

## Supplementary Material 2: TIDieR checklist for the U-trans intervention

Item number	Item	Description
<b>BRIEF NAME</b>		
1.	Provide the name or a phrase that describes the intervention.	A Behaviourally Informed Nutritional Intervention Targeting Ultra-Processed Food Reduction to Improve Overall Diet Quality in Individuals at Increased Cancer Risk (U-TRANS)
<b>WHY</b>		
2.	Describe any rationale, theory, or goal of the elements essential to the intervention.	<p>Rationale for the intervention</p> <ul style="list-style-type: none"> <li>- The rising incidence of cancers linked to metabolic risk factors, excess body weight, and unhealthy dietary patterns, including high intake of ultra-processed foods (UPFs), creates a strong need for effective primary prevention strategies.</li> <li>- UPFs are increasingly consumed worldwide and are associated with multiple adverse health outcomes, including higher risks of several cancers.</li> <li>- Reducing UPF consumption is identified as a public health priority to improve overall diet quality and support cancer prevention.</li> </ul> <p>Theoretical foundations</p> <ul style="list-style-type: none"> <li>- Interventions supported by behavioural science and grounded in established theoretical frameworks (e.g., the Public Health Wales NHS Trust framework / Behaviour Change Wheel) are more likely to be effective and sustained.</li> <li>- Digital behavioural interventions have demonstrated greater effectiveness than traditional health education approaches, but require strategies to overcome known barriers such as low engagement and environmental influences.</li> <li>- Co-design with individuals at increased cancer risk and healthcare professionals enhances the intervention's relevance, ensures alignment with lived experiences, and helps address behavioural barriers.</li> </ul> <p>Core goals of the intervention</p> <ul style="list-style-type: none"> <li>- To reduce UPF intake among adults at increased cancer risk in order to improve overall diet quality,</li> </ul>

		<p>assessed through the World Cancer Research Fund (WCRF) score.</p> <p>The aim of this paper is to present the development of a theory-driven nutritional intervention designed to reduce ultra-processed food consumption and improve overall diet quality among individuals at increased risk of cancer</p>
<b>WHAT</b>		
3.	<p><b>Materials:</b> Describe any physical or informational materials used in the intervention, including those provided to participants or used in intervention delivery or in training of intervention providers. Provide information on where the materials can be accessed (e.g. online appendix, URL).</p>	<p><b>Materials for intervention providers</b></p> <ul style="list-style-type: none"> <li>- A facilitator step-by-step manual was developed to guide dietitians in delivering the 15-minute intervention and follow-up procedures. This manual is available in the supplementary material.</li> </ul> <p><b>Materials used during intervention delivery</b></p> <ul style="list-style-type: none"> <li>- A set of food barcodes is used during the 15-minute session as examples to illustrate the identification of ultra-processed foods. These barcodes are provided in the supplementary material.</li> </ul> <p><b>Materials provided to participants</b></p> <ul style="list-style-type: none"> <li>- Participants use the Open Food Facts mobile application (<a href="https://fr.openfoodfacts.org/">https://fr.openfoodfacts.org/</a>) to scan products and identify ultra-processed foods.</li> <li>- A personal UPF reduction tracking sheet is provided to monitor progress throughout the 12-week period (supplementary material).</li> <li>- An informative sheet on Nutri-Score and an informative sheet on the NOVA classification are provided to support understanding of food quality and processing levels (supplementary material).</li> </ul> <p>All materials listed above can be accessed in the supplementary material accompanying the manuscript.</p>
4.	<p><b>Procedures:</b> Describe each of the procedures, activities, and/or processes used in the intervention, including any enabling or</p>	<p>Before the intervention (Begin by having participants download the application Open Food Facts)</p> <ol style="list-style-type: none"> <li>1. Profile customization – 4 min (1 min for installation, 3 min for explanations)</li> </ol> <p><b>Intervention steps:</b></p> <ol style="list-style-type: none"> <li>1. Examples of how foods are classified in Nutri-Score categories A to E and in NOVA groups 1 to 4 – 2 min:</li> <li>2. Guide to use the application to reduce UPF consumption – 10 min</li> </ol>

	support activities.	<ul style="list-style-type: none"> <li>- Compare a UPF with a substitute food using the app (4 min) and conclude with a preventive message:</li> <li>- Distribute the personal UPF reduction tracking sheet (1 min) and explain how to use the tracking sheet with an example (2 min).</li> <li>- Show how to use the application with family and friends (1 min).</li> <li>- Ask participants a question: “Could you name one (or two) advantages of sharing this tool with your relatives?”</li> <li>- Then go around the table for responses (2 min).</li> </ul> <p>3 – Closing of the intervention</p> <ul style="list-style-type: none"> <li>- Clarify that the purpose of the 15-minute intervention is to limit the consumption of ultra-processed foods</li> <li>- Explain the next steps of the study: after 12 weeks, to complete the same three questionnaires as at baseline (WCRF questionnaire, ultra-processed food intake questionnaire, and behaviour-change questionnaire)</li> </ul>
<b>WHO PROVIDED</b>		
5.	For each category of intervention provider (e.g. psychologist, nursing assistant), describe their expertise, background and any specific training given.	Only trained registered dietician will provide the intervention (based on the step by step manual).
<b>HOW</b>		
6.	Describe the modes of delivery (e.g. face-to-face or by some other	The intervention will be face to face in a group of 1 to 4 participants

	mechanism, such as internet or telephone) of the intervention and whether it was provided individually or in a group.	
<b>WHERE</b>		
7.	Describe the type(s) of location(s) where the intervention occurred, including any necessary infrastructure or relevant features.	U-TRANS will take place in several cancer centers in Villejuif, Avignon, Lyon, Rennes, Marseille. U-TRANS is part of the INTERCEPTION one stop day where people at high risk of cancer received different workshops and medical appointment
<b>WHEN and HOW MUCH</b>		
8.	Describe the number of times the intervention was delivered and over what period of time including the number of sessions, their schedule, and their duration, intensity or dose.	The intervention will last 15 minutes and will occur only once
<b>TAILORING</b>		
9.	If the intervention was planned to be personalized,	NA

	titrated or adapted, then describe what, why, when, and how.	
<b>MODIFICATIONS</b>		
10.	If the intervention was modified during the course of the study, describe the changes (what, why, when, and how).	<p>Feedback from the COPRICA participatory group directly informed several modifications to both the content and the delivery of the intervention. In particular, examples of UPFs were diversified to better reflect habitual consumption patterns and to avoid overemphasis on a single product category. To accommodate the 15-minute session format, the group discussion was replaced with an individual activity in which participants identify one UPF they regularly consume and could realistically substitute, thereby reinforcing understanding of the concept and personalisation. The intervention content was condensed into one or two sentences per step to facilitate delivery by a dietician. Additionally, a visual guide to customise nutritional profiles within the Open Food Facts application was incorporated into the facilitator's manual, alongside technical refinements such as downloading the application prior to the session. While suggestions for peer-based support were discussed during co-construction, they were not implemented to maintain fidelity with the U-TRANS study protocol.</p> <p>A feasibility test of the U-TRANS intervention conducted within the INTERCEPTION program with nine participants, showed a high participation rate (90%: 9 out of 10 subjects invited). Post-intervention satisfaction was unanimous, with all participants reporting that the Open Food Facts application was easy to understand, informative, and useful. Adherence to using the application after the intervention was also high (100%), with several participants expressing intention to involve family members and highlighting the "compare" function as helpful for identifying healthier alternatives. Based on this pilot feedback, additional explanatory materials, including guidance on the NutriScore, NOVA classification, and a FAQ section, were incorporated to support implementation (Supplementary material).</p>
<b>HOW WELL</b>		
11.	Planned: If intervention	NA

	adherence or fidelity was assessed, describe how and by whom, and if any strategies were used to maintain or improve fidelity, describe them.	
12.	Actual: If intervention adherence or fidelity was assessed, describe the extent to which the intervention was delivered as planned.	NA