CDK4/6 inhibitors in outpatient gynecological oncology: Identification of implementation barriers and opportunities for improving their use in private practice

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Background

CDK4/6 inhibitors (CDKi) have proven efficacy in early high-risk and advanced breast cancer, substantially improving progression-free survival.

Advantages:
- Oral administration
- Outpatient management possible
- Long-term adjuvant therapy (2-3 years) [1-4]

Current problem:
Despite oral formulation, most CDKi therapy in Germany remains hospital-based, limiting patient access and creating barriers to care. Community based gynecologists traditionally provide breast cancer follow-up but rarely manage CDKi therapy – the reasons for this gap are poorly understood

Study Aims

This multi-phase study aimed to:
1. ASSESS current knowledge and experience with CDK4/6-inhibitors in private gynecology practices
2. IDENTIFY specific implementation barriers and support needs
3. DEVELOP tailored practice guidelines based in identified needs
4. EVALUATE effectiveness of structured educational interventions

Methods

Design: Multi-phase cross-sectional study with progressive intervention development and evaluation
Setting: Northern Germany, 2024 - 2025
Community-based gynecologists recruited at regional conferences
Data collection: Anonymous structured questionnaires using validated scales
Analysis: Descriptive statistics, frequency distributions, pre-post comparisons

Phase 1: Needs Assessment

- Knowledge & experience assessment
- Barrier & support needs identification
- Practice demographics

Outcome: Baseline implementation gap and barrier profile defined

Phase 2: Guideline Evaluation

Intervention
Practice guideline developed based on Phase 1 findings, including:
- Baseline assessments
- Dosing algorithms
- Side effect management protocols
- Emergency response guidelines
- Monitoring schedules

Evaluation
- Practicality assessment
- Impact on treatment confidence
- Perceived helpfulness

Outcome: Guideline acceptability and impact quantified

Phase 3: Workshop Evaluation

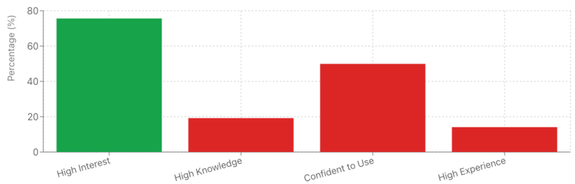
Intervention
Structured 4-hour workshop covering:
- CDKi mechanism & indications
- Practical dosing & monitoring
- Case-based side effect management

Evaluation
Pre-post assessment measuring:
- Competency across 8 domains
- Treatment confidence & implementation readiness

Outcome: Training effectiveness demonstrated

Figure 1: Implementation Gap - Interest vs. Reality

Phase 1 Survey Results (n=78 gynecologists)



Phase 1 Results: Implementation Gap & Barriers

Key findings:
- 75.6 % HIGH INTEREST (n = 59/78)
- 80.8 % LOW KNOWLEDGE (n = 63/78)
- 50.1 % LOW CONFIDENCE (n = 37/73)

→ Substantial gap between interest and actual implementation.

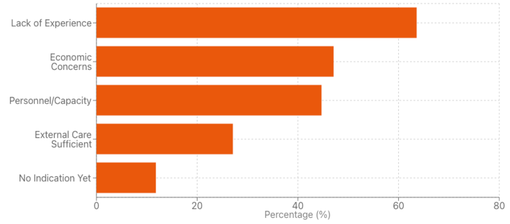
Top 3 barriers:

1.	LACK OF EXPERIENCE	63.6 % (n = 42/66)
2.	ECONOMIC CONCERNS	47.1 % (n = 31/66)
3.	PERSONNEL/CAPACITY	44.7 % (n = 29/66)

→ All addressable through **targeted interventions.**

Figure 2: Implementation Barriers

Primary reasons for limited CDK4/6i use (n=66)



Phase 2 Results: Guideline Impact

- 91.9 % high practicability (n = 27/37)
- 73.0 % would treat with this guideline (n = 27/37)
  - increase + 23.1 % vs. baseline
- 97.2 % helpful for side effects (n = 35/36)

→ Substantial **increase in treatment confidence** with structured support

Phase 3 Results: Workshop Assessment (pilot data)

Pre-Workshop Baseline (n = 34):
- Overall competency: 2.31/5.0
- Lowest domains:
  - Dosing experience 2.09/5.0 & indication setting 2.15/5.0

Post-Workshop Outcomes (n = 12):
- 58.3 % increased interest
- 41.7 % better prepared & reduced concerns

→ structured training demonstrates measurable competency improvement

Figure 3: Baseline Competency Profile (Pre-Workshop)

Phase 3: Mean scores across competency domains (n=34, Scale 1-5)

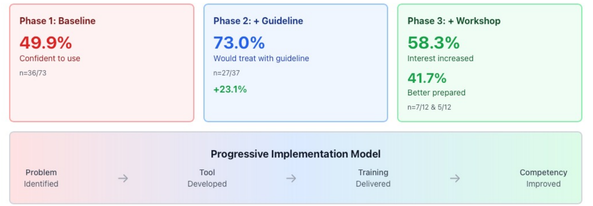


Discussion

- Significant implementation gap exists despite high interest
- Lack of experience is primary barrier (63.6 %) – not lack of willingness
- Practice guidelines substantially increase treatment confidence (+ 23.1 %)
- Multi-phase approach addresses different learning needs:
  - Knowledge (guideline)
  - Skills (workshop)
  - Confidence (both)

Figure 4: Progressive Intervention Impact Across Three Phases

Confidence and readiness improvements through structured interventions



Conclusions

- Strong interest in CDKi use exists in private practice
- Implementation barriers are primarily educational, not attitudinal
- Tailored practice guidelines & structured training substantially increase treatment confidence

Clinical implications:
Structured support programs can expand access to CDKi therpy by enabling safe, confident outpatient management in private practices

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References

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