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# ABC4Nurses:

## Development of an online Advanced Breast Cancer Education Programme for Nurses

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**Presented on behalf of the ABC4Nurses Research Team:**

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# Background

- ▶ Breast cancer is the most common cancer diagnosed globally (IACR, 2020)
- ▶ Over 531,000 women in Europe diagnosed with breast cancer in 2020 (13.3% of all cancer diagnoses).  
(European Commission 2021, GLOBOCAN 2020).
- ▶ Up to one-third of people diagnosed with breast cancer may develop advanced disease (Cardoso et al 2012; Globocan 2020).
- ▶ Incident cases expected to increase by >46% by 2040 (Globocan 2020).



# Background

## Access to Specialist Cancer Nursing Care for Advanced Breast Cancer

- ▶ Fewer than one-third of people living with advanced breast cancer have access to a specialist breast cancer nurse.
- ▶ Only 55% of European countries have Specialist Breast Units (SBUs).
- ▶ Geographical variance in:
  - ▶ access to specialist nursing care.
  - ▶ access to specialist breast units.

## Impact of Specialist Cancer Nursing Care for Advanced Breast Cancer

Access to specialised cancer care can support:

- ▶ Management of physical symptoms
- ▶ Greater satisfaction with quality of care
- ▶ Improved psycho-social well-being
- ▶ Lower rates of anxiety and depression

# Aim

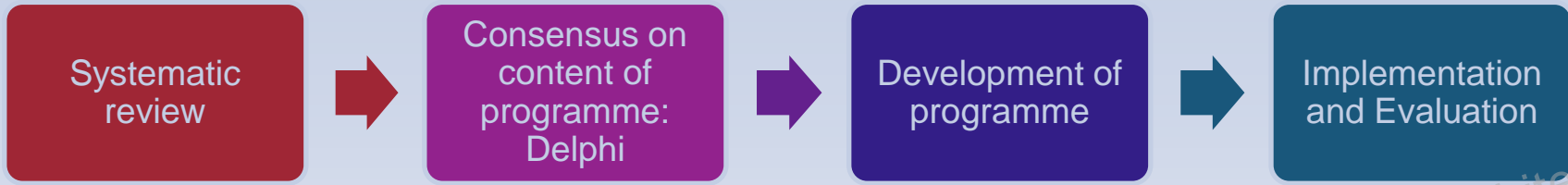
The aim of the project was to develop, deliver and evaluate a fit for practice, comprehensive, inclusive, and scalable online education programme, teaching European nurses specialist knowledge and skills in Advanced Breast Cancer (ABC) care.

The project comprised 4 phases:

1. **Systematic Review**
2. **Delphi Study**
3. **Development of the Programme**
4. **Pilot and Evaluation**



# Study Design



In Progress



# Phase 1: Systematic Review

## Participants:

Nurses engaging in further education on breast cancer or metastatic breast cancer or educators who are delivering further education programmes on breast cancer or metastatic breast cancer.

## Intervention:

Postgraduate or continuing professional development programme which provides education on metastatic breast cancer as the primary topic, or as a sub-component of a breast cancer educational programme.

## Outcomes:

Learning outcomes, competencies, topics and content of modules, modes of educational delivery, modes of assessment, and outcomes of educational programmes, based on Kirkpatrick's four levels, including:

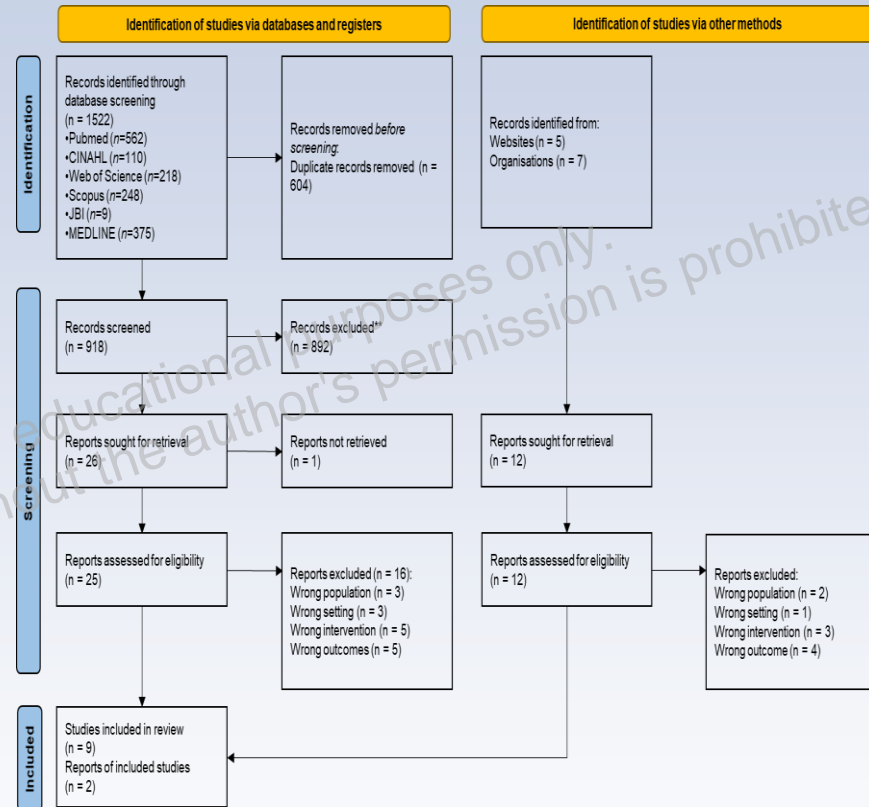
- *Reaction*: students' experience, satisfaction and self-assessment of learning in MBC;
- *Learning*: assessment grades and demonstration of skills in skills-based assessment.
- *Behaviour*: self-reported and observer-reported application of learning in clinical practice and impact on MBC service development
- *Results*: number of programme applicants, successful participants/graduates, alumni employment and promotional outcomes.

## Studies:

Primary quantitative, qualitative or mixed-methods studies and systematic reviews evaluating the implementation and outcomes of educational programmes about metastatic breast cancer. Peer-reviewed narrative reports describing the development of MBC education programmes. Standards or guidelines for breast cancer and metastatic breast cancer education programmes.

# Search Strategy

- **Search Terms:** breast cancer, metastatic breast cancer, nursing education and nurse training programmes.
- **Databases:** MEDLINE, CINAHL, Scopus, PsycINFO, Web of Science
- **Grey Literature:** Google Advanced Search, websites of key organisations in the field of breast cancer, cancer nursing, surgical oncology, medical oncology and radiation oncology.
- **Reference Management:** Covidence; EndNote X9



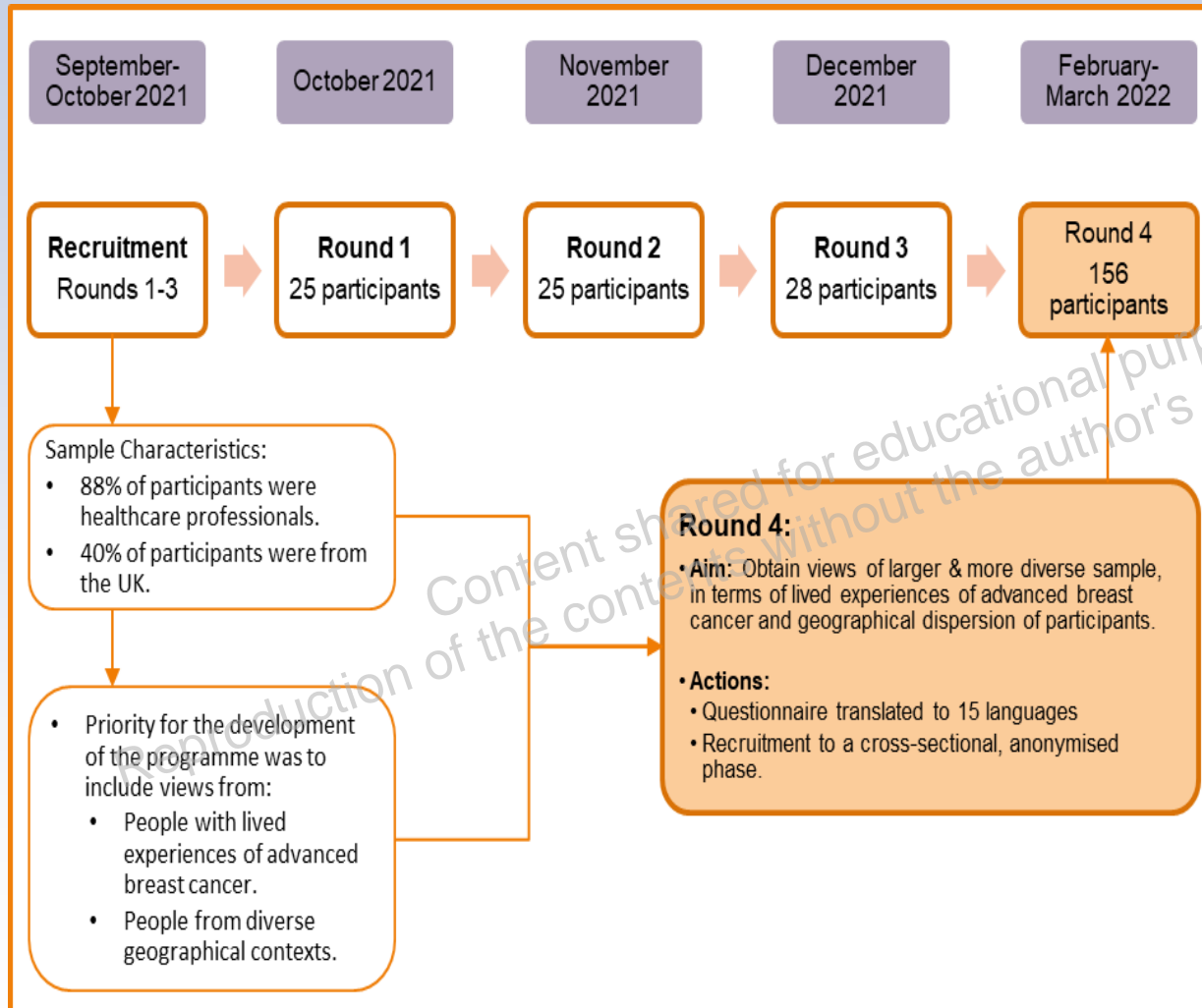


# Systematic Review Key Findings

- ▶ Limited number of education programmes on advanced breast.
- ▶ Guidance on indicative content in educational and competency standards included in this review varied. Where studies included components on advanced breast cancer, the indicative content was not always transparent.
- ▶ Programmes lacked theoretical underpinning for curriculum development, and not consistently aligning with existing standards or guidelines for breast cancer or advanced breast cancer education and competencies.
- ▶ Limited evidence that people living with advanced breast cancer were involved in the development and delivery of educational programmes for cancer nurses.
- ▶ Small sample sizes involved in programme evaluation, predominant focus on self-reported experience, change in attitude, knowledge, skills and behaviours.



# Phase 2: Delphi Study



**Aim:** to obtain consensus on the essential topics for an international curriculum for an advanced breast cancer education programme for nurses (ABC4Nurses) from a diverse group of people who are experts in advanced breast cancer by experience and profession.

# Delphi Study – Results Rounds 1-3

## Round 1 (n = 25)

- 32 topics reached consensus
- 7 participants recommended 17 further items
- 5 teaching methods reached consensus
- 7 participants recommended additional teaching methods and 2 participants recommended patient and caregiver experiences
- These were assimilated into existing methods and topics

## Round 2 (n = 25)

- 36 topics were presented
- 5 did not reach consensus, including two new items
- 6 methods of teaching were presented
- All methods of teaching reached consensus

## Round 3 (n = 28)

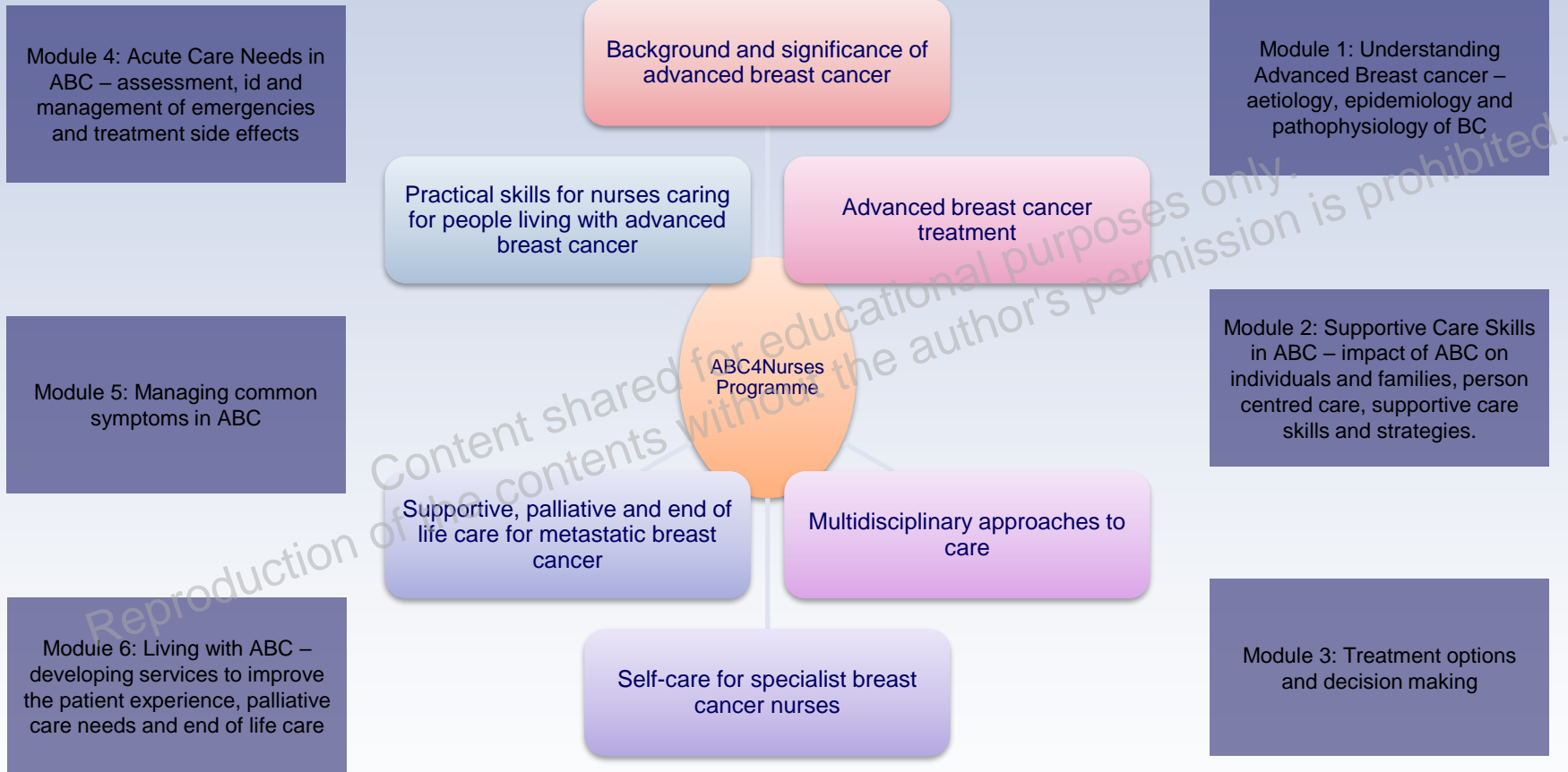
- Two items failed to reach consensus

# Delphi Study – Results Round 4

Round 4 ( $n = 156$ )

- All 36 topics reached consensus amongst whole sample
- One method of teaching did not reach consensus amongst whole sample (reflective practice)
- Within subgroups not all topics or teaching methods reached consensus
- 22 participants made 39 suggestions for additional topics
- 15 participants made 17 suggestions methods of teaching
- All recommendations were assimilated into prior topics and methods

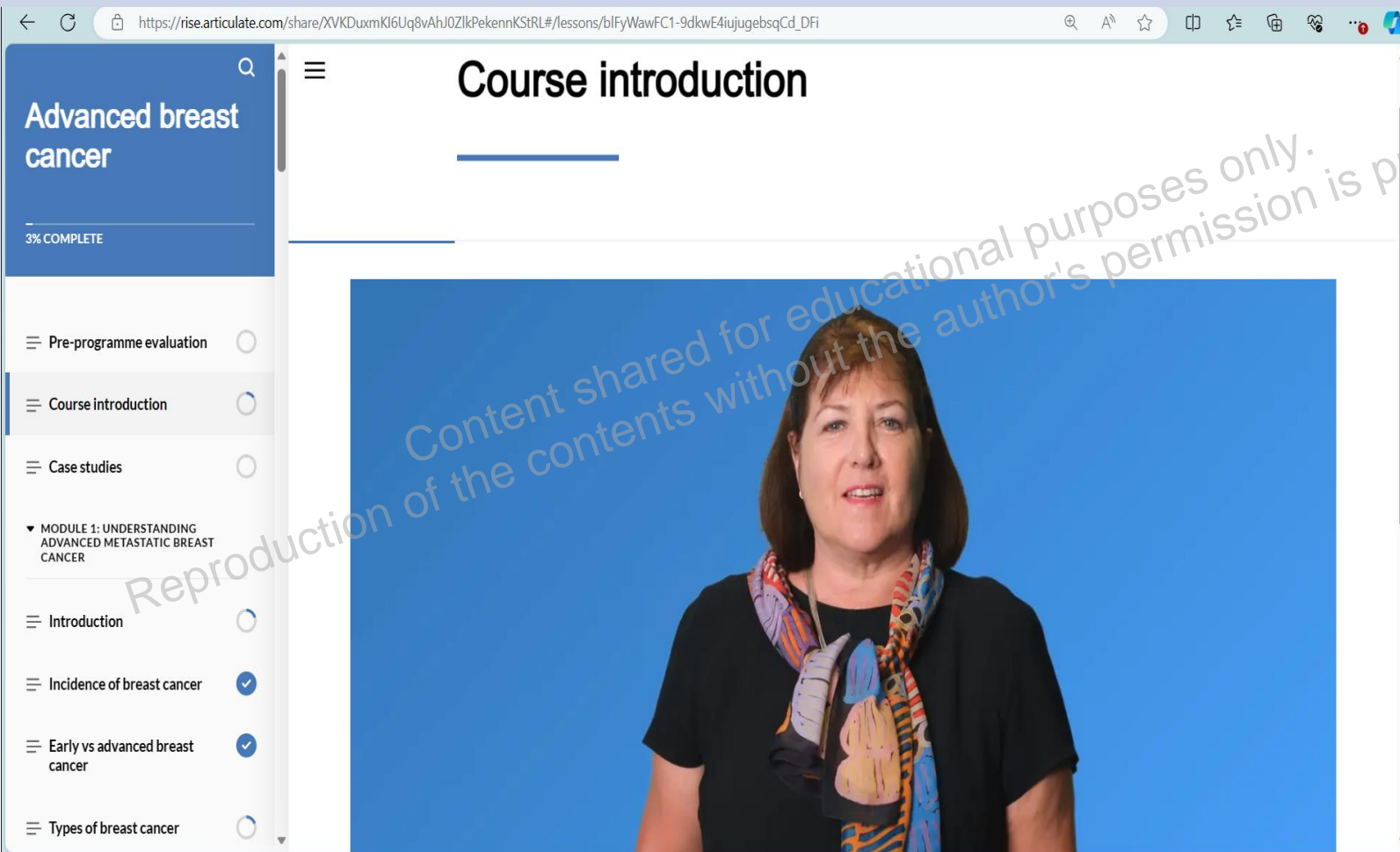
# Phase 3: Development of the ABC4Nurses Programme



**Translated into Spanish, Turkish, Czech as well as English**



# Each module has a filmed introduction and summary



The screenshot shows a web browser displaying a course page. The browser's address bar contains the URL: [https://rise.articulate.com/share/XVKDuxmK16Uq8vAhJ0ZlkPekennKStRL#/lessons/blFyWawFC1-9dkwE4iujugebsqCd\\_DFi](https://rise.articulate.com/share/XVKDuxmK16Uq8vAhJ0ZlkPekennKStRL#/lessons/blFyWawFC1-9dkwE4iujugebsqCd_DFi). The page title is "Course introduction". On the left, a blue sidebar contains the course title "Advanced breast cancer" and a progress indicator "3% COMPLETE". Below this, a list of course sections is shown with expand/collapse icons and progress status:

- Pre-programme evaluation
- Course introduction
- Case studies
- MODULE 1: UNDERSTANDING ADVANCED METASTATIC BREAST CANCER
  - Introduction
  - Incidence of breast cancer
  - Early vs advanced breast cancer
  - Types of breast cancer

The main content area features a video player with a blue background. A woman with short brown hair, wearing a black top and a colorful patterned scarf, is visible in the video frame. A large, semi-transparent watermark is overlaid diagonally across the video, reading: "Content shared for educational purposes only. Reproduction of the contents without the author's permission is prohibited."

# Use of video, interactive exercises, case studies and quizzes

Thanks for sharing your ideas here.

In some cultures cancer is seen as taboo, and often not talked about in families. Here a short film made by West African women living London talking about some of the difficulties in their culture.

Together

- Person-centred supportive care
- The nurse's role in supportive care in advanced breast cancer
- Communication in advanced breast cancer
- Communicating with empathy
- Barriers to effective communication
- A cross-cultural approach to cancer care communication
- Supporting people and their families through difficult circumstances
- Coping styles or ways of coping

Elizabeta

Elizabeta is a 78 year old lady who cares for her husband James, who has dementia.

She is fit for her age but takes medication for hypertension

START >

- Person-centred supportive care
- The nurse's role in supportive care in advanced breast cancer
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### Case studies

Throughout this programme, we're going to draw upon real-life case studies to help us better understand the nuances of ABC and provide opportunities to apply our understanding.

With that in mind, we would like to introduce you to some people who have been recently diagnosed with ABC.

- Maria
- Ines
- Elizabeta

Maria and Ines have previously been treated for early breast cancer. Elizabeta has advanced breast cancer at first diagnosis.

- Person-centred supportive care
- The nurse's role in supportive care in advanced breast cancer
- Communication in advanced breast cancer
- Communicating with empathy
- Barriers to effective communication
- A cross-cultural approach to cancer care communication
- Supporting people and their families through difficult circumstances
- Coping styles or ways of coping

Cyclins and CDKs regulate the cell cycle.

RB INACTIVE

Retinoblastoma Tumour Suppressor Protein

Watch later Share

- Systemic anti-cancer therapy (SACT)
- Chemotherapy: introduction
- Chemotherapy: side effects
- The role of CDK 4/6 therapy
- Targeted therapies
- Hormone therapy
- Immunotherapy
- Radiotherapy
- Other treatments

### Quiz

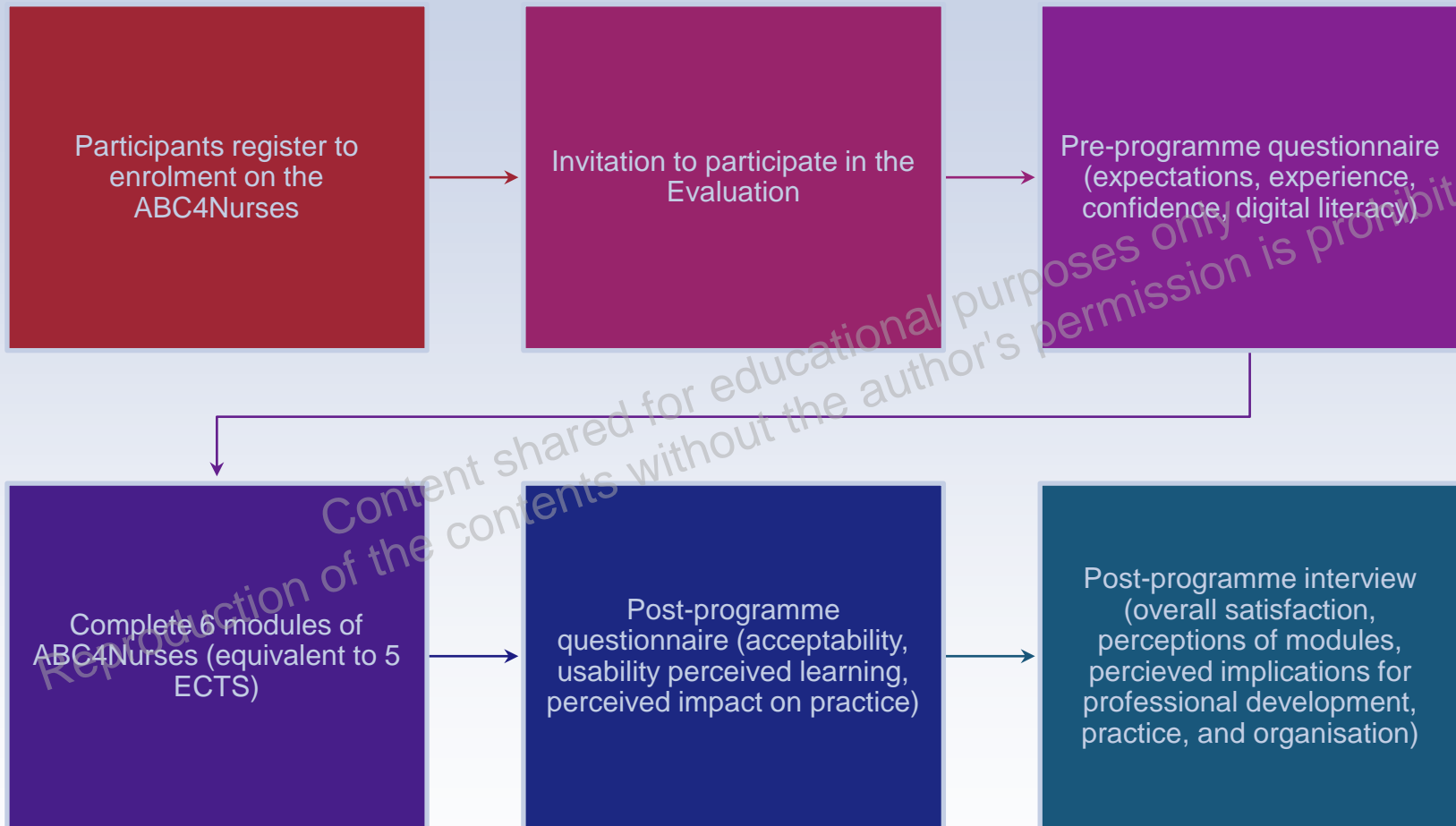
Let's now apply and check your understanding with a short quiz. There are four questions, and you must get at least three correct to pass.

You can reattempt this quiz twice.

START QUIZ >

- Other treatments
- Adherence
- Clinical trials
- Quiz
- Summary
- Introduction
- Oncology emergencies
- Hypercalcaemia
- Malignant spinal cord compression

# Phase 4 – Pilot and Evaluation





# Mixed Methods Evaluation

## ■ Guided by Kirkpatrick Model

Kirkpatrick's four levels, including:

- *Reaction*: students' experience, satisfaction and self-assessment of learning in ABC;
- *Learning*: assessment grades and demonstration of skills in skills-based assessment.
- *Behaviour*: self-reported and observer-reported application of learning in clinical practice and impact on ABC service
- *Results*: Interviews (overall satisfaction, perceptions of modules, perceived implications for professional development, practice, and organization. Interviews with manager

## ➤ Pre/Post module and programme questionnaires

(levels 1 and 2)

## ➤ Qualitative interviews

(levels 3 and 4)

## ➤ Analysis – Descriptive stats/ Reflexive Thematic Analysis (Braun & Clarke, 2019)



# Results

- ▶ 819 people registered; 501 did not access so removed
- ▶ 272 active users during pilot; 185 consented
- ▶ 133 participated in evaluation

Variable	Pre-Test	
	Mean	SD
Age	40.71	15.532
Years as registered nurse	16.27	9.914
	n	%
Age Groups		
	20-35 years	65 33.7
	35-49 years	91 47.2
	50-65 years	37 19.2
Gender		
	Male	6 3.00%
	Female	195 97.00%
Country		
	"Australia"	1 0.5
	"Bahrain"	1 0.5
	"Spain"	42 20.9
	"United Kingdom"	64 31.8
	"Columbia"	4 2
	"Czech Republic"	36 17.9
	"Croatia"	1 0.5
	"Cyprus"	1 0.5
	"Greece"	4 2
	"India"	1 0.5
	"Ireland"	4 2
	"Italy"	1 0.5
	"Malta"	2 1
	"Mexico"	2 1
	"Norway"	1 0.5
	"New Zealand"	1 0.5
	"Austria"	1 0.5
	"Oman"	1 0.5
	"Paru"	1 0.5
	"Philippines"	1 0.5
	"Poland"	1 0.5
	"Switzerland"	1 0.5
	"Turkey"	27 13.4
	"JAE"	2 1
Years of Experience		
	<5 years Experience	31 16.5
	6-10 years experience	31 16.5
	11-20 years experience	66 35.1
	21-30 years experience	46 24.5
	31-40 years experience	13 6.9
	> 41 years experience	1 0.5
Highest Level of Qualification		
	Certificate or Matriculation	19 9.5
	Undergraduate	104 52.3
	Postgraduate	76 38.2
Specialist Cancer Care Qualification		
	Yes	89 44.7
	No	110 55.3
Time since last qualification		
	Less than 5 years ago	103 51.8
	Between 6-10 years	37 18.5
	More than 11 years ago	59 29.6
Any training in the past six months		
	Yes	113 56.8
	No	86 43.2
Current Area of Work		
	Surgical	30 15.2
	Chemotherapy Day Ward	58 29.3
	Radiotherapy	7 3.5
	Inpatient Unit	79 39.9
	Community	13 6.6
	Other	10 5.1
	Outpatients	1 0.5
Self-Perceived preparation to care for people with cancer		
	Low	5 2.6
	Moderate	69 35.8
	High	119 61.7

97% female

Average age 40 years (range: 20-64; SD= 15.53).

- ▶ half the sample had between 11-20 and 21-30 years of experience as a registered nurse (35.1% and 24.5%, respectively).
- ▶ 16.5% had less than five years of experience.
- ▶ 9.5% held a certificate level qualification, 52.3% held an undergraduate qualification and 38.2% held a postgraduate qualification.
- ▶ 44.7% had a specialist cancer care qualification. The majority of participants worked in a chemotherapy day ward (29.3%), in-patient units (39.9%), surgical (15.2%) and radiotherapy units (3.5%).
- ▶ Participants self-perceived preparation to care for people with ABC ranged from low (2.6%), moderate (35.8%) and high (61.7%).



# Results

- ▶ 152 responses re support to complete the programme only 8 participants received support (study leave)
- ▶ 79 participants completed during pilot period.
- ▶ Average 64.9 days
- ▶ 96% completed on 1<sup>st</sup> attempt
- ▶ 95.5% agreed or strongly agreed with the following three statements:
  - “This programme met my expectations for learning”,
  - “The course was a worthwhile use of my time”,
  - “I believe that the programme has helped me in my work”.



# Qualitative Findings

## ► Theme 1 Benefits of programme

*Educational tools, enjoyability, clinical practice, accessibility, useful topics*

## ► Theme 2 Barriers to progressing knowledge

*Within the programme, outside the programme*

## ► Theme 3 Wider impact of the programme

*Importance and need for education, organisational changes raising awareness, peers.*



# Conclusions

- ▶ Participants overall experience of learning, learning materials of the programme and participants' satisfaction with the programme were rated highly by participants.
- ▶ After completing the programme, participants felt confident in caring for people living with ABC and were committed to applying what they had learned into practice
- ▶ Participants felt that this programme provided a good knowledge base for nurses.
- ▶ Most reported receiving little to no support from their organisations to undertake this training. This is mirrored across the literature (Sarre et al, 2018; UNISON, 2016), where although nurses desire educational opportunities, they often lack the support within their organisations to successful fulfil this need.



# Summary

- This 4 phase project was fully evidence based and included stakeholder co-design
- Findings support the ABC4Nurses programme is a fit for practice, comprehensive, inclusive online education programme.
- Any questions

