
**Impact of Geopolitical Conflict on Radiology Services: Lessons From the 2026
Us–Iran War.**

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doi: 10.51505/ijmshr.2026.10311

URL: <http://dx.doi.org/10.51505/ijmshr.2026.10311>

Received: May 30, 2026

Accepted: Jun 09, 2026

Online Published: Jun 18, 2026

Abstract

Background: Geopolitical conflicts significantly affect healthcare delivery systems, including radiology services.

Objective: To analyze the impact of the 2026 US–Iran war on radiology infrastructure, workflow, and resource availability.

Methods: Narrative review based on emerging global reports and healthcare system observations.

Results: Major disruptions include shortages of contrast media, radiopharmaceuticals, helium supply constraints affecting MRI, increased energy costs, cybersecurity risks, and increased emergency imaging demand.

Conclusion: Radiology services are highly vulnerable to geopolitical instability, necessitating resilient systems, diversified supply chains, and adaptive strategies.

Keywords: Radiology; Geopolitical conflict; Supply chain disruption; MRI; Contrast media; Global health; Healthcare systems

Introduction

Radiology is an essential pillar of modern medicine, supporting diagnosis, treatment planning, and monitoring. Its reliance on global supply chains, advanced equipment, and energy-intensive systems makes it particularly vulnerable to geopolitical conflicts.

The 2026 US-Iran war has significantly impacted global trade routes, energy markets and healthcare logistics. While immediate attention has focused on trauma care and humanitarian crises, the indirect effects on radiology services are substantial and warrant detailed evaluation.

Disruption of Medical Imaging Supply Chains

The conflict has led to interruptions in the supply of contrast agents, radiopharmaceuticals, and spare parts for imaging equipment, resulting in delayed or deferred imaging services.

Helium Shortage and MRI Impact

MRI scanners depend on liquid helium for superconducting magnets. Supply disruptions have increased operational costs and reduced MRI availability.

Rising Energy Costs

Energy price escalation has significantly increased operational costs of CT and MRI systems, impacting affordability and accessibility.

Infrastructure Damage

Healthcare infrastructure damage in conflict zones has reduced access to diagnostic imaging, affecting both acute and chronic care.

Cybersecurity Threats

Radiology systems such as PACS and RIS face increased cyber threats during geopolitical conflicts, leading to potential service disruptions.

Increased Emergency Imaging Demand

War conditions lead to increased trauma and emergency cases, placing additional burden on radiology departments.

Strategies for Resilience and Adaptation

Key strategies include diversifying supply chains for essential materials, optimizing imaging protocols, investing in energy-efficient systems, strengthening cybersecurity and enhance workforce training for crisis management.

Future Directions

Developing local manufacturing capabilities, integrating artificial intelligence for workflow

optimization ,establishing global cooperation frameworks for healthcare logistics and creating contingency plans for radiology service continuity.

Conclusion

The 2026 US-Iran war underscores the susceptibility of radiology services to global geopolitical instability. From supply chain disruptions to increased operational challenges, the impact is multifaceted. Strengthening resilience through strategic planning, technological integration and global cooperation are essential to ensure continuity of radiology services during future crises.

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