Protocol

A) CLINICAL TRIAL IDENTIFICATION			
Title	**Use of Music Therapy as an Intervention to Reduce Anxiety in Patients With Localized Breast Cancer**		
Short title	CENSORIAL		
Coordonnateur	Sandra PIQUIN Study nurse ICO Site Angers sandra.piquin@ico.unicancer.fr		
Estimated number of centers	1	**Number of subjects**	27
Inclusion period	18 months	**Overall duration**	24 months
Subject participation duration	5 months		

B) SPONSOR IDENTIFICATION	
Sponsor name	ICO, DRC-Cellule de Promotion
Contact	Marine Tigreat 02 40 67 98 78 marine.tigreat@ico.unicancer.fr

C) SYNOPSIS

Breast cancer is the most common cancer among women worldwide, with 58,500 new cases reported in metropolitan France in 2018. The diagnosis of cancer, the explanation of treatment modalities, and their potential adverse effects can generate distressing emotions, such as fear, and the resources available to cope with these emotions vary among patients. Attending the hospital for outpatient chemotherapy administration is, in itself, a potential source of anxiety.

The use of music as part of a therapeutic approach constitutes an intervention that may help patients reduce the intensity of distressing emotions. “Active” music therapy involves the patient’s participation through the use of instruments, vocal expression, or rhythmic body movement, without requiring any prior musical skills. The presence of a certified music therapy professional is essential, particularly to support and manage the emotions that may arise during sessions. These sessions may be conducted individually or in groups. In the context of breast cancer, music therapy has demonstrated benefits in reducing pain, anxiety, depressive symptoms, and length of hospital stay in patients undergoing mastectomy.

⇨ **This controlled, randomized study aims to assess the effect of music therapy on reducing anxiety in patients with localized breast cancer receiving outpatient chemotherapy, compared with a control group without musical intervention.**

D) INFORMATION

Design	The study has the following characteristics: • Single-center study • Controlled study • Randomized study (2:1 allocation ratio) • Open-label study • Prospective study • Parallel-group design
Primary objective	To evaluate the effect of music therapy on anxiety levels in patients with breast cancer receiving adjuvant or neoadjuvant chemotherapy.
Primary endpoint	Anxiety will be assessed using the STAI scale (Trait form YB and State form YA). The STAI State score will be collected before and after chemotherapy administration during the first three chemotherapy sessions in both the music therapy and control

	groups. The mean pre- and post-chemotherapy difference in STAI State scores will be compared between the music therapy and non-music therapy groups.
Secondary objectives and endpoints	Secondary objectives are to evaluate the effect of music therapy by comparing the two groups (with and without music therapy) on: a. Changes in anxiety levels between the first and the third chemotherapy sessions, measured using the STAI State score (before the first session and before the third session). b. Changes in anxiety levels between the first and the last chemotherapy sessions, measured using the STAI State score (before the first session and before the last session). c. Changes in quality of life, measured using the PROMIS-29 questionnaire at study inclusion, at the end of the third chemotherapy session, and at the end of all chemotherapy sessions. d. The presence of anticipatory nausea (i.e., nausea occurring before chemotherapy administration) assessed before the first three chemotherapy sessions and before the last chemotherapy session, using a 0–10 numeric rating scale.
Inclusion criteria	1. Female patient with localized breast cancer 2. Indication for adjuvant or neoadjuvant chemotherapy 3. Age ≥ 18 years 4. Signed informed consent 5. Patient covered by a national health insurance system
Exclusion criteria	1. Metastatic breast cancer 2. Triple-negative breast cancer (HR–: ER–, PR– and HER2–) 3. Patient not eligible for curative surgery 4. Prior treatment with chemotherapy 5. Uncorrected hearing loss 6. Pregnant or potentially pregnant woman, or breastfeeding 7. Presence of a major depressive episode or psychotic disorder at the time of the diagnostic consultation 8. Patient unable to understand French 9. Cognitive impairment or inability to understand study requirements 10. Vulnerable patient under legal protection (safeguard of justice, guardianship, or curatorship)

E) DESCRIPTION OF STUDY INTERVENTIONS

Description of the Music Therapy Intervention

In the experimental group, a music therapy session conducted by a certified music therapist will be offered to the patients. The session will take place before the administration of chemotherapy during the 1st, 2nd, and 3rd treatment cycles. Each session will last 1 hour.

The activity program will be defined during the first individual session. The sessions will follow three progressive processes:

Activities	Patient Involvement
Instrumental music (violin, guitar, singing) Relaxation suggestions (e.g., imagery associated with the music resonating in the body) Suggestion of music listening at home Invitation to instrumental improvisation Vocal warm-up	Active listening Attention to bodily sensations
Instrumental music as an introduction Invitation to instrumental improvisation	Selection of music pieces

Vocal warm-up Suggestion to use music as a relaxation tool at home	Physical involvement in playing a musical instrument (hang, senzula, percussion instruments)
Musical introduction based on the patient's choice Vocal warm-up Singing an existing song or engaging in songwriting (brainstorming, selecting a melody, singing the composition with the music therapist) Discussion on the use of music to improve mood and reduce feelings of fatigue	Active listening or instrumental play Songwriting Verbalization of emotional experiences

Description of Quality-of-Life Questionnaires:

Participants will be asked to complete the following quality of life questionnaires (see the assessment schedule for the timing of questionnaire administration):

STAI (State/Trait):

The State Trait Anxiety Inventory (STAI), developed by Spielberger et al. (1983), is a self assessment questionnaire. The French version was validated by Bruchon Schweitzer et al. in 1993 (Manuel de l'inventaire d'anxiété état trait – forme Y).

This scale includes two components:

- State Anxiety, which reflects the patient's current emotional state and allows assessment of nervousness and worry during the session.
- Trait Anxiety, which reflects the patient's general and habitual emotional state.

PROMIS 29:

The PROMIS 29 Profile v2.0 assesses pain intensity using a single numeric rating item (0 to 10) and evaluates seven health domains (physical function, fatigue, pain interference, depressive symptoms, anxiety, ability to participate in social roles and activities, and sleep disturbance), using four items per domain.

STUDY ASSESSMENT SCHEDULE

VISITS	INCLUSION PERIOD	TREATMENT PERIOD							FOLLOW UP PERIOD
Dates des visites		**Cycle 1**		**Cycle 2**		**Cycle 3**		**Last cycle**	**M6 end of treatment**
Delay		*Before start of musicotherapy*	*End of chemotherapy*	*Before start of musicotherapy*	*End of chemotherapy*	*Before start of musicotherapy*	*End of chemotherapy*		
Inclusion / Exclusion criteria	X								
Informed consent	X								
Randomisation (2:1)	X								
PRO (Patient Reported Outcome)									
STAI YB (trait)		X							X
STAI YA (état)		X	X	X	X	X	X		
QLQ C30		X					X	X	
BR23		X					X	X	
Numerical scale 0-10 (nausea)		X					X	X	
INTERVENTION									
Arm 1 : musicotherapy		Before chemotherapy		Before chemotherapy		Before chemotherapy			
Arm 2 : control									