MCP SERVER | NO CODE | CLOUD HOSTED

Geneva Score Calculator MCP for AI Agents

Assessing Pulmonary Embolism Risk and Guiding Diagnostic Protocols

The Geneva Score Calculator MCP provides a critical decision support system for assessing Pulmonary Embolism (PE) risk. Clinicians can input core patient data—like age, heart rate, and surgical history—to generate an immediate PE risk score based on the Revised Geneva Algorithm. It then recommends specific diagnostic next steps, such as D-dimer testing or CTPA imaging, helping guide care decisions fast.

A+ Quality Score 100/100

pulmonary-embolism | geneva-score | medical | risk-assessment | healthcare

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vinkius.com/mcp/geneva-score-calculator

SCAN TO VIEW

The connectivity layer between AI and the world's software.

Vinkius sits between AI and every application. All communication passes through Vinkius Cloud via the Model Context Protocol (MCP) — with governance, observability, and security at every layer.

Your AI Connections Run Through Vinkius Cloud

The world's largest managed MCP catalog

Vinkius is the connectivity layer where AI connects to the software your business already runs. We handle the hosting, the security, the credentials, the uptime — you get agents that actually do things.

We operate the world's largest managed MCP catalog. Major SaaS platforms, CRMs, databases, and cloud providers — running, monitored, production-ready. This MCP server is hosted and maintained by the Vinkius Cloud for AI Agents.

> *The agent doesn't manage credentials, doesn't manage uptime, doesn't manage security. Vinkius does.*
>
> — Architecture principle

Four Pillars of the Vinkius Runtime

01 — Security by design

Credentials stay encrypted at rest via AES-256. The AI agent never touches raw keys — they're injected into a sandboxed V8 isolate at runtime. Actions are logged, and connections have an emergency kill switch.

02 — Built on MCP Fusion

This MCP server was built with **MCP Fusion**, the open-source framework (Apache 2.0) that powers the entire Vinkius catalog. Schema-as-firewall strips undeclared fields, compiled PII redaction runs at zero overhead, and cryptographic lockfiles produce git-diffable audit trails.

03 — Deterministic observability

Eight immutable metrics per endpoint: request volume, p95 latency, error rate, active connections, cost attribution. A live payload feed logs every tool call with mutation detection.

04 — Autonomous operations

Servers are deployed, monitored, and patched autonomously. New capabilities and security patches ship weekly. Zero-downtime deployments ensure continuous availability across all managed MCP servers.

AES-256	Ed25519	24h TTL	V8 Isolate
Encryption at rest	PKI vault signatures	Ephemeral session keys	Sandboxed execution

One Token. Instant Access.

Every MCP server on Vinkius is accessed through a **Connection Token**. Tokens are generated in the cloud dashboard and produce a unique MCP endpoint URL. Paste this URL into any MCP-compatible client — no SDK required.

A single token can serve **multiple AI clients simultaneously**, or you can issue separate tokens per client for granular access control. Each token tracks its own request count, last activity timestamp, and can be individually enabled or revoked.

MCP ENDPOINT

```
https://edge.vinkius.com/{token}/mcp
```

Claude · Cursor · VS Code · Windsurf · Grok · Gemini

Security Is the Architecture

Security in Vinkius is not a feature — it's the foundation of the runtime. The gateway enforces multiple independent protection layers between AI agents and third-party APIs.

01 — Ed25519 PKI Vault

Every workspace has an Ed25519 Master Key. Session keys are generated ephemerally (24h TTL) and signed by the Master Key. Credentials never leave the vault boundary.

02 — V8 Isolate Sandboxing

Tool code runs inside isolated-vm V8 isolates with 64 MB memory caps and per-request timeouts. No filesystem access, no network access except through the SSRF-guarded fetch bridge.

03 — SSRF Guard

All outbound HTTP requests are DNS-resolved and validated before execution. Private IP ranges (10.x, 172.16-31.x, 192.168.x, AWS metadata 169.254.x) are blocked at the network layer.

04 — DLP & PII Redaction

A ResponseGuard pipeline intercepts every tool response. Configurable redaction patterns strip sensitive fields (emails, SSNs, card numbers) before data reaches the AI agent.

05 — Cryptographic Audit Trail

Every request is signed into a SHA-256 hash chain with Ed25519 signatures. Events form a tamper-proof, SIEM-exportable forensic record.

06 — Honeytoken Trap System

Phantom credentials are injected into isolated environments. If a honeytoken is used outside Vinkius infrastructure, the server is quarantined instantly.

Emergency Kill Switch

EU AI Act Art. 14(1) Compliant

The kill switch is an **emergency halt** mechanism — not a simple toggle. When triggered, it executes three actions atomically:

01 — Server deactivated

The MCP server is immediately taken offline across the entire cluster.

02 — All tokens revoked

Every connection token is invalidated. Total lockout — reconnection blocked until new tokens are issued.

03 — WebSocket connections killed

Active connections terminated via Redis pubsub broadcast. Propagates to every runtime node in the cluster.

Full Visibility. Zero Guesswork.

The Vinkius cloud dashboard includes a full MCP Governance suite — real-time analytics and security controls for production AI operations.

Control Plane

KPI dashboard with request volume, latency, success rate, token consumption, and AI-generated operational briefings.

Agent Activity

Which AI clients are connecting, how often, and what they're doing — real-time session tracking.

FinOps

Cost tracking per tool, payload compression savings, budget optimization signals, and consumption trends.

Tool Health

Slowest and most error-prone tools, with actionable root-cause insights and performance baselines.

Firewall & DLP

PII redaction activity, sensitive data protection counters, and security event timeline.

Incident Log

Error trends, failure rates, status-code breakdowns, and forensic audit trail access.

> Get started at **cloud.vinkius.com** — connect your AI agent in under 60 seconds.

Geneva Score Calculator MCP

3 tools available
Cloud-hosted on Vinkius

When a patient presents with symptoms suggesting pulmonary embolism, quickly determining their true risk is crucial for treatment planning. This MCP helps you bypass manual calculations and guesswork. By connecting your preferred AI client through the Vinkius catalog, your agent can take raw clinical data—like vital signs or recent procedures—and run it against established medical guidelines to calculate a precise PE score. It doesn't just give you a number; it tells you what that number means for the patient next. After generating the risk level, the system immediately pulls up recommended diagnostic protocols, telling the care team whether they need an initial D-dimer test or if advanced imaging like CTPA is warranted. This ensures every step of the PE workup is evidence-based and timely.

Core Capabilities

01 — Calculate Pulmonary Embolism Risk

Calculates a patient's risk score for pulmonary embolism using the established Geneva Score algorithm.

02 — Determine Required Diagnostics

Provides a list of recommended next medical steps, such as specific blood tests or imaging procedures, based on the calculated risk tier.

03 — Verify Patient Data Integrity

Checks all entered patient parameters to confirm they fall within medically plausible and safe physiological ranges.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/geneva-score-calculator** — connect your AI agent in three steps.

01 Start by feeding your AI client the necessary clinical data points, including age, heart rate, and any relevant history (like recent surgery).

02 The MCP first runs a validation check on that raw input to make sure all parameters are within acceptable medical ranges.

03 Next, it processes the validated inputs through the Geneva Score algorithm to output the risk score and then uses that score to fetch the definitive diagnostic protocol.

The bottom line is you get an instant, medically guided recommendation for a patient's PE workup without manual calculations or guesswork.

Built For

This MCP is built for healthcare professionals who need rapid, evidence-based decision support. It helps reduce diagnostic uncertainty in emergency settings and guides primary care physicians through complex risk stratification.

Emergency Medicine Physician

Uses the tool during high-volume triage to quickly calculate PE risk based on limited vital signs, ensuring immediate differential diagnosis.

Internal Medicine Specialist

Utilizes the score calculator for follow-up care or initial workups when a patient's symptoms are vague but concerning for PE.

Nurse Practitioner

Gathers and inputs comprehensive patient history data, receiving instant feedback on necessary diagnostic orders (like D-dimer) to guide the physician.

What Changes When You Connect

01 Stop guessing. Use the `compute_geneva_score` tool to get an objective, clinically validated risk score instantly.

02 Get clear next steps right away. The system uses `get_diagnostic_protocol` to recommend specific tests like D-dimer or CTPA imaging, saving time and minimizing errors.

03 Trust your data inputs. The `validate_clinical_parameters` tool checks everything you put in, guaranteeing the calculated score is based on plausible patient metrics.

04 Improve departmental flow. Instead of manually cross-referencing protocols, let your agent run the full assessment from input to recommendation in seconds.

05 Focus on care, not math. This MCP handles the complex scoring and protocol lookup so clinicians can spend time treating patients, not calculating risk.

Real-World Applications

Triage a patient with chest pain

A nurse enters vitals for a complaining patient. The agent runs the data through the Geneva Score Calculator, determining high risk and immediately requesting a D-dimer assay via `get_diagnostic_protocol`.

Reviewing ambiguous consult notes

A specialist reviews old records and needs to know if current parameters are valid. They use the MCP's validation tool first, ensuring the data integrity before running the core PE risk calculation.

Determining workup for an outpatient follow-up

A doctor wants to rule out PE in a low-suspicion patient. The agent calculates the score and determines that only basic bloodwork is needed, avoiding unnecessary advanced imaging like CTPA.

Handling missing or questionable data points

The system flags unusual inputs (like an impossible age reading). Using validation checks prevents inaccurate scores, forcing the user to correct the raw clinical parameters before proceeding.

Patterns to Avoid

Relying on generalized risk tools

✗ AVOID

Using a basic calculator that only looks at age and sex. This gives an incomplete picture, potentially missing factors like recent surgery or specific heart rate changes.

✓ INSTEAD

You must use the Geneva Score Calculator MCP because it incorporates multiple clinical variables into one score. Use `compute_geneva_score` for comprehensive risk assessment.

Skipping data validation

✗ AVOID

Manually entering parameters that are medically impossible (e.g., a heart rate of 300 bpm). This leads to an unreliable score and wrong diagnostic pathways.

✓ INSTEAD

Always start by running `validate_clinical_parameters`. The MCP ensures the input data is physically plausible before any calculations run.

Forgetting the next steps

✗ AVOID

Getting a high risk score, but then not knowing what to order. You're left with just a number and no actionable plan.

✓ INSTEAD

The process doesn't end at scoring. Use `get_diagnostic_protocol` immediately after calculating the score to get clear orders for tests like D-dimer or CTPA.

The Right Fit

Use this MCP if your workflow requires rapid, clinically accurate risk stratification for Pulmonary Embolism. You need a system that not only calculates a specific, recognized score but also immediately translates that number into concrete next steps for care (e.g., 'Order D-dimer'). Don't use it if you simply need to track patient history or manage billing codes; those are separate workflow tools. Also, don't rely on this tool alone for diagnosis—it only guides the diagnostic *protocol*. If you just need a general health check without specific risk modeling, look into broader primary care assessment MCPs instead.

Geneva Score Calculator: Accurate Pulmonary Embolism Risk Assessment

Right now, assessing PE risk involves pulling up multiple guidelines, manually inputting age, heart rate, and surgical status into different spreadsheets or clinical decision trees. This process is slow, requires deep institutional knowledge, and increases the chance of human error when time matters most.

With this MCP, your agent takes all those variables—age, history, vitals—and plugs them straight into the established Geneva Score Algorithm. You get an immediate risk score, allowing you to move directly from data input to actionable results without any manual math or cross-checking.

Geneva Score Calculator: Directing Diagnostic Protocols for PE

The biggest time sink is figuring out what test to order next. Do you need a D-dimer? Is CTPA enough? Traditionally, this requires consulting multiple protocol manuals and making judgments based on the calculated risk.

After getting the score, the MCP automatically runs `get_diagnostic_protocol`. It gives you a clear, prioritized list of recommended tests—whether that's low-risk D-dimer or high-risk CTPA—cutting out hours of research and diagnostic uncertainty.

3 Geneva Score Calculators Tools for Pulmonary Embolism Risk Assessment

Use these tools to calculate PE risks, validate patient data integrity, and retrieve definitive diagnostic protocols instantly.

#	TOOL	DESCRIPTION
01	`validate_clinical_parameters`	Confirms that all provided clinical measurements are medically realistic and within physiological bounds.
02	`compute_geneva_score`	Calculates the specific Geneva Score used to assess a patient's risk level for pulmonary embolism.
03	`get_diagnostic_protocol`	Retrieves a structured list of recommended diagnostic tests or next clinical steps based on the calculated risk score.

See It in Action

Real prompts you can use once this MCP is connected to your AI agent through Vinkius Cloud.

U Calculate the PE score for an 85-year-old patient with a heart rate of 130, recent hip surgery, and mild hemoptysis.

Geneva Score Report

- **Total Calculated Score:** 9
- **Risk Tier:** High Risk (Immediate intervention required)
- **Recommended Protocol:**

1. CT Pulmonary Angiogram (CTPA) - Priority 1
2. Anticoagulation therapy consultation

Please notify the attending physician immediately.

U What diagnostic path should we take if the patient is low risk?

Low Risk Protocol Guide

Based on a calculated low-risk score, the recommended next step to rule out embolism is:

- **Test:** D-dimer Assay (Standard Panel)
- **Goal:** Rule out PE.
- **Action:** Order blood draw immediately. If negative, consider discharge criteria.

U Check if the patient's vital signs are valid before calculating anything.

Validation Check Results

✅ **Age (70):** Plausible.
❤️ **Heart Rate (105 bpm):** Within normal limits.
💊 **Recent Surgery:** Recorded as plausible.

The clinical parameters you entered pass validation and are ready for scoring.

Frequently Asked Questions

01 **How does the Geneva Score Calculator help with PE diagnosis?**

It provides a critical, objective risk score based on established medical guidelines. Instead of guessing, you get an immediate number that dictates whether the patient needs basic testing or advanced imaging.

02 **What kind of data does I need to input into Geneva Score Calculator?**

You need standard clinical parameters like age, heart rate, and specific medical history details, such as if they had recent surgery. The MCP will guide you on what information is necessary.

03 **If the score is low, what does the calculator recommend?**

For a low-risk patient, the system doesn't just give a number; it recommends specific next steps. This often includes ordering tests like D-dimer to definitively rule out PE.

04 **Is this MCP useful for emergency room settings?**

Absolutely. In fast-paced ER triage, the Geneva Score Calculator provides instant risk assessment and immediate diagnostic protocols, saving vital minutes in decision-making when time is critical.

05 **Can I check if my patient data is valid with this MCP?**

Yes. Before calculating anything, you can validate the clinical parameters to ensure that all the numbers and details entered are medically plausible and within safe physiological ranges.

Go Live in 60 Seconds

Get your connection token from **cloud.vinkius.com**, then paste the endpoint URL into any MCP-compatible client.

YOUR MCP ENDPOINT

```
https://edge.vinkius.com/[TOKEN]/mcp
```

CLIENT	WHERE TO CONFIGURE
Claude AI	Profile → Customize → Connectors → "+" → Add custom connector → Paste endpoint
Cursor	Settings → Features → MCP Servers → "+ Add New MCP Server" → Type: SSE → Paste endpoint
VS Code	Ctrl/Cmd+Shift+P → "MCP: Add Server" → add `"geneva-score-calculator": { "url": "…" }`
Windsurf	MCP Settings → `mcp_settings.json` → Add endpoint URL
ChatGPT	Settings → Tools & plugins → Add MCP server → Paste endpoint
Gemini	Extensions → Add MCP Server → Paste endpoint URL

ASK AN AI ABOUT THIS

Let your preferred AI explain this MCP server

- Ask ChatGPT
- Ask Claude
- Ask Perplexity
- Ask Gemini
- Ask Grok

READY TO CONNECT

Geneva Score Calculator is live on Vinkius Cloud.

Get your connection token, paste it into your AI agent, and start building. No SDK. No deployment. Just results.

Start at cloud.vinkius.com →

vinkius.com · support@vinkius.com

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