

Urban Combat Lessons Learned: The Battle of Kyiv, February – March 2022

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ABSTRACT

The Russian attempt to seize the city of Kyiv in February 2022 is arguably the most decisive battle of the ongoing Russian-Ukraine war. This paper describes the successful defense of Kyiv by the Ukraine Defense Forces and the lessons learned from the battle. This battle for the critical urban center offers many lessons for the military professional interested in urban warfare. There are lessons learned applicable to all levels of war – strategic to tactical. These include the critical importance of urban areas, why military considerations are often not dominant, and the criticality of leadership and combined arms tactics. Interestingly, most of the lessons learned regarding urban warfare in the battle of Kyiv reflect the same lessons learned from the major urban battles since World War II.

Key words: Ukraine, Russia, War, Urban, Warfare, Operations, 2022, Invasion, Kyiv.

Introduction

In late February 2022, the advanced guard of the 331st Air Assault Brigade's Battalion Tactical Group (BTG), mounted in armored personnel carriers and armored reconnaissance vehicles, made its way south on Vokzalnaya Street through the Kyiv suburb of Bucha. The column was intercepted and ambushed by a Ukrainian force equipped with Anglo-Swedish Next-generation Light Anti-tank Weapons (NLAWs).¹ In the subsequent hours-long fight on the narrow two-lane road hemmed in by solid suburban residential houses and small gardens, most of the BTG was destroyed.² This short, dramatic fight represents the type of combined arms battle in dense urban terrain that happened throughout Ukraine in February and March 2022. The early combat in Ukraine and subsequent battles in urban terrain verified trends in urban combat demonstrated in other urban battles since World

¹ Jeremy Kofsky, "An Airfield Too Far: Failures at Market Garden and Antonov Airfield," *Modern War Institute*, May 5, 2023, (<https://mwi.westpoint.edu/an-airfield-too-far-failures-at-market-garden-and-antonov-airfield/>) and Asher Shane, "Russian convoy blitzed near Kyiv by Ukrainian troops 'armed with Brit anti-tank weapons,'" Mar. 2, 2023, *Leading Britain's Conversation*, (<https://www.lbc.co.uk/news/russian-convoy-blitzed-by-ukrainian-troops-armed-with-brit-anti-tank-weapons/>).

² Tom Copper, Adrien Fontanellaz, Edward Crowther, Milos Sipos, *War in Ukraine. Volume 2: Russian Invasion. February 2022*, (Warwick: Helion & Company, 2023), 43.

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War II and confirmed that much of what previous wars have demonstrated about urban combat remains true.

On February 24, 2022, the Russian invasion of Ukraine began. The ground invasion of Ukraine consisted of three distinct strategic attacks (see Figure 1).³ The most important and dangerous strategic assault came from the north and was commanded by the Northern Military District. It consisted of two separate forces, Force V and Force O. The objective of these forces was to seize the capital city, Kyiv, and, in the process, eliminate Ukraine's leadership.⁴ This was the main effort of the Russian invasion.

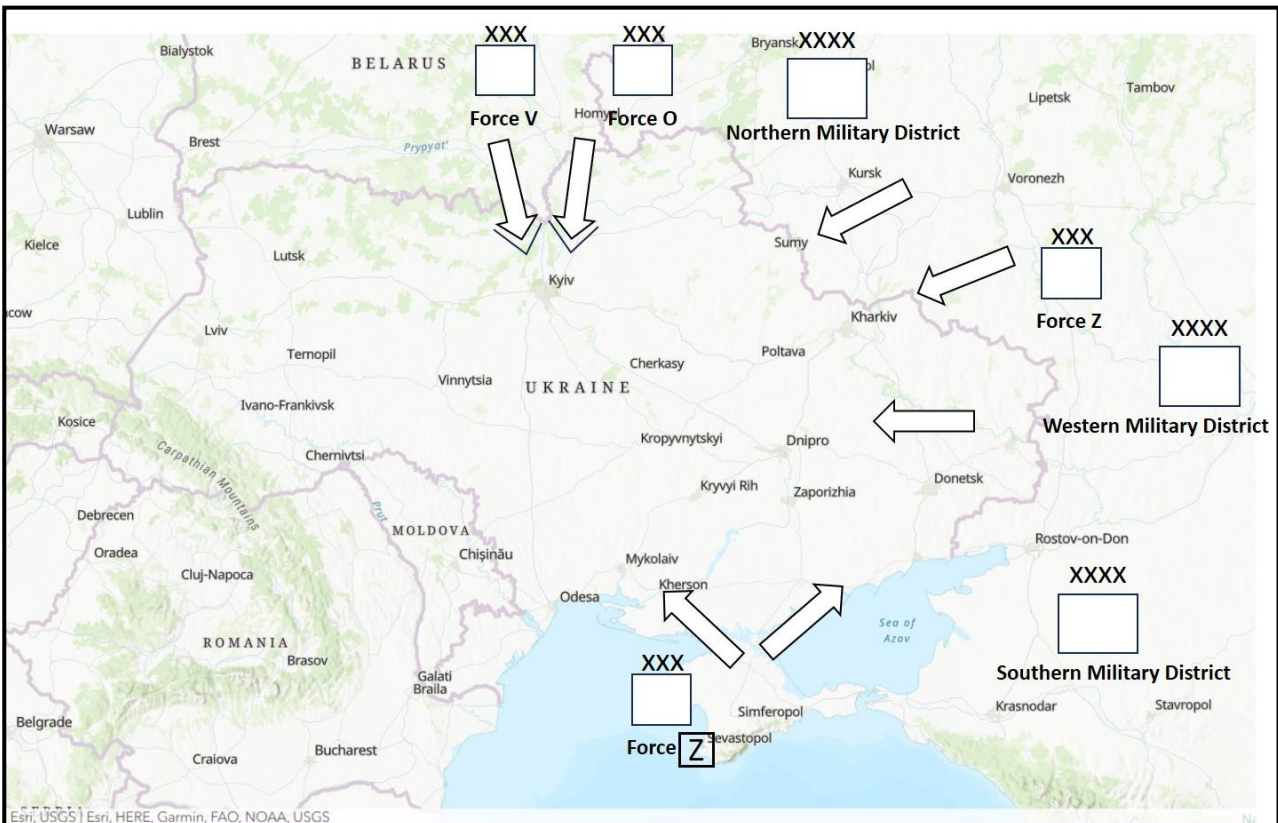


Figure 1: Russian Invasion Plan

Simultaneously, the Russians launched a second strategic multi-prong assault, Force Z, under the command of the Western Military District. Force Z's assault consisted of three distinct operations. One attack aimed at the city of Sumy and then would continue west ultimately linking up in the vicinity of Kyiv with the forces of the Northern Military District. Another attack was aimed at the northern flank of Ukraine forces in the east and the city of Kharkiv. A third effort was a more general assault from east to west along the entire line of contact in the east, aimed at fixing the majority of the Ukrainian Defense Force (UDF) maneuver brigades in place. Force Z was the most powerful attacking force, but its mission was primarily to focus the UDF east and away from the main effort aimed at Kyiv.⁵

³ Maps and Diagrams by the author. Maps built using static maps from Argis Online (<https://www.arcgis.com/apps/mapviewer/index.html>).

⁴ Mykhaylo Zabrodskyi, Jack Watling, Oleksandr V Danylyuk and Nick Reynolds, "Preliminary Lessons in Conventional Warfighting from Russia's Invasion of Ukraine: February–July 2022", *RUSI*, 30 Nov. 2022, 9.

⁵ *Ibid*, 9-10.



The third strategic attack was commanded by the Southern Military District. It originated in Crimea and attacked west and east simultaneously along the coast of the Black Sea to capture Odessa in the west and Mariupol in the east.⁶ It had two major objectives: in the west, to seize the major Black Sea port of Odessa, and in the east, to create a land bridge along the Sea of Azov from Crimea to Russia. On the morning of 24 February 2022, the Russian military invaded Ukraine on all three planned strategic axes: North, East and South.⁷

The Russian attack failed to achieve its primary strategic objective –the city of Kyiv. During the nearly two years of conflict since 2022, urban warfare has been an integral part of the military operations of both sides. A detailed examination, based on open-source information of the battle for Kyiv at the outset of the war in February and March 2022, reveals that although technology has introduced some important additions to urban tactical operations, the nature of urban warfare has not fundamentally changed.

The Battle for Kyiv

Russian Land Forces

On the evening of February 23, the bulk of the UDF's ten maneuver brigades were positioned in the eastern Donbas area, what the UDF called the Joint Force Operations area (JFO) or the Line of Contact with the Russian and separatist military forces. In the early morning hours of February 24, the Russians initiated the invasion with electronic jamming and air strikes by manned and unmanned systems against critical targets in Ukraine, primarily air defenses and command and control centers. The intent was to disrupt and destroy these capabilities to facilitate a large-scale ground invasion.⁸

The basic military unit of action during the initial Russian invasion of Ukraine was the Battalion Tactical Group (BTG) (see figure 2). The BTG was essentially a mechanized combined arms battalion augmented slightly for independent action. It was not substantially different than the traditional Russian combined arms battalion: it was organized around the basic Russian motorized rifle battalion (MRB) consisting of three companies of three platoons, each with three vehicles. Thus, a company consisted of ten combat vehicles. Most BTGs were based on rifle battalions, which might be equipped with a variety of combat vehicle types, but most commonly, either the BMP-3, BMP-2, or BTR-90. The MRB standard attached elements of air defense, engineer, anti-tank, and mortar platoons were part of the BTG, as was the typical ten-vehicle tank company. Supplementing these standards of the MRB to give it additional independent capability could be a reconnaissance platoon, artillery battery, missile battery, air defense battery, unmanned aerial vehicle (UAV) platoon, engineer platoon or company, and electronic warfare (EW) capability. The attachments to the BTG varied depending on the mission and the availability of resources available to the BTG from its parent unit at the regiment or brigade level.⁹

⁶ Ibid, 9.

⁷ Cooper, *War in Ukraine*, 37.

⁸ Ibid, 37-38.

⁹ "Tactical Observations on the 2022 Russian Invasion of Ukraine", *Spotlight Brief*, No. 3, 2022, (Canberra: Australian Army Research Center, 2022), 9.

The BTG was formed mostly from elements within the parent regiment or brigade. Each brigade or regiment was capable of forming two and sometimes three BTGs. They were designed to operate for short-term contingency operations outside of Russia. Because of this, the parent brigade or regiment prioritized manning the BGT with contract soldiers, not conscripts.¹⁰ This gave the BTG the best soldiers within the parent unit. It also had the effect of leaving the parent unit disorganized, under-manned, inexperienced, and often, in general, combat ineffective. The BTGs typically worked directly for the combined arms army (CAA), not the brigade, regiment, or division. They were also designed to carry out specific special missions such as advance guard, flank guard, and river crossing operations. Thus, they were ideal for the type of war Russia envisioned fighting against Ukraine in February 2022.¹¹

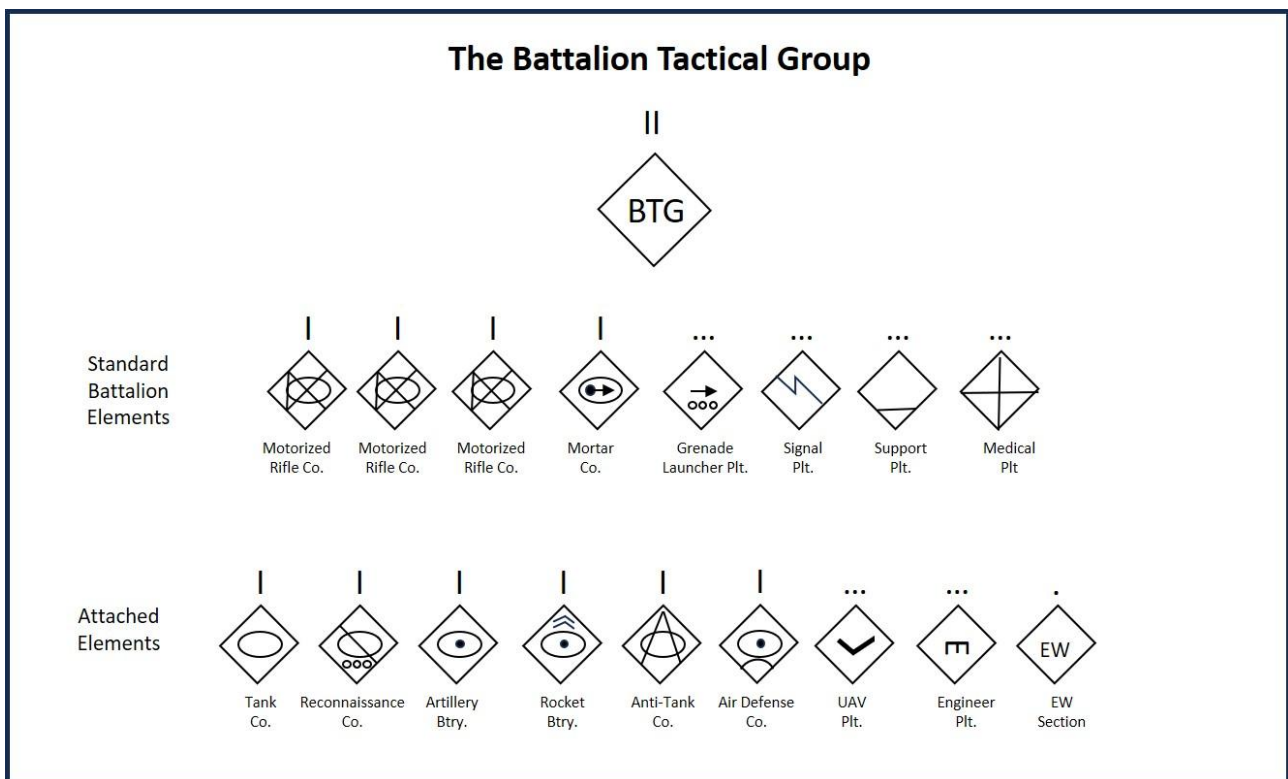


Figure 2: The Battalion Tactical Group

The Russian Plan and Initial Action

The Russians had a very good plan for how they would capture Kyiv and make victory strategically decisive. The battle for Kyiv was part of the Russian northern offensive commanded by the Northern Military District. The Russian main effort consisted of two forces. Force “V” was a combined arms force that originated in Belarus, the 35th CAA, consisting of approximately 12 BTGs, including several Airborne (VKS), Spetsnaz, and

¹⁰ In 2022, approximately 50% of the Russian army was made up of conscripts, “Russian Military Personnel–Conscription,” *Global Security*, (<https://www.globalsecurity.org/military/world/russia/personnel-draft.htm>).

¹¹ Lester Grau and Charles Bartles, “Getting to Know the Battalion Tactical Group”, *RUSI*, 14 Apr. 2022, (<https://rusi.org/explore-our-research/publications/commentary/getting-know-russian-battalion-tactical-group>) and Cooper, *War in Ukraine* 17.



Rosgvardia (National Guard) BTGs (see figure 3).¹² The 35th CAA’s mission was to attack from Belarus west of the Dnieper River, isolate Kyiv from the west, and seize the capital’s government district. This attack would be facilitated by an air assault to seize the Antonov Airfield, approximately 20 kilometers north of the city center near the suburb of Hostomel.

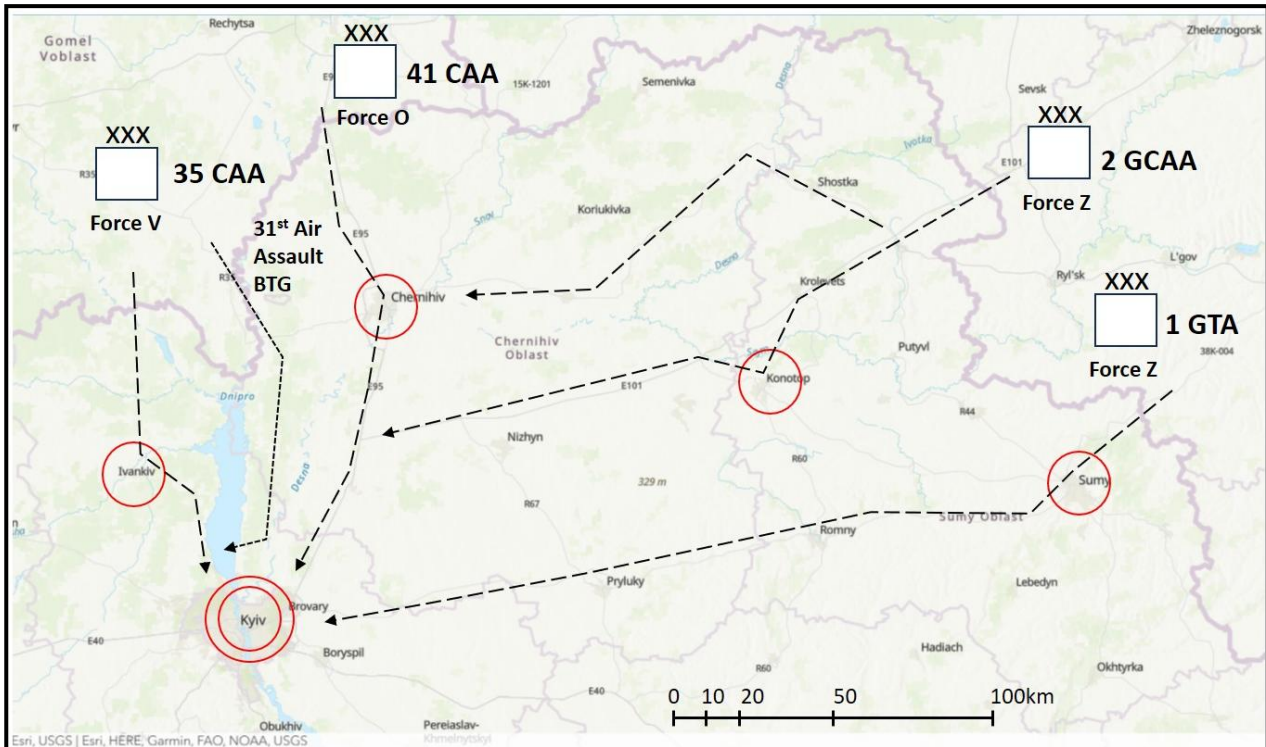


Figure 3: Russian Plan to Seize Kyiv

The other assault force, Force “O,” also originated in Belarus. It would attack along a line east of the Dnieper River through the city of Chernihiv and enter Kyiv from the northeast.¹³ It had the mission of isolating eastern Kyiv. This force was built around the 41st CAA, and had approximately 14 BTGs assigned.¹⁴

Additional support for the attack to seize Kyiv came from the Western Military District’s 2nd Guards Combined Arms Army (GCAA) and 1st Guards Tank Army (GTA). The 2nd GCAA had the objective of initially capturing the city of Konotop and then continuing east to link up with the 41st CAAS south of Chernihiv. The 1st GTA also attacked out of Russia from an area southwest of Kursk. Its initial objective was the city of Sumy. With the four armies focused on northern Ukraine, the Russians planned to isolate the capital,

¹² “Russian Force Posture around Ukraine in BTGs,” *The Institute for the Study of War*, (<https://understandingwar.org/map/russian-force-posture-around-ukraine-btgs-january-25-2022>).

¹³ Zabrodskiy, ‘Preliminary Lessons’, 9-10.

¹⁴ “Russian Force Posture around Ukraine” and David Axe, “How Ukraine’s First Tank Brigade Fought a Russian Force Ten Times its Size –and Won,” *Forbes*, December 25, 2022 (<https://www.forbes.com/sites/davidaxe/2022/12/25/how-ukraines-1st-tank-brigade-fought-a-russian-force-ten-times-its-size-and-won/?sh=bdc5d556c598>).

occupy Kyiv, and seize most of northern Ukraine within 48 to 72 hours of crossing the border.¹⁵

The combined arms and tank armies were the conventional forces part of the Russian plan to seize Kyiv. In addition, the Russian plan included numerous small Spetsnaz teams that were infiltrated into Kyiv in the weeks prior to the invasion. The mission of these teams was to kill or capture the senior leadership of the country. They had the specific mission of killing or capturing President Zelenskyy and his family.¹⁶ This part of the plan would disrupt command and control and create a political power vacuum that would be filled by Ukrainian politicians sympathetic to a pro-Russian relationship between the two countries.

The Battle for Northwest Kyiv

On the first day of the invasion, things went relatively well for the 35th CAA. The lead elements of the army crossed the Belarus border soon after the air and missile strikes launched; they were approximately 85 kilometers by road from downtown Kyiv. Within hours of crossing the border, the Russians took control of the Chernobyl Restricted Area and its nuclear power plant.¹⁷ The army continued south using one of the few good roads in this part of Ukraine, the E02 highway. Later that afternoon, they passed through the city of Ivankiv after skirmishing briefly with the small UDF present in that city. They were halfway to the Army objective: Kyiv.

At the same time that the ground forces of the 35th CAA were crossing the border, another element of the 35th was on its way to its objective. A BTG of the 31st Air Assault Brigade was assigned the task of securing the Antonov Airfield, approximately 20 kilometers north of the center of Kyiv and 65 kilometers south of the border. The BTG of the 31st approached the airfield around mid-morning, transported by approximately 34-40 Mi-8 helicopters, escorted by Mi-24 and KA-52 attack helicopters.¹⁸

The airfield was only lightly defended, and what air defense existed was mostly destroyed by the predawn missile attack or by the escorting KA-52 attack helicopters. Several MANPADs were fired at the attacking helicopters, and though at least two were forced to crash-land, several others were reported as destroyed. The paratroopers of the 31st BTG quickly secured the airport. Later that afternoon, an ad-hoc force made up of elements of the 4th Rapid Reaction Brigade of the Ukraine National Guard, 72nd Mechanized Brigade, Alpha Group of the Ukraine Security Services (SBU),¹⁹ and civilian volunteers counterattacked to retake the airfield but was repulsed by the Russians who were dug in. However, the Ukrainians were able to call for supporting artillery fire from the 45th Artillery Brigade in Kyiv. These, combined with an air attack by Ukrainian Su-24M attack aircraft, cratered the runway, making it unusable and denying the Russians the ability to reinforce the airhead by landing fixed-wing aircraft. This thwarted the plan for the 31st BTG to be reinforced by two BTGs of the 76th Guards Air Assault Division transported in IL-76 fixed-wing transports, which would have also likely brought in the 31st

¹⁵ "Russian Force Posture around Ukraine," and Zabrodskyi, 'Preliminary Lessons', 9-10.

¹⁶ Ibid, 10-11.

¹⁷ Cooper, *War in Ukraine*, 41.

¹⁸ Kofsky, "An Airfield Too Far," Cooper, *War in Ukraine*, 40 and Zabrodskyi, 'Preliminary Lessons,' 26.

¹⁹ Alpha Group of the Ukraine Security Service (SBU) is a Delta Force type special operations detachment specializing in anti-terrorism. Jordan Smith, "Ukrainian SBU: Protectors of the Homeland," *Grey Dynamics*, Feb. 4, 2023, (<https://greydynamics.com/ukrainian-sbu-protectors-of-the-homeland/>).



BTG's combat vehicles.²⁰ At the end of the first day of the attack to seize Kyiv, the 35th CAA had achieved most of what it was expected to do. At the same time, the 41st CAA was attacking south from eastern Belarus on the east side of the Dnieper River, while the 2nd GCAA and the 1st GTA were supporting efforts and aimed at linking up with the 41st CAA east of Kyiv.

The Russian Attacks from the East

The 41st CAA attack ran into problems from the start. As it attacked south, its first major objective was the city of Chernihiv with a population of 300,000. Chernihiv was the home station of the Ukrainian 1st Tank Brigade. The UDF brigade received enough early warning of the attack to disperse its battalions from their barracks so that it was not affected by the initial Russian strike attack. The brigade then moved to defensive positions as the Russian forces moved south along the N28 and E95 Highways. The Ukrainian tanks met the Russians for the first time at the town of Sednev on the N28 highway northeast of the city. In that short fight the Ukrainian rebuilt 1970s-era Soviet T-64BM tanks proved more than a match for the newer Russian tanks and fighting vehicles. Initial encounters in Chernihiv itself took place on February 25, with the Russians losing several vehicles and withdrawing from the city. The 41st Commander, General Ryzhov, then chose to bypass Chernihiv rather than become involved in a lengthy fight for the city. The Russian's focus was on getting to Kyiv as quickly as possible. To isolate the threat of the 1st Tank Brigade in the city, the 41st left significant forces to surround it.²¹

Having the 1st Tank Brigade astride their line of communications (LOC) from Belarus proved problematic for the 41st CAA. Containing the UDF tanks in the city drained resources from the CAA spearhead, and driving around the city slowed the logistics effort. Further, as the CAA advanced south on a single highway, the E95, radio communications broke down, making coordinating logistics and controlling the BTGs difficult. The entire column, broken up into BTG packets, was subject to constant harassing attacks and ambushes launched by by-passed civilian volunteers and small UDF units, often moving quickly using civilian all-terrain vehicles. Morale in the Russian units broke down as the soldiers who were not briefed on the war or their mission were disheartened by the unexpected resistance and casualties and the worsening logistics situation. Several units spontaneously surrendered to the UDF forces rather than fight. Ultimately, this attack, designed to complement the attack by the 35th CAA, culminated well short of metropolitan Kyiv and failed to come close to its objectives.²²

Similarly, the supporting attacks of the 2nd GCAA and the 1st GTA, moving through Konotop and Sumy were stymied by C3 difficulties, logistics issues, poor morale, and UDF

²⁰ Most accounts of the Antonov Airfield assault have the Ukrainians recapturing the airfield by darkness on 24 February; however, the Cooper account is unequivocal that the Russians remained in control and the UDF counterattack failed. Cooper, *War in Ukraine*, 39-40, Kofsky, "An Airfield Too Far" and Dan Rice, "The Untold Battle of Kyiv," *Small Wars Journal*, May 15, 2022, (<https://smallwarsjournal.com/jrnl/art/untold-story-battle-kyiv>).

²¹ Axe, "How Ukraine's First Tank Brigade Fought a Russian Force" and *ibid*, "Ukraine's Best Tank Brigade Has Won The Battle For Chernihiv," *Forbes*, Mar. 31, 2022, (<https://www.forbes.com/sites/davidaxe/2022/03/31/ukraines-best-tank-brigade-has-won-the-battle-for-chernihiv/?sh=a6b384e7db9a>), Cooper, *War in Ukraine*, 45-46 and Zabrodskyi, 'Preliminary Lessons,' 26-28.

²² *Ibid*, 27-28 and 32-33.

resistance. Though Konotop was secured after negotiating with the city leaders for a nonresistance agreement, like Chernihiv, the city of Sumy was bypassed by the Russians after their infantry suffered casualties trying to enter the city.²³ Sumy then became a base of resistance to the Russian invasion and a threat to the Russian LOCs. Though the 2nd GCAA was able to link up with the 41st CAA east of Chernihiv, the combat power of the CAA was absorbed in defending its LOC and fending off UDF counterattacks from Sumy. The only Russian thrust toward Kyiv that had a chance of success was the effort of the 35th CAA west of the Dnieper.

Attempts to Breakthrough into Kyiv

The 35th CAA achieved solid success in its effort to seize Kyiv on the first day of the war, 24 February. The next day, it followed up on its success by pushing the Chechen Rosgvardia 141st BTG to link up with the 31st BTG at Antonov Airfield. The 35th CAA also launched two irregular BTGs to seize key objectives in and around Kyiv and assist with the capture of Ukraine leaders in Kyiv. A 45th Spetsnaz BTG was able to avoid UDF defenses and moved directly into the center of Kyiv, while a BTG made up of private military company (PMC) Redut mercenaries moved to secure the hydroelectric plant at Vyshhorod.²⁴ The Spetsnaz BTG penetrated all the way into northern metropolitan Kyiv before it was stopped by defending UDF and SBU elements in the city center. After a bitter fight in which the Spetsnaz lost most of their vehicles and suffered dozens of casualties, the Spetsnaz broke contact and retreated north. Similarly, the Redut force attacking the hydroelectric plant was repulsed as the guard force at the plant was augmented by elements of the SBU Alpha group.²⁵ In addition, a small Russian OMON police (riot police of the National Guard) unit wandered south into Bucha and was completely destroyed crossing a bridge into Irpin (see figure 4).²⁶

On 26 February, the Russians again attempted to penetrate into Kyiv. This effort focused on the Chechen Rosgvardia 141st Motorized BTG.²⁷ The BTG attacked through the suburbs of Bucha toward Irpin without conducting a reconnaissance of the route and without an advance guard element.²⁸ The advance had barely started when it was ambushed in the narrow streets of the Bucha suburb by a combined artillery and ground attack. Virtually the entire BTG, over 50 vehicles, were destroyed.²⁹

The failure of the 141st to advance beyond the Bucha suburb on 26 February caused the Russians to commit even stronger forces to break into Kyiv on 27 February. This time, three BTGs were employed across the northwestern suburbs of Kyiv. On the western flank

²³ Tim McMillan, "Know No Mercy: The Russian Cops Who Tried to Storm Kyiv by Themselves," *The Debrief*, May 20, 2022, (<https://thedebrief.org/know-no-mercy-the-russian-cops-who-tried-to-storm-kyiv-by-themselves/>).

²⁴ Cooper, *War in Ukraine* 25-28 and 42. The Redut PMC was closely associated with the 45th Spetsnaz Brigade.

²⁵ Cooper, *War in Ukraine*, 42.

²⁶ McMillan, "Know No Mercy."

²⁷ Munira Mustaffa, "The Kadyrovtsy: Putin's Force Multiplier or Propaganda Tool?" *New Lines Institute*, Mar. 4, 2022, (<https://newlinesinstitute.org/state-resilience-fragility/authoritarianism/the-kadyrovtsy-putins-force-multiplier-or-propaganda-tool/>).

²⁸ "The subdivision of the National Guard Forces Command of the Chechen Republic is destroyed near Kiev, Ministry of Defense of Ukraine," *Interfax-Ukraine News Agency*, Feb. 27, 2022, (<https://en.interfax.com.ua/news/general/802950.html>).

²⁹ McMillan, "Know No Mercy," Cooper, *War in Ukraine*, 43.



the 35th CAA deployed a BTG of the 37th Motorized Rifle Brigade (MRB) who attacked to outflank the defenses of Kyiv. In the center, a BTG of the 331st Guards Airborne Regiment (GAR) attempted to push through the Bucha suburb into Irpin and Kyiv. In the east, a third BTG attempted to cross the flooded Irpin River, advance through the village of Moshchun, and then turn south into Kyiv.

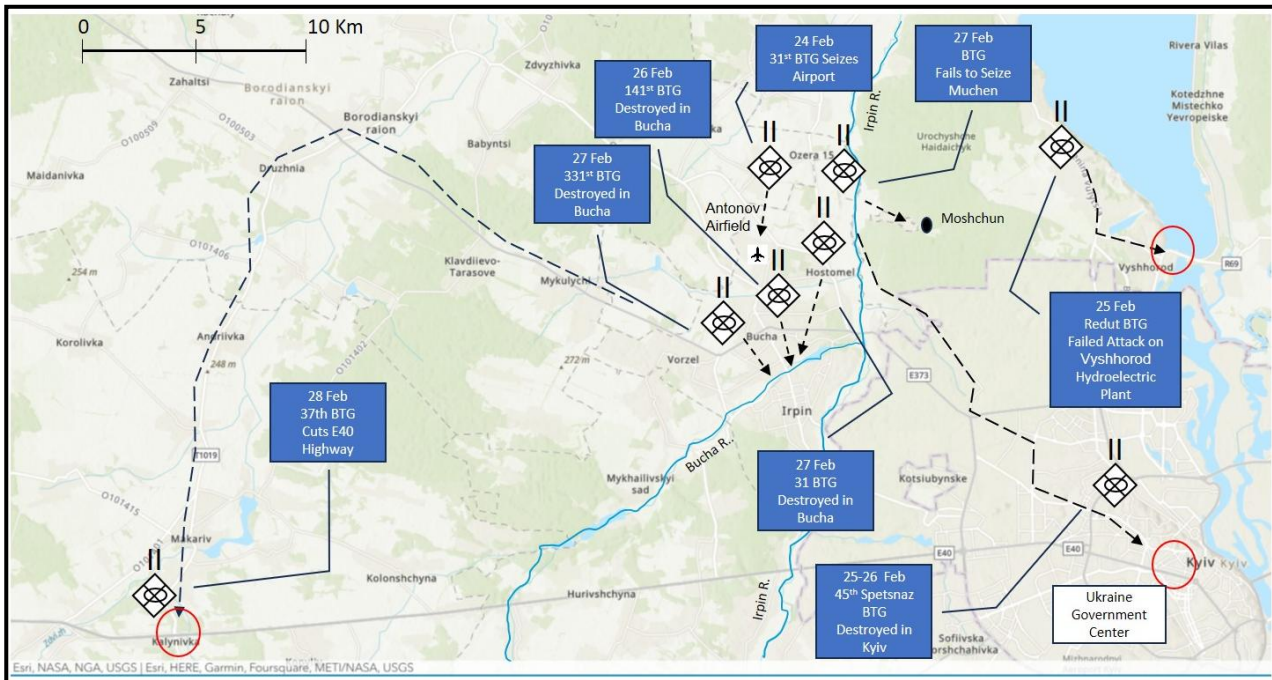


Figure 4: Attacks to Break into Kyiv

The attack west by the BTG of the 37th MRR was very successful. The BTG initially moved well west of Kyiv and then turned south by-passing small resistance and villages along the way. They had passed a company-size UDF force in the village of Makariv and continued south. By the morning of 28 February, they had secured a foothold blocking the E40 highway, which was the primary route connecting Kyiv with western Ukraine.³⁰ They had advanced over 50 kilometers in 36 hours but were at the end separated from the bulk of the 35th CAA by over 30 kilometers.

In the center, the 331st BTG attacked through Bucha with similar results to those experienced by the 141st BTG. The spearhead of the BTG was ambushed in the narrow streets of the suburb by the 72nd Brigade and mobilized civilian volunteers. The force of a dozen armored vehicles was completely destroyed. This stopped the attack of the 331st. Fighting continued against the main body of the 331st, and most of that unit was destroyed. In the east, a third BTG attempted to cross the Irpin River and capture the village of Moshchun. The flooded river, dense forest on the far side of the river, bunkers left over from the WWII period, and a well-led company of infantry of the 72nd Brigade stopped this advance from getting across the river.³¹

³⁰ Cooper, *War in Ukraine*, 43.

³¹ Ibid and Paul Sonne, Isabelle Khurshudyan, Serhiy Morgunov and Kostiantyn Khudov, "Battle for Kyiv: Ukrainian valor, Russian blunders combined to save the capital," *The Washington Post*, August 24, 2022, (<https://www.washingtonpost.com/national-security/interactive/2022/kyiv-battle-ukraine-survival/>).

Frustrated with the lack of success on the most direct routes into Kyiv through Bucha and Moshchun, the 35th CAA committed a fourth BTG to the attack on the afternoon of 27 February. This BTG was the 31st BTG that had originally seized Antonov airfield three days earlier. The 31st BTG conducted a mounted assault through Busha similar to that attempted by the 331st earlier that same day –and with the same result. The paratroopers, now mounted in light armored vehicles, were subjected to artillery and anti-armor ambushes by elements of the 72nd Brigade. Again, the results were catastrophic for the Russians as the BTG was almost completely wiped out on the streets of Bucha, and the deputy brigade commander was captured by the UDF. That same day at Antonov airfield, the vehicles of the 31st BTG's parent unit, the 31st Airborne Assault Brigade, arrived from Belarus by road and were assembled for refueling. This was noted by UDF observers and drones. Artillery was promptly called on the refueling operation. This artillery attack destroyed most of the vehicles of the brigade and killed over 60 Russians.³²

As the conventional attacks were progressing against Kyiv from the north and east, the Russians were simultaneously engaged in a completely different assault on the city and the Ukrainian government. This was an attack by Russian special operations forces directly against the Ukrainian government in Kyiv. The intent of this effort was to decapitate the leadership of Ukraine and replace the government with one that promoted a friendly relationship with Russia. To accomplish this, the Russians infiltrated Spetsnaz detachments into Kyiv throughout February in the weeks before the invasion. Their mission was to seize the parliamentary building and other key facilities and capture or kill President Volodymyr Zelenskyy and his cabinet. They were to be reinforced by the Spetsnaz, airborne, and Rosgvardia elements of the 35th CAA.³³ The UDF was aware of this threat and countered it by placing a heavy security presence around key leaders and installations, moving the leaders frequently, and at the same time imposing a strict curfew on the city. When the rapid breakthrough into the city from the Antonov airfield did not occur on day one or day two of the invasion, the Spetsnaz detachments exposed themselves as they tried to carry out their missions. Their attacks were generally unsuccessful, and over the next few days, they engaged in skirmishes and firefights with UDF security forces. Some reports indicated a dozen separate attempts were made on President Zelenskyy's life. By 28 February, the various Russian detachments had been hunted down and destroyed, and the city was relatively secure from the special operations threat.

Conclusion of the Battle

February 27 was the culmination of the Russian effort to seize Kyiv from the northwest. Though the 37th MRB BTG managed to cut off Kyiv's major road connection east, the city was far from surrounded. By the end of March, Highway E40 was again secured, and Kyiv's Road connection to western Ukraine was open. Fierce fighting continued in the 35th CAA sector north of Kyiv through the month of March as the Russians attempted to break through in the Moshchun sector without success. In addition,

³² Cooper, *War in Ukraine*, 44.

³³ Jack Watling, Oleksandr V Danylyuk and Nick Reynolds, "Preliminary Lessons from Russia's Unconventional Operations During the Russo- Ukrainian War, February 2022–February 2023," *RUSI*, Mar. 29, 2023, 18-19 (<https://rusi.org/explore-our-research/publications/special-resources/preliminary-lessons-russias-unconventional-operations-during-russo-ukrainian-war-february-2022>).



Russian troops took out their frustrations on the civilian population trapped behind Russian lines north of Kyiv. In particular, numerous civilians in the suburbs of Bucha and the town of Makariv were tortured and murdered.³⁴ By the end of March, the efforts of the Russians to capture western Kyiv had completely culminated, and in April, the Russian forces west of the Dnieper River began to withdraw north back to Belarus.

Russian forces east of the Dnieper were also in an increasingly tentative position. At the end of March, both Sumy and Chernihiv were still in Ukrainian hands, and the defenses were such that they were beyond the combat power of the Russians to overcome. These Russian forces also began to withdraw back to their start positions in late March. By April, the Belarus border was restored to Ukraine control, and the main Russian effort of the February invasion, the attack to seize Kyiv, was decisively defeated.

Lessons Learned or Affirmed

Though much remains unknown about the details of the fighting in and around Kyiv and much hard fighting has occurred since the urban battles around Kyiv in 2022, there is enough information to draw some reliable conclusions about urban warfare in an intense peer to peer large-scale conventional combat environment. Some of these lessons are briefly highlighted in the paragraphs that follow.

The Russian invasion of Ukraine affirmed many of the lessons learned from previous conflicts regarding the critical importance of successful urban areas to strategic success in war. Warfare has been centered on seizing and controlling urban areas throughout military history. One of the reasons for this is that war is an extension of politics, and politics is centered in cities –particularly national capital cities. Therefore, whether they desire to or not, armies often must attack the political apparatus of their opponent, the center of which is in the opposition’s capital city. This makes urban combat unavoidable.

The reasons for the urban area’s strategic political importance will often outweigh the military strategic and operational options. In 2022, Kyiv was relatively lightly defended, while the focus of the UDF command was on the JFO area in the east. When assessing the likelihood and nature of a possible Russian invasion, both NATO and Ukraine military leaders saw the most likely vulnerability as the UDF combat power in the east. They looked at the situation primarily through a military prism. However, the importance of cities must be considered from cultural, economic, and political perspectives and not just the military. Thus, for political reasons, Kyiv was the main objective of the Russian invasion.

In urban operations, strategic political imperatives will override urban tactical considerations. Thus, there was political pressure on the 35th CAA to break through the Kyiv defenses quickly despite the casualties the force took in just a few days of combat. Had they taken the time to do more detailed reconnaissance, waited for reinforcements, and had better coordination with and more supporting BTGs and artillery, the attacks in Bucha and towards Irpin may have been more successful.

³⁴ “Ukraine discovered a new massacre of Russian troops: 132 bodies with signs of torture were found in Makariv,” *Infobae*, April 9, 2022, (<https://www.infobae.com/en/2022/04/09/ukraine-discovered-a-new-massacre-of-russian-troops-132-bodies-with-signs-of-torture-were-found-in-makariv/>).

The best way to take a city is to capture it before it can be defended. This lesson was also illustrated by the operations at Kyiv. The basic concept behind the Kyiv operation was that Spetsnaz infiltrators, combined with the insertion of airborne troops at Antonov airfield, would neutralize the Ukraine leadership and control the center of government before the UDF could react. The fact that this was unsuccessful does not distract that the Russian plan was very appropriate for the strategic situation as they understood it, and may have worked had there been better execution at all levels of the Russian military.

The Russian plan unraveled primarily because the Antonov airport operation was not successful. Although the Russian airborne troops were successful in seizing the airport, that was only the initial phase of the operation. The decisive phase would have been the rapid advance into Kyiv from the airport. This was prevented by the rapid counterattack of the UDF forces and, most importantly, the cratering of the runway by the UDF Air Force and artillery. Without the runway, operational reinforcements and the vehicles of the 31st BTG, which were necessary to mount the quick transition to offensive operations to secure downtown Kyiv, were not available.

Isolating a city is a key precursor to urban warfare success. After the coup strategy failed due to the inability of the Spetsnaz and the air assault to achieve their objectives, the Russian fallback plan was a more conventional attack to seize the city. As a first step, this required the city to be isolated from outside support and reinforcement. The closest the Russians came to achieving this was when the 37th BTG cut the M40 highway and the western avenue into Kyiv. However, at the culmination of offensive operations the Russians were not close to isolating the city. They were not even able to isolate the much smaller city of Chernihiv. The simple reason for this was the lack of combat power and the geographic size of Kyiv. The Russians at Kyiv never had the combat power necessary to accomplish the task.³⁵

Effective and continuous command and control are necessary to synchronize all the elements of combat power and to reinforce success quickly. In urban operations, the physical structure of buildings interferes with communications systems, thus making communications, command and control (C3) difficult under the best of circumstances. The way to overcome a tenuous C3 situation is through mission command-type orders and the initiative of subordinate tactical leaders. Russian forces, by doctrine, did not encourage this type of command philosophy; thus, as the initial plan broke down, the offensive power of the BTGs waned. One source described the Russian command philosophy as "Command by Plan."³⁶ Attempts to reenergize the momentum of the attack had to be made by senior leaders moving forward, but this was not only unsuccessful but resulted in numerous senior leader casualties.³⁷ In contrast, the Ukrainian army has been pushing a bottom-up small unit initiative leadership philosophy since 2014. Additionally, all UDF leaders and soldiers understood that the command's intent was simple: kill Russians and

³⁵ Louis DiMarco, "Urban Operations in Ukraine: Size, Ratios, and the Principles of War," *Modern War Institute*, June 20, 2022, (<https://mwi.westpoint.edu/urban-operations-in-ukraine-size-ratios-and-the-principles-of-war/>).

³⁶ Cooper, *War in Ukraine*, 31.

³⁷ William Booth, Robyn Dixon and David L. Stern, "Russian generals are getting killed at an extraordinary rate," *The Washington Post*, March 22, 2022, (<https://www.washingtonpost.com/world/2022/03/26/ukraine-russian-generals-dead/>).



defend Ukraine. These factors allowed UDF small units to function very effectively despite surprise and C3 disruptions.³⁸

Another lesson demonstrated by the Kyiv operations is that the battle around the city often dictates the outcome of the battle in the city. The defense of the suburbs in the northwest and the defense on the approaches to Kyiv from Chernihiv determined the outcome of the battle. These successful operations prevented a Russian breakthrough into the city itself and thus precluded a destructive block-by-block battle in the capital city and interruption of Ukraine's government functions and command.

Special operations and conventional operations often work together in urban environments and must be closely synchronized. Both sides made extensive use of special operations forces (SOF) in the battle. When they were closely synchronized, such as the Ukrainian use of the Alpha Group at the airfield and later at the hydroelectric facility, they greatly increased the capability of conventional forces. When used in isolation without conventional support, against prepared defenders, such as the Spetsnaz in downtown Kyiv, they can be defeated in detail.

Numerous tactical lessons regarding urban warfare were affirmed in the fight for Kyiv. One of the most important of these is the need for combined arms. Ironically, one of the reasons for the Russian's inability to achieve success in the suburbs of Kyiv is that despite the fact that the BTGs were built around a core of the motorized infantry battalion, the BTGs generally lacked enough infantry to build a competent combined arms team. This forced the BTGs to operate mostly mounted with little or no infantry support in urban terrain. This accounts for the numerous BTGs ambushed in Bucha.³⁹ Urban warfare requires combined arms, but the ratio of armor to infantry must change in urban combat. In urban combat, more infantry is needed, and less armor operates in a supporting role.

Combined arms between dismounted infantry and mounted armored vehicles require effective training. The creation of BTGs from brigades and regiments for particular missions and emphasizing the use of contract soldiers was disruptive to training. This, combined with personnel shortages and a small unit leadership philosophy that discouraged initiative, made it difficult for the Russians to execute combined arms tactics at the platoon level and below. The high vehicle loss rates in Ukraine, particularly on the Russian side, are more attributable to poor combined arms tactics than to a leap in the effectiveness of anti-tank weapons such as the Javelin.⁴⁰

Another overlooked factor in combined arms is that all armor is not created equal. Armor brings protection, firepower, and mobility to the combined arms team. However, not all armor is the same – tanks are the definition of armor, while armored personnel carriers (APCs) and infantry fighting vehicles (IFVs) do not have these armor advantages to the same degree. In the fighting in Bucha, the Russians found their APCs and IFVs were extremely vulnerable to all light anti-tank weapons and even, in some cases, to light and heavy machineguns.⁴¹ Without sufficient armor protection the Russian vehicles became death traps to the crews and infantry inside. This also makes the point that the infantry's role in urban combat is dismounted.

³⁸ Rice, "The Untold Battle of Kyiv."

³⁹ "Tactical Observations on the 2022 Russian Invasion of Ukraine," 3 and 15

⁴⁰ Ibid, 18.

⁴¹ Ibid, 15.

The BTGs that were Russia's primary maneuver units in the battle for Kyiv proved unsuited for urban warfare. The organization did not have the cohesion and training, nor the resilience to conduct intense urban combat. The organization was too small, and because it was not part of a brigade or regimental organization, it could not be replaced or reinforced quickly once close combat in the urban environment became intense. Thus, fighting in isolation, the BTGs quickly became combat-ineffective as they sustained losses. There were no division or brigade-level organizations used in the battle for Kyiv. The absence of these levels of command overwhelmed the Russian senior commander's span of control and reduced the Russian command system's agility, adaptability, and responsiveness.

Significant civilian casualties from combat also occurred, but by historical standards, the number of civilian deaths in the battle of Kyiv was relatively low. As of April 2023, the UNCHR estimates at least 8,490 civilians have been killed and 14,244 injured in the Ukraine-Russian War, by all combat from all sources.⁴² This is a very low number, and though it is likely to go much higher, it is not at all close to the approximately half a million combined military casualties of both sides.⁴³ Historically, such as in the battle for Manila in 1945, civilian casualties in a single intense urban combat can be several hundred thousand. The reasons why civilian casualties are relatively low in Ukraine may be due to the extensive population evacuation conducted by the Ukrainian government and civilian casualty awareness on the part of the UDF. Still, a lesson reinforced by the experience in the battle for Kyiv is that in urban combat civilian casualties are unavoidable.

Damage to civilian infrastructure was significant. During the first week of the battle, the Russians were careful not to damage the infrastructure that they intended to utilize after a quick victory. Among the infrastructure effected by the battle for Kyiv were bridges over the Irpin River, almost all of which were destroyed. After the first weeks of the war, the Russians dramatically increased the pace of artillery usage, as did the Ukrainians. The use of massive artillery barrages by both sides since the battle for Kyiv in 2022 has, limited primarily by ammunition availability, dramatically increased the amount of damage done to urban areas caught in the areas of fighting. Russia also appears to be conducting deliberate infrastructure damage through its systematic air campaign against urban areas in central and western Ukraine.

Since the battle for Kyiv in the opening months of the war, the use of fires to reduce urban defenses has become the preferred tactic of the Russians since the early urban battles of 2022. This is because the UDF has used the urban terrain effectively in the defense and also because the overall quality of the Russian maneuver forces in Ukraine is no longer capable of effective combined arms tactics. The use of large volumes of fire, particularly artillery fires, can effectively reduce even a well-prepared and trained urban defending force. However, the consequences in terms of the destruction of the urban infrastructure and civilian casualties are immense. Thus, the Ukrainians have avoided this approach while the Russians have embraced it.⁴⁴ This use of fires to destroy the urban

⁴² "Civilian Death Toll In Ukraine At Least 8,500, But UN Says It's Likely 'Considerably Higher,'" *Radio Free Europe/Radio Liberty*, April 11, 2023, (<https://www.rferl.org/a/ukraine-war-civilian-deaths-russia-invasion/32358863.html>).

⁴³ Helene Cooper, Thomas Gibbons-Neff, Eric Schmitt and Julian E. Barnes, "Troop Deaths and Injuries in Ukraine War Near 500,000," U.S. Officials Say, *New York Times*, August 18, 2023, (<https://www.nytimes.com/2023/08/18/us/politics/ukraine-russia-war-casualties.html>).

⁴⁴ "Tactical Observations on the 2022 Russian Invasion of Ukraine," 21.



defenses is a common one in the history of urban operations, particularly in Stalingrad in 1942, Manila in 1945, and most recently in Grozny in 2000.

Electronic warfare (EW) was very effective in disrupting UDF C3. This, however, did not have a major adverse effect on the conduct of UDF tactical operations, although it did significantly affect the situational awareness of the battalion and higher leadership, particularly early in the battle. Runners were an effective means of overcoming EW.⁴⁵

Though the war in Ukraine continues today with no less intensity than in February and March of 2022, time has revealed insights into its conduct. The war between Ukraine and Russia has demonstrated hundreds of lessons and considerations for modern militaries to analyze and consider. Certainly, one of these lessons is the centrality of urban areas to combat at all levels of warfare, strategic to tactical. This close look at the Battle of Kyiv in February and March of 2022 affirms much of the lessons already known about urban warfare. It makes the more general point that understanding the conduct of urban warfare beginning in World War II and through the present is the key to understanding how and why urban warfare is being conducted by both sides in Ukraine today, and is likely to be conducted in other future battles in the twenty-first century.

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⁴⁵ Rice, "The Untold Battle of Kyiv."

