LNS
LUXEMBOURG

Respiratory Viruses in Luxembourg (ReViLux)

Report – Sentinel Week 18 and Sequencing Update

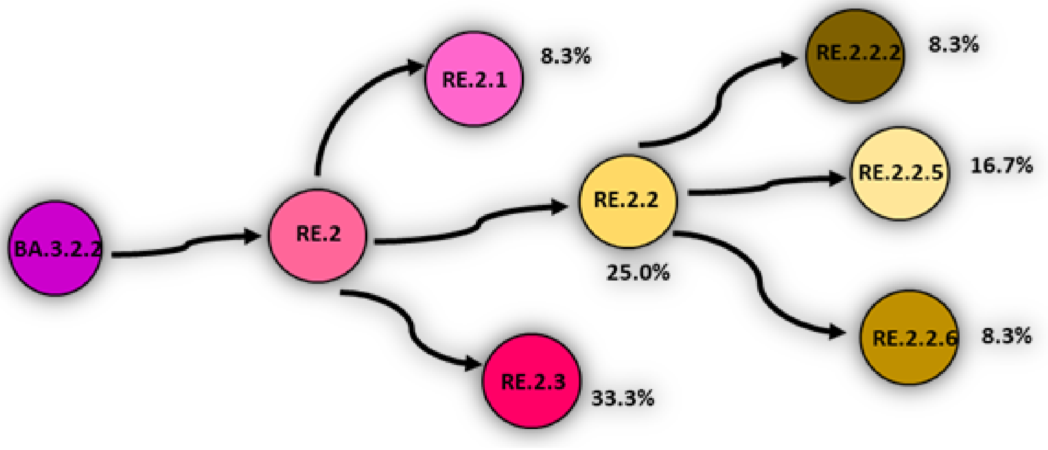
Summary

Week 2026/18 shows a slight increase in consultations, while ARI remained low and ILI activity increased but stayed at baseline, consistent with the ongoing decline in respiratory illness typical of the post-winter period.

During week 2026/18, 31 sentinel specimens were analysed, mainly from children aged 0-4 years, with respiratory viruses detected in 61.3% of samples. **Human rhinovirus (32.3%)** was the predominant pathogen, followed by **adenovirus (12.9%)** and **parainfluenza virus (12.9%)**, while **influenza B (3.2%)** and **RSV (6.5%)** circulated at low levels. No SARS-CoV-2 cases were detected, and virus circulation patterns showed human rhinovirus circulation across all age-groups under 65 years, with other viruses mainly affecting children under 5 years.

Variants of SARS-CoV-2 detected from weeks 2026/10-2026/14

The most commonly detected variant during this monitoring period was NB.1.8.1, accounting for 36.1% of cases, followed by BA.3.2 (33.3%) and XFG (22.2%). An additional 8.3% of cases were attributed to other variants, including XFZ.
The Figure below illustrates the emergence and distribution of BA.3.2.2 sub-lineages circulating in Luxembourg during this period.



Sentinel Surveillance Network

The Sentinel Surveillance aims at monitoring the circulating respiratory viruses, from traditional ones like Influenza to more recent ones like SARS-CoV-2, and hence underpin public health actions. The Sentinel Network is a group of general practitioners and paediatricians spread across the country. They report the weekly number of patients showing symptoms suggestive of acute respiratory infection (ARI) and influenza-like illness (ILI), and those patients are then sampled and tested for a panel of respiratory viruses. The circulation of respiratory viruses in the north hemisphere is generally monitored by seasons that go from week 40 to week 20. The period between weeks 20 and 40 is called inter-season and monitoring is done on a voluntary basis.

Clinical results

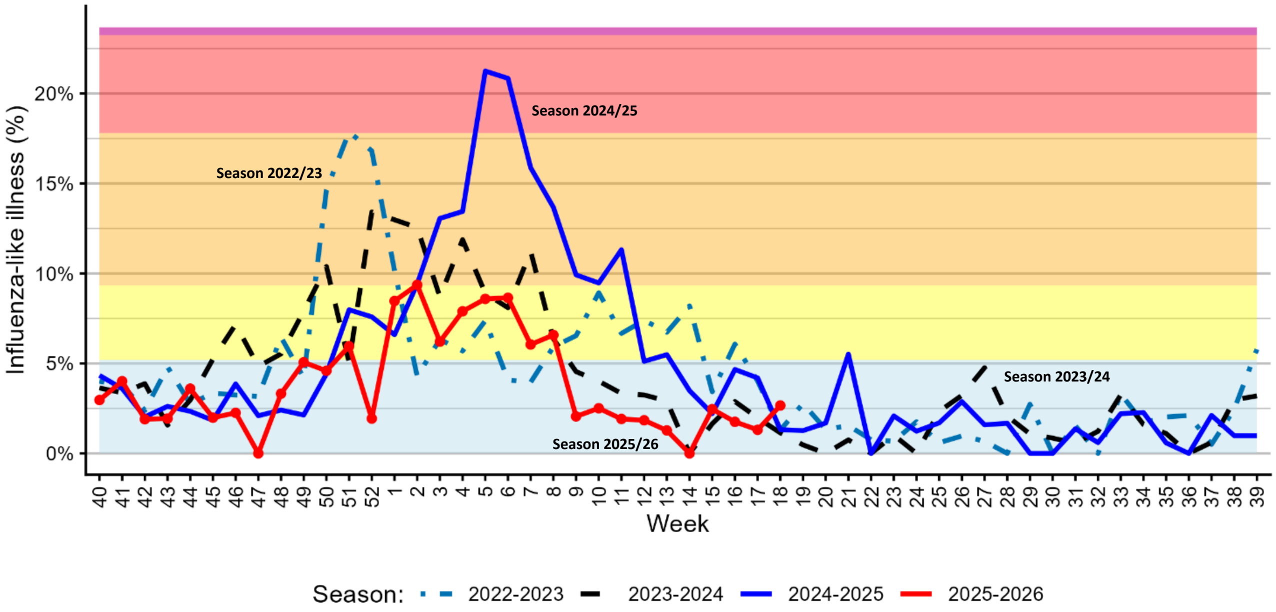
In week 2026/18, the total number of consultations increased to 263, compared with 229 in week 2026/17. The proportion of ARI remained below 10%, while ILI activity doubled from 1.3% to 2.7%, but remained at baseline levels. Overall, these trends suggest low respiratory illness activity, consistent with the end of the winter season and reduced circulation of major respiratory pathogens. This pattern is in line with reports from other EU/EEA countries.

Historical trends in ILI consultations are presented in figure 2, and a detailed summary of the ARI and ILI case counts for the past four weeks is provided in table 1.

Table 1. Syndromic surveillance over the last 4 weeks

Week	ARI		ILI		Total consultations
	N	%	N	%	
2026/15	13	10.66	3	2.46	122
2026/16	35	12.28	5	1.75	285
2026/17	21	9.17	3	1.31	229
2026/18	25	9.51	7	2.66	263

Figure 1. Percentage of patients with Influenza-like illness over the last three seasons and 2025-2026 (red); Background colours according to intensity of circulation: baseline, low, medium, high, very high.



ARI: Acute Respiratory Infections; ILI: Influenza-Like Illness.

Laboratory results

During week 2026/18, the LNS received 31 sentinel specimens. Of these, 64.4% (N=20) were from children aged 0 to 4 years, followed by 22.6% (N=7) from children aged 5 to 17 years. Adults aged 18 to 64 years accounted for 9.7% (N=3) of the samples, while patients aged ≥ 65 years represented 3.2% (N=1). Overall, 58.1% (N=18) of samples were from female patients and 41.9% (N=13) were from male patients.

Respiratory viruses were detected in 19 (61.3%) of the 31 sentinel samples. In week 2026/18, the predominant pathogen was **human rhinovirus (32.3%)**, followed by **adenovirus (12.9%)** and **parainfluenza viruses (12.9%)**. **Human metapneumovirus** and **RSV** were detected in 9.7% and 6.5% of samples, respectively. In addition the network detected very low influenza B circulation (3.2%).

RSV activity remained below 10%, with two new case detected. One case has been subtyped as RSV-A. So far this season, 197 RSV cases have been detected, of which 86.8% (N=171) have been subtyped; 64.1% were RSV-A and 35.7% RSV-B.

Over the past two weeks, no new SARS-CoV-2 cases have been detected. During the same period, human rhinovirus continued to be detected across all age-groups below 65 years of age, while adenovirus, human metapneumovirus, and parainfluenza viruses were predominantly identified in children under 5 years.

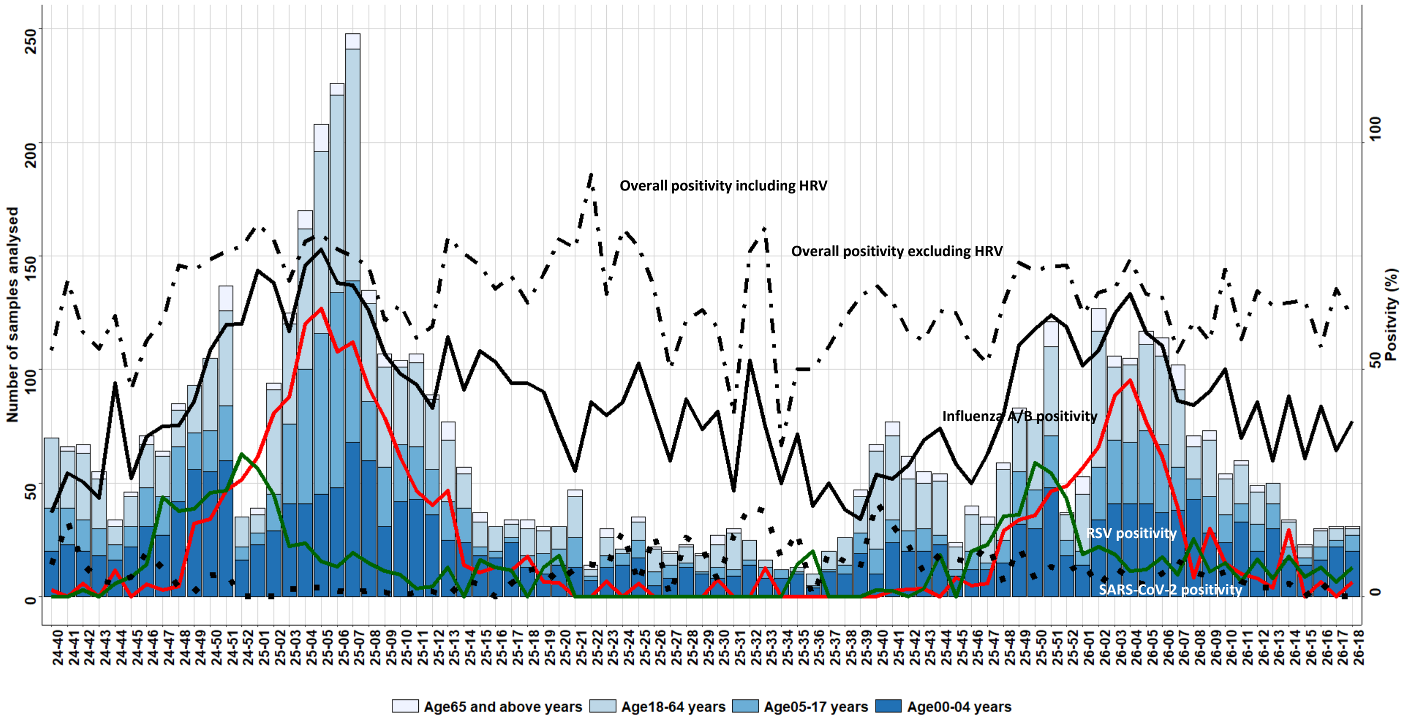
An overview of the circulating viral pathogens in the sentinel network in Luxembourg during the current and previous (inter)- season is presented in figure 2, 3 and table 2.

Table 2. Distribution of respiratory viruses detected within the Sentinel Network over the past 4 weeks compared to previous season; Results from last weeks are not all yet consolidated.

Virus	**Season 2025/26**					**Season 2024/25**		
	Positivity Rate in %							
	W15	**W16**	**W17**	**W18**	**Total N (%)**	**W17**	**W18**	**Total N (%)**
Human rhinovirus	47.8	23.3	45.2	32.3	524 (25.9)	32.4	29.4	720 (24.8)
Adenovirus	8.7	20.0	3.2	12.9	133 (6.6)	14.7	11.8	203 (7.0)
Parainfluenzavirus	13.0	10.0	9.7	12.9	82 (4.1)	16.1	14.7	99 (3.4)
Metapneumovirus	4.3	6.7	16.1	9.7	128 (6.3)	11.8	11.8	157 (5.4)
Respiratory syncytial virus	4.3	6.7	3.2	6.5	197 (9.7)	5.9	0.0	287 (9.9)
Influenzavirus B	0.0	3.3	0.0	3.2	2 (0.1)	5.9	2.9	404 (13.9)
SARS-CoV-2	0.0	3.3	0.0	0.0	125 (6.2)	2.9	5.9	80 (2.7)
Influenzavirus A	0.0	0.0	0.0	0.0	363 (17.9)	0.0	5.9	502 (17.2)

**Co-detection is counted once for each virus detected.*

*Figure 2. Presents number of sentinel samples received per week by age-group (weeks 2024/40 to 2026/18) including overall sample positivity- including human rhinovirus (HRV, dot-dash line), excluding HRV (black line), SARS-CoV-2 (dotted line), influenza **combined** (red) and RSV (green); Secondary axis corresponds to positivity; Results from last weeks are not all yet consolidated.*



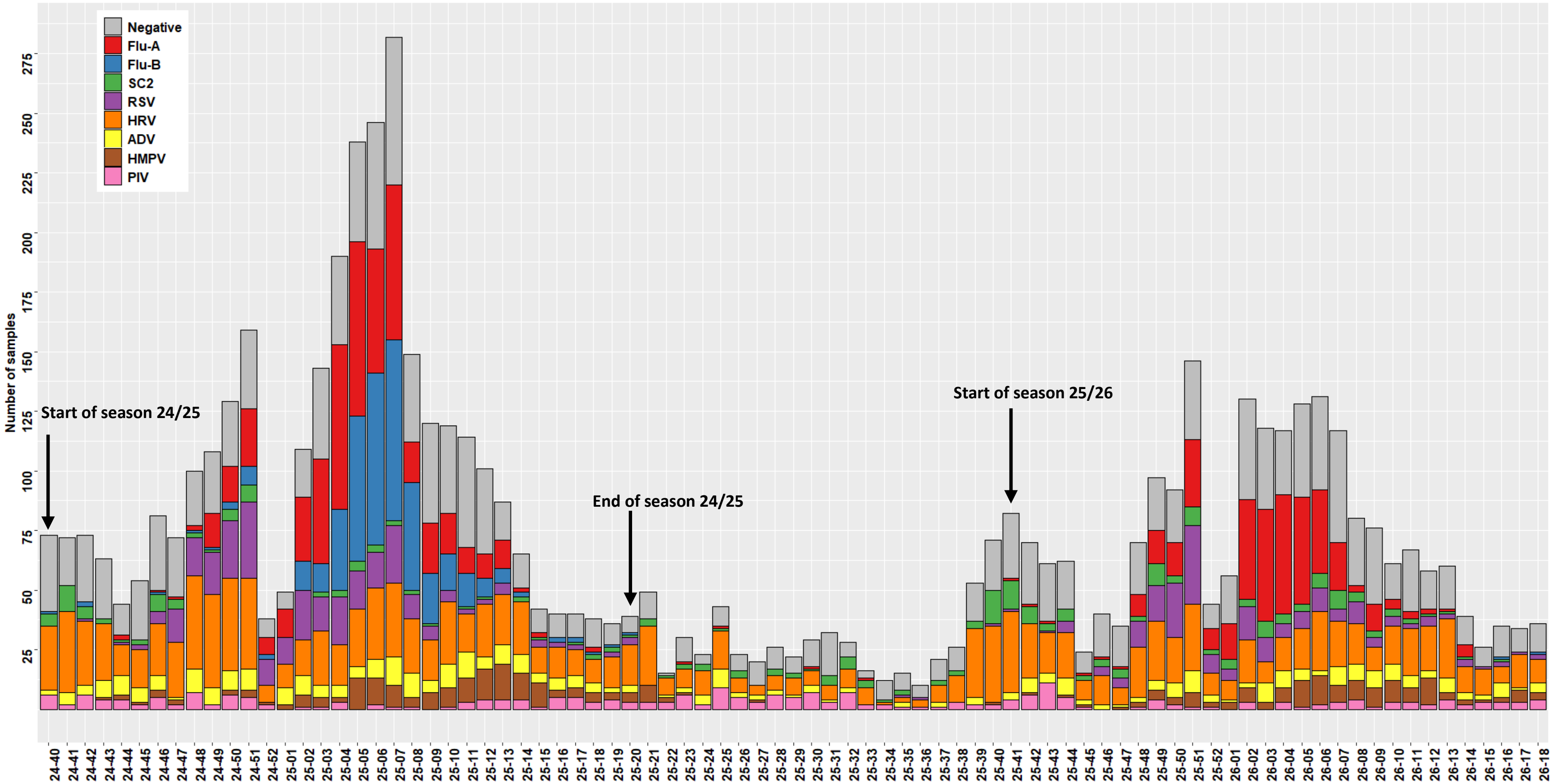


Figure 3. Circulation of respiratory viruses detected within the Sentinel Network by calendar week (seasons 24/25 and 25/26). FLU-A: influenzavirus A; FLU-B: influenzavirus B; PIV:parainfluenzavirus; RSV: respiratory syncytial virus; ADV: adenovirus; HMPV: metapneumovirus; HRV: human rhinovirus; SC2: SARS-CoV-2; Results from last weeks are not all yet consolidated.

SARS-CoV-2 Genomic Surveillance

The LNS receives positive specimens (nasopharyngeal or oropharyngeal swabs analysed by RT-PCR) from the national network of laboratories. A selection of hospital specimens are sequenced, as well as a representative selection of community specimens. Illumina devices are used. Bioinformatic analyses are based on a standardised pipeline and lineage assignment is performed through the Pangolin software (Pangolin: 4.4; 1.38 mode UShER).

Sequencing activity

Of the 83 reported cases in Luxembourg, 36 samples (43.4%) were successfully sequenced. Specimen collection dates ranged from calendar weeks 10 to 14 of 2026. Among these, 27.8% (N=10) were obtained from hospital settings, while 72.2% (N=26) originated from the community. Sequencing efforts prioritized the most recent specimens and those from hospitalized patients. Any low coverage will be addressed in subsequent sequencing runs.

Variant circulation

Between weeks 2026/06-09 and 2026/10-14, a shift in variant predominance was observed in Luxembourg. In weeks 2026/06-09 (N=133), BA.3.2 was the dominant lineage (46.6%), followed by XFG (33.8%) and NB.1.8.1 (19.5%). By weeks 2026/10-14 (N=36), NB.1.8.1 became the most prevalent variant (36.1%), while BA.3.2 declined to 33.3% and XFG further decreased to 22.2%.

Additionally, other variants (XFZ, 8.3%)) emerged in weeks 2026/10-14, whereas they were not detected in the earlier period. Previously circulating lineages such as JN.1 and KP.3 were not detected in either period.

However, these observations for weeks 2026/10-14 should be interpreted with caution due to the substantially low number of samples (N=36), reflecting reduced SARS-CoV-2 circulation during this period.

At this time, there is no indication that NB.1.8.1, XFG, or BA.3.2 are associated with increased disease severity. A summary of all circulating variants identified in the selected sample, including those listed by WHO variants under monitoring, is provided in Table 4 and Figure 6.

Age, setting and lineage distribution

Among hospital patients (N=10), approximately 60% of sequenced samples were from individuals aged > 75 years. In contrast, over 80% of community cases occurred in patients aged ≤ 75 years. Overall, in this selected cohort (N=36), females accounted for 72% in both settings.

Notably, BA.3.2 was not detected among hospital patients. Half (50%) of the BA.3.2 cases were identified in patients younger than 15 years, and no cases were observed in those older than 75 years. In the elderly population (< 75 years), only NB.1.8.1 (45.5%) and XFG (54.5%) lineages were detected.

Table 3 compares sampling setting and variant prevalence over the past five weeks. Notably, only a limited number of samples were received from hospitals, indicating that most cases were detected in the community.

Table 3. Comparison of sub-variants by sampling setting

Comparison of variant detection during weeks 2026/10-14		
Lineage	**Community (N=26)**	**Hospital (N=10)**
XFG	**4 (15.4%)**	**4 (40.0%)**
NB.1.8.1	**8 (30.8%)**	**5 (50.0%)**
BA.3.2	**12 (46.2%)**	**0 (0.0%)**
Other	**2 (7.7%)**	**1 (10.0%)**

Table 4. Distribution of SARS-CoV-2 lineages detected during weeks 2026/06 to 2026/14; Previously reported cases might be updated by retrospective analysis

Lineage	First detection in Luxembourg	Under WHO monitoring	weeks 06-09 (N=133)		weeks 10-14 (N=36)	
			%	CI %	%	CI %
NB.1.8.1	07.04.2025	yes	19.5	13.2 – 27.3	36.1	20.8 – 53.8
BA.3.2	11.11.2025	yes	46.6	37.9– 55.5	33.3	18.6 – 51.0
XFG	13.03.2025	yes	33.8	25.9 – 42.5	22.2	10.1 – 39.2
Other	not applicable	no	0.0		8.3	1.8 – 22.5
JN.1	25.08.2023	yes	0.0		0.0	
KP.3	03.04.2024	yes	0.0		0.0	

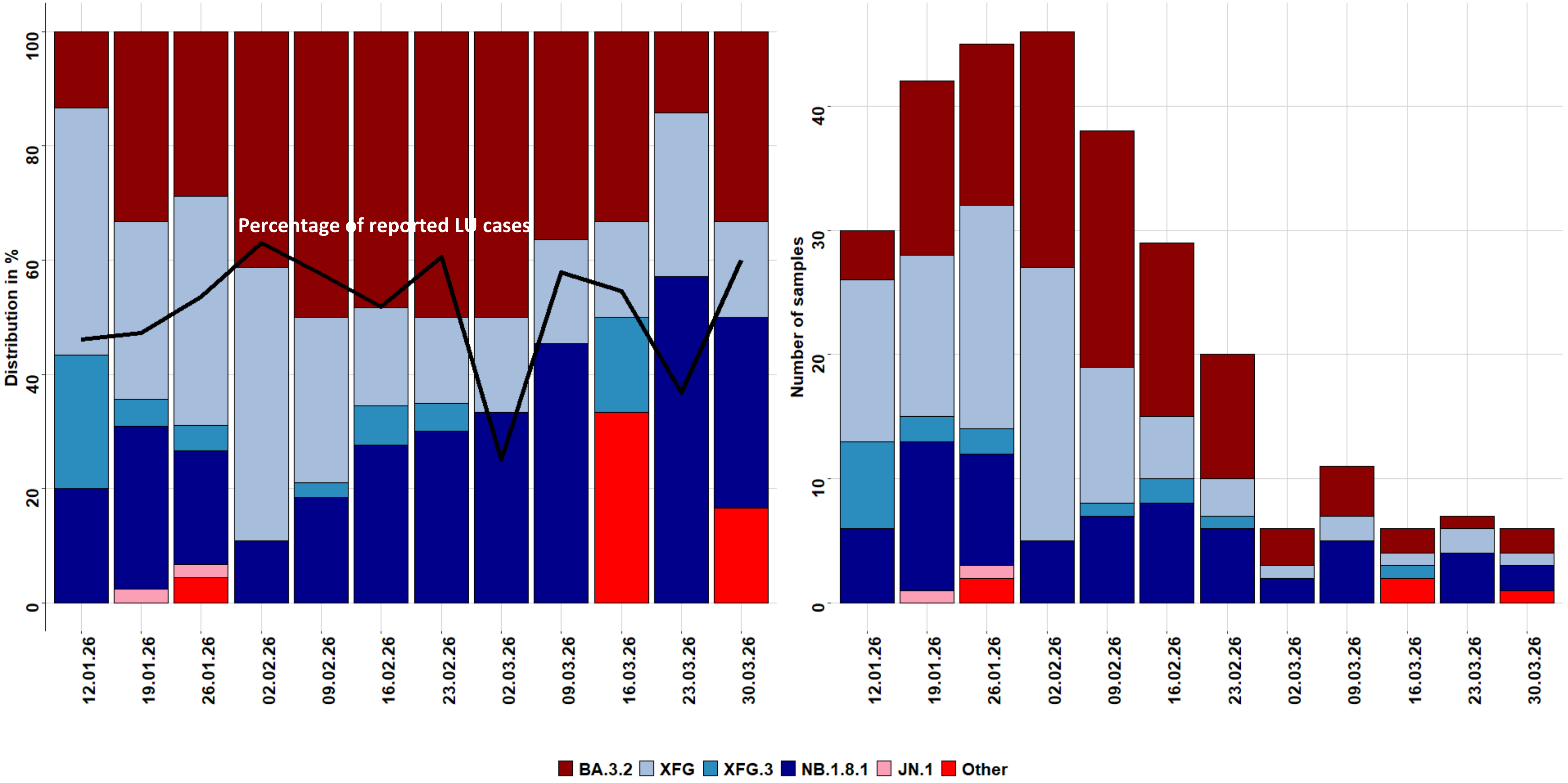


Figure 6. Lineage distribution and sequencing coverage from week 2026/03 (12.01.2026) to week 2026/12 (30.03.2026) in weekly intervals; All displayed variants include descendant lineages- except those specified on the legend. Other: recent cases-recombinant XFZ; during this period no further KP.3 cases have been detected

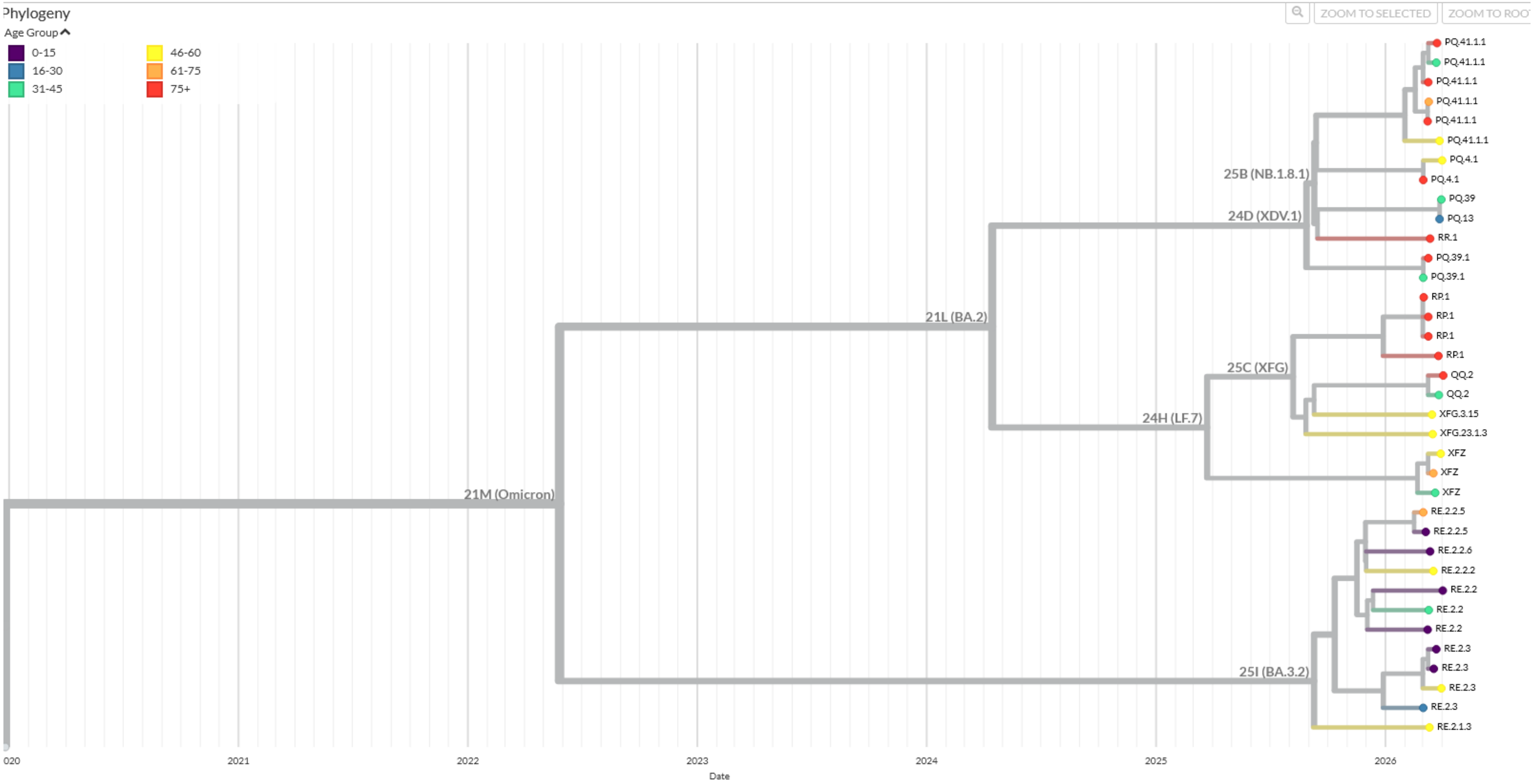


Figure 7. Emergence and phylogenetic distribution of SARS-CoV-2 lineages in Luxembourg (weeks 2026/10-14) by age-group

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