

RAG-Based Nursing Q&A System

User Guide for Nursing Staff

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Table of Contents

1. Introduction
 2. Getting Started
 3. Basic Usage
 4. Advanced Features
 5. Best Practices
 6. Troubleshooting
 7. FAQ
 8. Support and Feedback
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1. Introduction

The RAG-Based Nursing Q&A System is designed to provide you with instant, evidence-based answers to questions about breast cancer patient care. This guide will help you effectively use the system to support your clinical decision-making.

1.1 Purpose of this Guide

This user guide will help you:

- Access and navigate the Q&A system
- Formulate effective questions
- Interpret and apply the information provided
- Understand the system's capabilities and limitations

1.2 Who Should Use This System

This system is designed for:

- Registered Nurses (RNs)
- Nurse Practitioners (NPs)
- Licensed Practical Nurses (LPNs)
- Nursing Assistants (under supervision)
- Nursing Students (under supervision)

1.3 System Benefits

Using this system will help you:

- Save time researching clinical questions
 - Ensure care is based on the latest evidence
 - Provide consistent information to patients
 - Access specialized oncology knowledge regardless of your experience level
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2. Getting Started

2.1 System Access

Web Access:

1. Navigate to <https://nursing-qa.hospitalname.org>
2. Log in with your hospital credentials
3. Select "Breast Cancer Care" from the specialty dropdown

Mobile App Access:

1. Download the "Nursing Q&A" app from your device's app store
2. Log in with your hospital credentials
3. The app will automatically sync with your department settings

EHR Integration:

1. While viewing a patient record, click the "Clinical Decision Support" button
2. Select "Nursing Q&A" from the tools menu
3. The system will automatically load with relevant patient context

2.2 First-Time Setup

When accessing the system for the first time:

1. Complete the brief orientation tutorial (5 minutes)
2. Set your clinical specialty and areas of interest
3. Review and accept the terms of use
4. (Optional) Customize notification preferences

2.3 Interface Overview



The interface consists of:

1. **Question Input Bar:** Where you type your clinical questions
 2. **Patient Context Panel:** Shows active patient information (if integrated with EHR)
 3. **Response Area:** Displays system answers with citations
 4. **Action Toolbar:** Options for saving, sharing, or requesting more information
 5. **History Sidebar:** Access to your previous questions and responses
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3. Basic Usage

3.1 Asking Effective Questions

The system works best with clear, specific questions. For optimal results:

Do:

- Include relevant patient characteristics (age, stage, treatments)
- Ask specific clinical questions
- Use standard medical terminology

Examples of effective questions:

- "What are the recommended interventions for radiation-induced dermatitis in a 65-year-old with diabetes?"
- "How should I adjust the antiemetic protocol for a patient who had a poor response to ondansetron during the first cycle of AC chemotherapy?"
- "What patient education should be provided before starting an aromatase inhibitor?"

Avoid:

- Vague or overly broad questions
- Hypothetical scenarios without clinical focus
- Questions about prognosis or survival rates (consult oncologist)

3.2 Understanding Responses

Each response includes:

1. **Direct Answer:** Concise response to your question
2. **Supporting Information:** Additional context and details
3. **Evidence Level:** Indication of the strength of supporting evidence
4. **Citations:** References to clinical guidelines and research
5. **Confidence Score:** System's assessment of answer reliability

Example Response Structure:

QUESTION: What interventions are recommended for managing peripheral neuropathy from taxane chemotherapy?

DIRECT ANSWER:

First-line interventions include dose modification, duloxetine (30mg daily, increasing to 60mg if tolerated), and cryotherapy during infusion for prevention.

SUPPORTING INFORMATION:

Peripheral neuropathy occurs in approximately 70-80% of patients receiving taxanes, with symptoms including numbness, tingling, and pain in hands and feet. Management is three-pronged:

1. PREVENTION:

- Cryotherapy (frozen gloves/socks) during infusion reduces incidence by 35%
- Consider dose density or alternative regimens in high-risk patients

2. PHARMACOLOGIC MANAGEMENT:

- Duloxetine: Only agent with strong evidence (Category 1)
- Gabapentin/pregabalin: Mixed evidence but commonly used (Category 2B)
- Avoid opioids for long-term management

3. SUPPORTIVE CARE:

- Physical therapy for maintaining function
- Patient education on safety precautions
- Regular assessment using the CTCAE scale

EVIDENCE LEVEL: Category 1 (High-level evidence, uniform consensus)

CITATIONS:

1. NCCN Guidelines for Supportive Care, Version 2.2025
2. Hershman DL, et al. (2024). Prevention and management of chemotherapy-induced peripheral neuropathy. J Clin Oncol. 43(12):1109-1134.

CONFIDENCE SCORE: 95%

3.3 Follow-up Options

After receiving an answer, you can:

- **Ask for clarification:** Click "Clarify" to ask a follow-up question
 - **Request simplification:** Click "Simplify" for a less technical explanation
 - **Save for later:** Bookmark the response for future reference
 - **Share with team:** Send to other care providers via secure messaging
 - **Print for patient:** Generate a patient-friendly handout based on the response
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4. Advanced Features

4.1 Patient-Specific Queries

When integrated with the EHR, you can ask questions specific to your current patient:

1. Ensure the correct patient is loaded in the context panel
2. Include "for this patient" in your question
3. The system will automatically consider relevant factors like:
 - Age and comorbidities
 - Current medications and allergies
 - Treatment history and current regimen

Example: "What side effects should I monitor for this patient starting today's treatment?"

4.2 Clinical Pathways Integration

For standardized care scenarios:

1. Click the "Pathways" button in the action toolbar
2. Select the relevant clinical situation
3. The system will guide you through the institution-approved pathway
4. Each step includes rationale and evidence

4.3 Visual Reference Library

For visual assessment questions:

1. Click the "Visual References" button
2. Search or browse by condition (e.g., "radiation dermatitis grades")
3. Use the comparison tool to match patient presentations with reference images

4.4 Export and Documentation

To include information in patient documentation:

1. Click the "Export" button
2. Select the appropriate format:
 - Clinical note entry
 - Patient education text
 - Team communication
3. Review and edit as needed
4. Click "Insert into Chart" to add to the current patient's record

5. Best Practices

5.1 Clinical Judgment Reminder

Always remember:

- The system provides decision support, not replacements for clinical judgment
- Verify critical information, especially in emergent situations
- Follow your institution's policies and procedures
- Consult with physicians for complex or unusual cases

5.2 Optimal Usage Scenarios

The system is most valuable for:

Scenario	Example Usage
Protocol verification	Confirming steps in a standard procedure
Patient education preparation	Gathering accurate information before teaching
Management of common symptoms	Evidence-based interventions for expected side effects
Medication information	Administration guidelines and monitoring parameters
Documentation guidance	Standards for assessing and documenting specific conditions

5.3 Limitations

The system should NOT be used for:

- Emergency protocols (follow institutional emergency procedures)
- Complex treatment decisions requiring oncologist input
- Prognosis or survival discussions
- Off-label medication recommendations
- Investigational treatments outside of approved protocols

6. Troubleshooting

6.1 Common Issues and Solutions

Issue	Possible Cause	Solution
System returns "Insufficient information"	Question too vague	Add specific patient characteristics and clinical details
Response seems outdated	Recent guideline update	Check the citation date and click "Check for updates"
Slow response time	Network connectivity issue	Try again or switch to the mobile app on cellular network
Patient context not loading	EHR integration error	Manually enter relevant patient details
Contradictory information	Complex clinical scenario	Use the "Consult specialist" button for oncology nurse navigator review

6.2 Technical Support

For technical issues:

- Helpdesk: x7500
 - Email: nursing-qa-support@hospitalname.org
 - In-app: Click "Report Issue" in the bottom menu
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7. Frequently Asked Questions

7.1 System Capabilities

Q: How up-to-date is the information?

A: The system's knowledge base is updated weekly with the latest research and monthly with guideline updates. Last update: [Current date - 7 days]

Q: Can I see what sources the system uses?

A: Yes, all responses include citations. Click any citation to view the full reference and access the original source when available.

Q: Is patient information stored by the system?

A: The system uses patient data only during your active session to provide contextualized answers. No patient-specific queries are stored beyond the current session, and all data handling is HIPAA-compliant.

7.2 Clinical Usage

Q: Should I document that I used the system?

A: Follow your department's policy on clinical decision support. Generally, it's good practice to note that you consulted evidence-based resources when making clinical decisions.

Q: Can I use this for patients with other types of cancer?

A: Currently, the system is optimized for breast cancer care only. Using it for other cancer types may result in incomplete or inappropriate information.

Q: How does the system handle non-standard cases?

A: For unusual presentations or rare complications, the system will indicate if information is limited and recommend specialist consultation.

8. Support and Feedback

8.1 Training Resources

Additional training resources include:

- Monthly virtual training sessions (schedule available on intranet)
- On-demand video tutorials (accessible via the "Help" menu)
- One-on-one sessions with Clinical Informatics (email to schedule)

8.2 Providing Feedback

Your feedback helps improve the system:

1. Click the "Feedback" button after receiving any response
2. Rate the answer's usefulness and accuracy
3. Suggest improvements or report incorrect information
4. Request new features or content areas

8.3 Reporting Clinical Concerns

If you believe the system has provided potentially incorrect or harmful information:

1. Document the question and response
2. Contact the Nursing Informatics team immediately (x8255)
3. Complete a clinical variance report if appropriate

Thank you for using the RAG-Based Nursing Q&A System. Together, we can provide the best evidence-based care for our breast cancer patients.

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NOTE: This document had been created as a technical writing sample