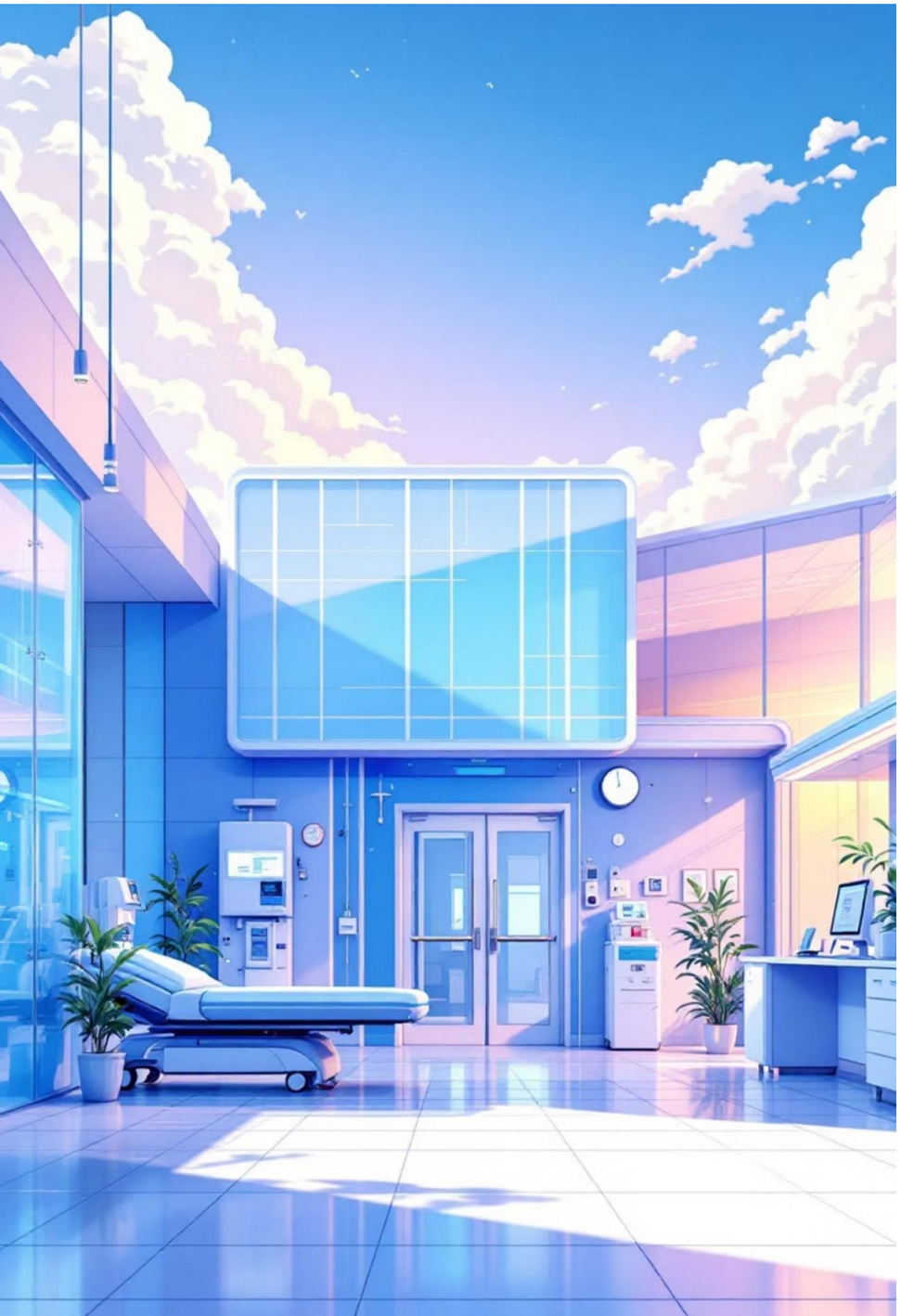


OncoFlow AI

Agentic AI to Protect Oncology Treatment Timelines

Scheduling, disruption handling, and
evidence-backed decisions for cancer care

Built with IBM watsonx Orchestrate

The Pain Today in Oncology Scheduling

Rigid Availability

Oncologists have constantly shifting schedules that complicate planning.

Manual Chaos

Schedulers juggle calls, emails, and spreadsheets for time-critical treatments.

Last-Minute Disruptions

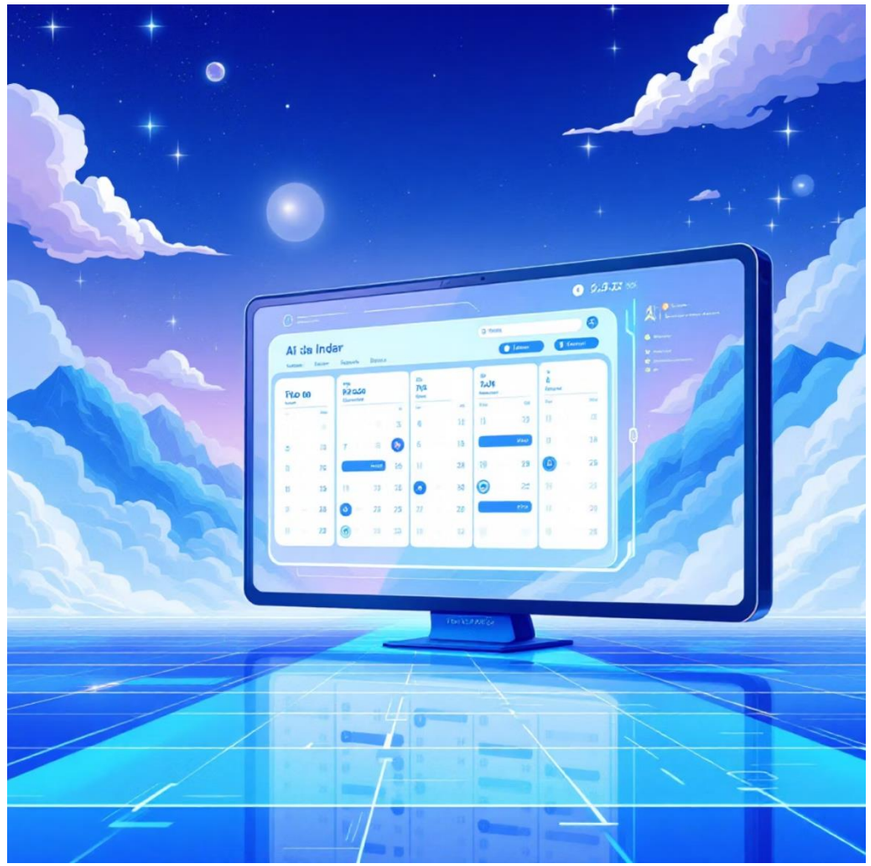
Sick calls, equipment outages, and system downtime cause scheduling chaos.

Impact: Wasted capacity, delayed chemo/radiation, anxious patients, and higher clinical risk.

What Is OncoFlow AI?

An AI-powered oncology scheduling product built on **IBM watsonx Orchestrate**.

- **Acts as a copilot for schedulers and care teams, not just a chatbot**
- **Optimizes doctor–patient schedules and automatically handles disruptions**
- **Reschedules safely, updates calendars, and sends empathetic patient messages**
- **Uses PubMed-backed evidence to justify time-critical decisions for high-risk patients**



Stakeholder Value

Schedulers & Admins

Less manual rescheduling and fire-fighting.

Oncologists

Fewer chaotic changes, safer treatment timelines.

Patients

Clear, empathetic updates instead of last-minute surprises.

Hospital Leadership

Better use of limited oncology capacity, fewer risky delays.

Multi-Agent Design on watsonx Orchestrate

User Input

Natural language request

OncoFlow Orchestrator

Chat agent that understands intent and routes to specialists

Scheduler Agent

Planning, optimization, and booking appointments

Disruption Agent

Handles emergencies and last-minute changes

The Orchestrator is the only agent users interact with—it intelligently delegates to specialist agents for planning or disruption handling.

End-to-End Workflow

01

Natural Language Request

User types request into OncoFlow Orchestrator

02

Intent Classification

Orchestrator classifies as planning, disruption, or explanation and routes accordingly

03

Agent Processing

Scheduler or Disruption Agent pulls data, computes Treatment Risk Scores (HIGH/MEDIUM/LOW), and calls tools

04

Proposal & Approval

Agent finds valid slots, proposes changes, and drafts messages for user approval

05

Execution

Applies changes and calls calendar_block_slot to block time

06

Evidence Support

If asked "Why is this risky?", Orchestrator calls pubmed_search and summarizes oncology research

Demo: High-Risk Patient Needs an Urgent Slot

Step 1: Natural Language Request

1

User types: *"Patient P003 is high risk and needs an appointment this week. Find the earliest safe slot with any oncology doctor between Nov 25–29, 2025 and list the top 3 options."*

Orchestrator detects planning request and routes to Scheduler Agent.

Step 2: Under the Hood

2

Scheduler Agent pulls doctor constraints, existing appointments, and patient P003's treatment cycle and risk status. Uses tools to find safe available slots.

Returns top 3 options:

- **Nov 25, 2025 · 9:00–9:30 AM · Dr. John**
- **Nov 25, 2025 · 11:00–11:30 AM · Dr. Emily**
- **Nov 26, 2025 · 10:00–10:30 AM · Dr. John**

Step 3: Confirm and Book

3

Follow-up: *"Please book Patient P003 for an appointment on Nov 25, 2025 at 9:00 AM."*

Scheduler Agent validates, books appointment, and calls calendar_block_slot to block the time.

Technology Stack

IBM watsonx Orchestrate

- 3 agents: OncoFlow Orchestrator, Scheduler Agent, Disruption Agent
- Skill flows, routing logic, approvals, and guidelines

watsonx.ai LLMs

- Llama-3-based models
- Reasoning, intent detection, tool selection, message drafting

Custom Tools

Scheduling: mock_data, get_doctor_schedule, compute_treatment_risk, find_available_slots, propose_schedule_changes

Disruption: get_appointments_for_window, generate_patient_message, send_notification, escalate_to_human_scheduler

Integrations: calendar_block_slot, pubmed_search

Business Impact for Hospitals

80%

Reduced Fire-Fighting

Automates weekly planning and complex rescheduling

95%

Protected Timelines

Lowers chance of dangerous delays for high-risk patients

30%

Increased Capacity

Fills gaps from cancellations and fragmented availability

Improved Patient Experience

Proactive, clear, empathetic communication during changes builds trust

Evidence-Aware Decisions

Scheduling decisions backed by PubMed research and logged rationales

Business Model & Roadmap

How We Monetize

B2B SaaS for hospitals and cancer centers

- Base subscription per site or oncology department
- Add-on modules: EHR/EMR integration, enterprise calendar, advanced analytics
- Start with paid pilots, convert to multi-year contracts
- Long term: partner with EHR vendors and IBM ecosystem

Roadmap

Short term: Connect to real Outlook/Google Calendar and EHR test environments

Medium term: Extend beyond oncology, build delay and utilization dashboards

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