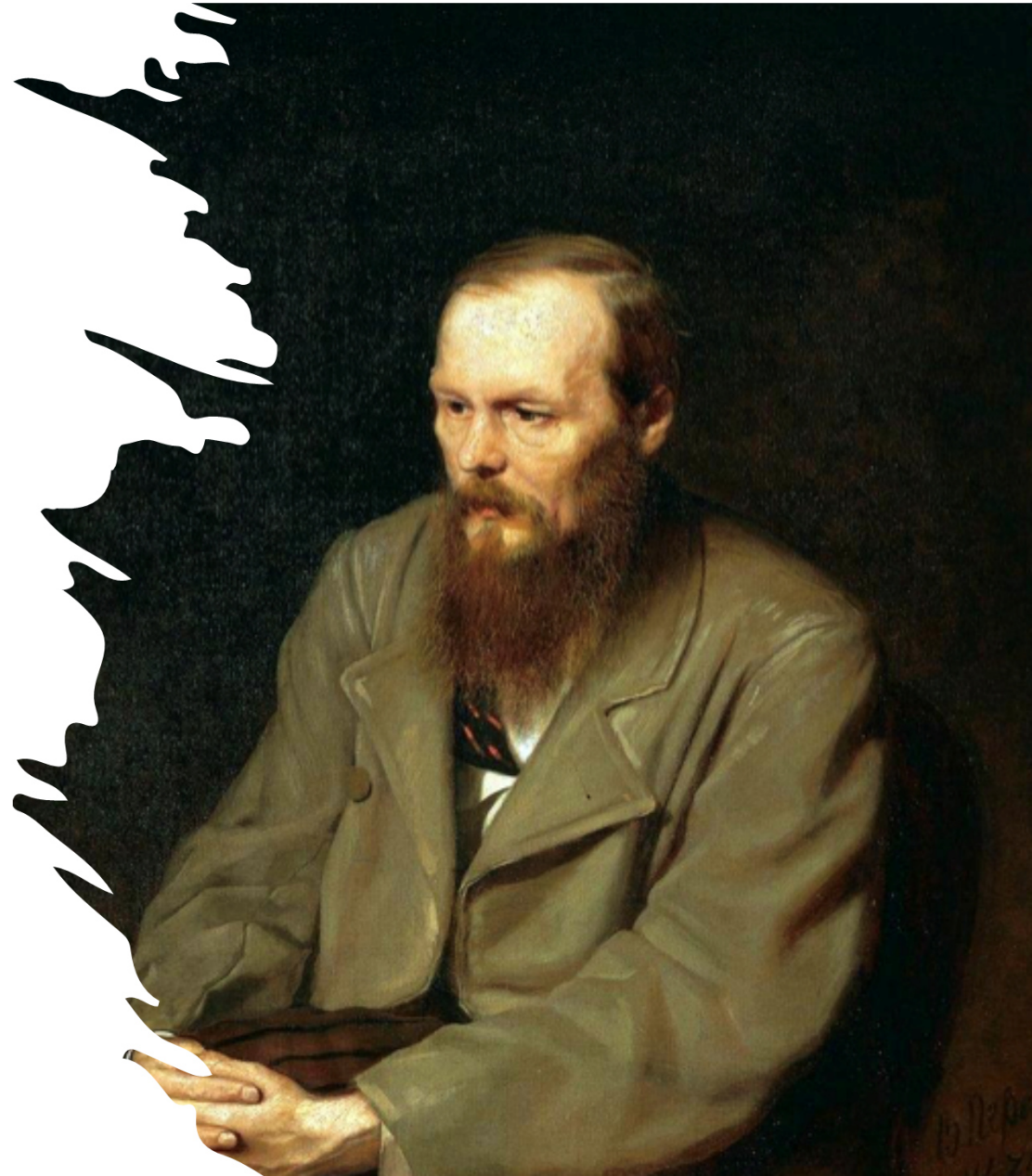


Dialogue between Prince Miškin and young Hippolit.
Fyodor Dostoevsky, The Idiot, 1869

Beauty will save the world

*...what beauty
will save the world?*

Dialogue between Prince Miškin and young Hippolit.
Fyodor Dostoevsky, *The Idiot*, 1869





The beautiful art
of radiation oncology

The image displays two 3D radiation therapy planning models of a head and neck tumor. The model on the left shows the original anatomy with a color-coded dose distribution, where red and yellow indicate high-dose areas and blue and green indicate lower-dose areas. The model on the right shows the same anatomy with a more uniform dose distribution, where the tumor is highlighted in red and yellow, and the surrounding normal tissue is in green and blue. The text 'The beautiful art of radiation oncology' is overlaid in the center of the image.



...what beauty will save the world?

**The beauty
of gestures that produce
relief and gratitude**



TAKE HOME MESSAGE

