Aberantní fenotypy v hematoonkologii - kazuistiky z laboratoře

Mgr.Kamila Kutějová

a kol.

Spadia Lab

Beckman Coulter
Říjen 2026, Velké Karlovice

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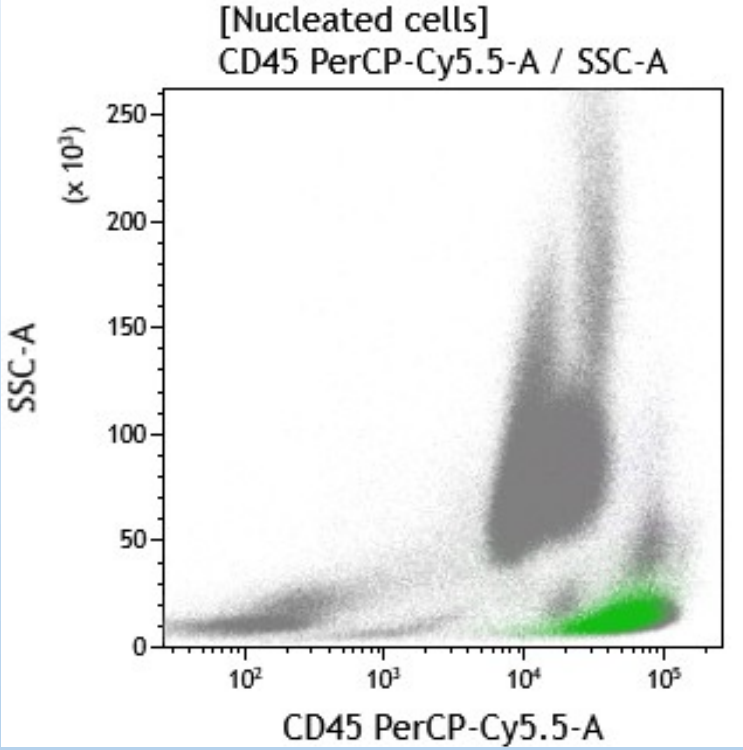
Kazuistika č.1

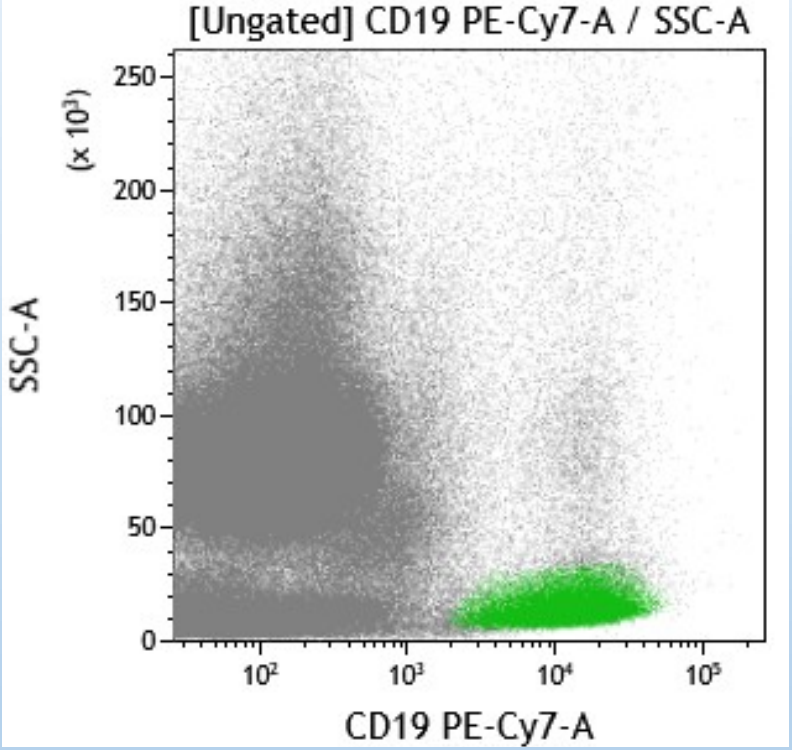
- muž, roč. 1950
- 2.4.2026 – Městská nemocnice Ostrava, kardiologie dg. I509

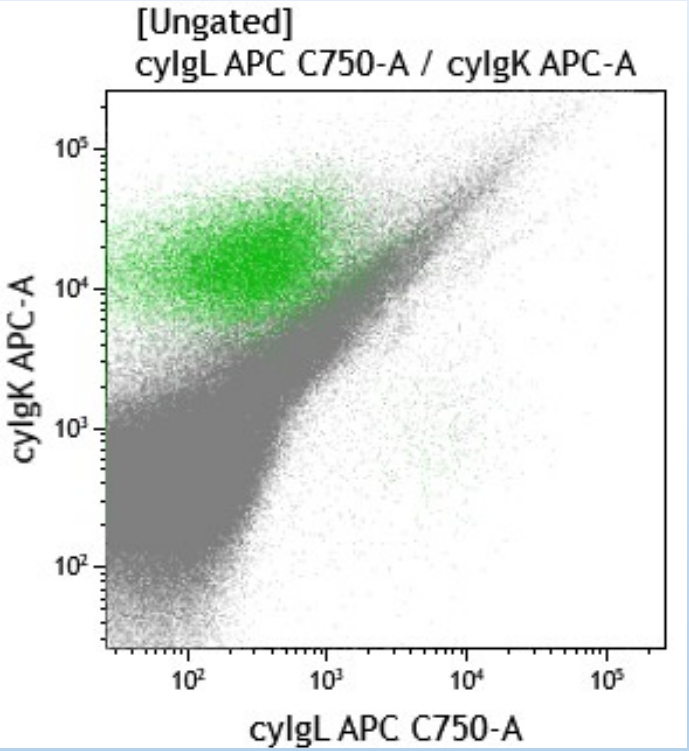
  PK: Lymfocyty 7% - 91% T-lymfocyty (s normálním poměrem CD4/CD8), 1% B-lymfocyty (polyklonální), 8% NK-buňky, 0% CPCs
- 20.4.2026 – KD, lymfadenopatie, dle ELFO PP IgM Kappa 21g/l
- 28.5.2026 – FNO, KD
- Léčba ESA s dobrým efektem na anémii

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Kazuistika č.1



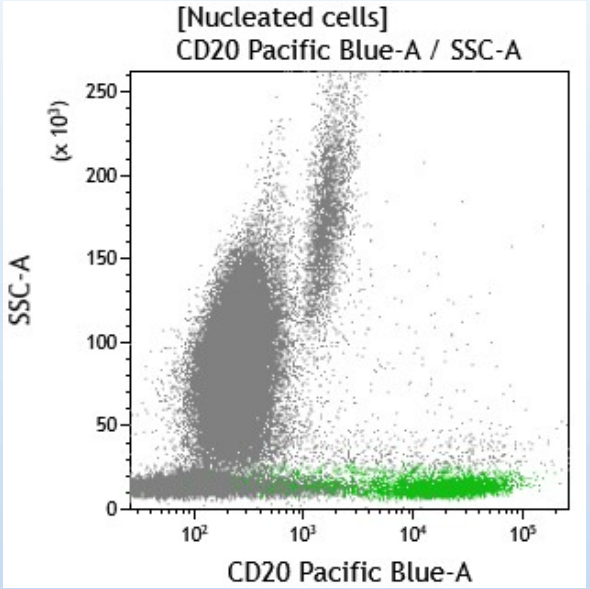


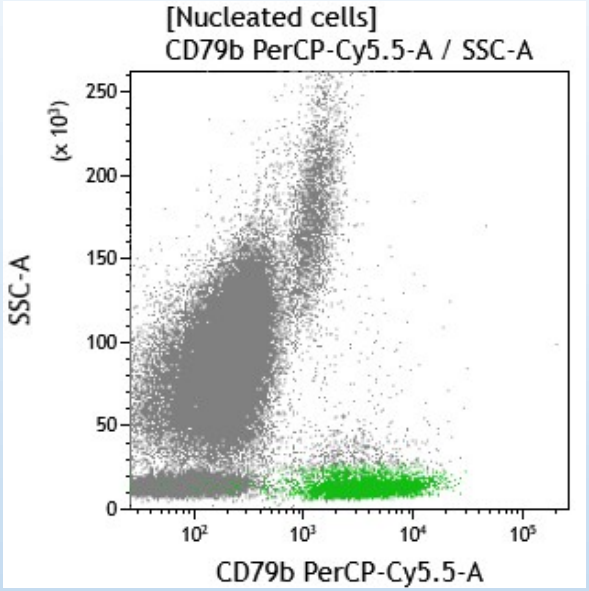


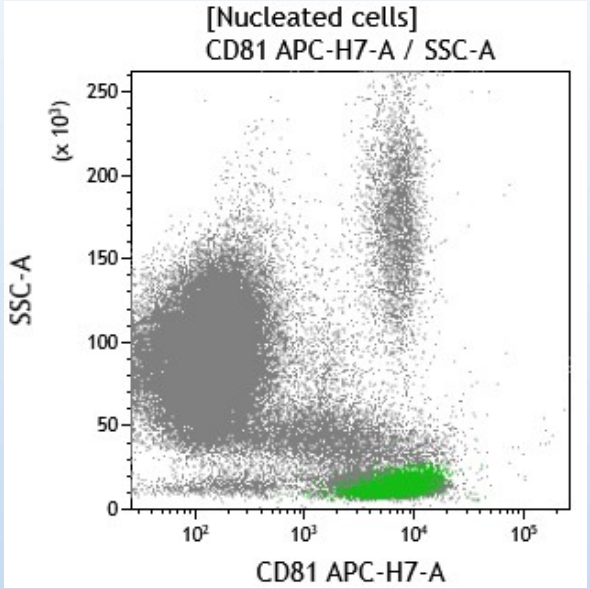
Cca 6% klonální B-lymfocyty

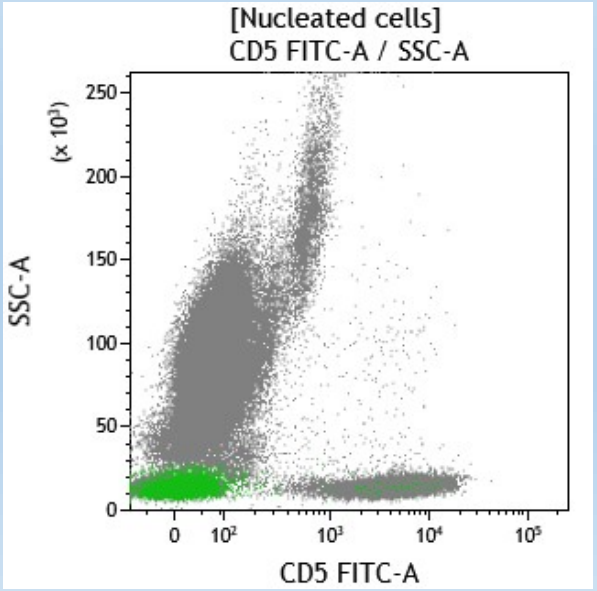
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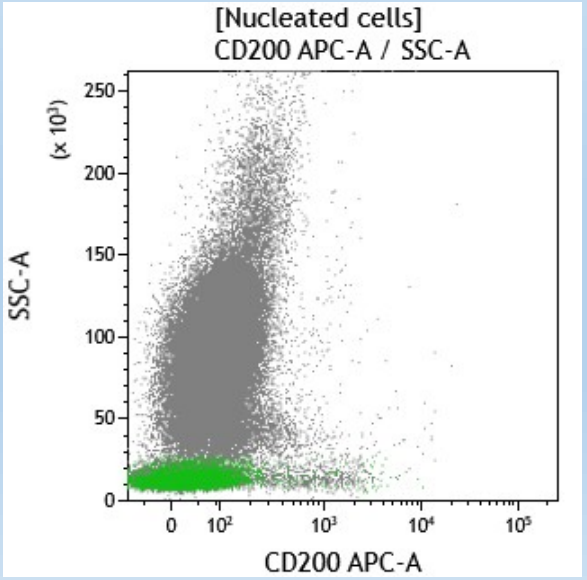
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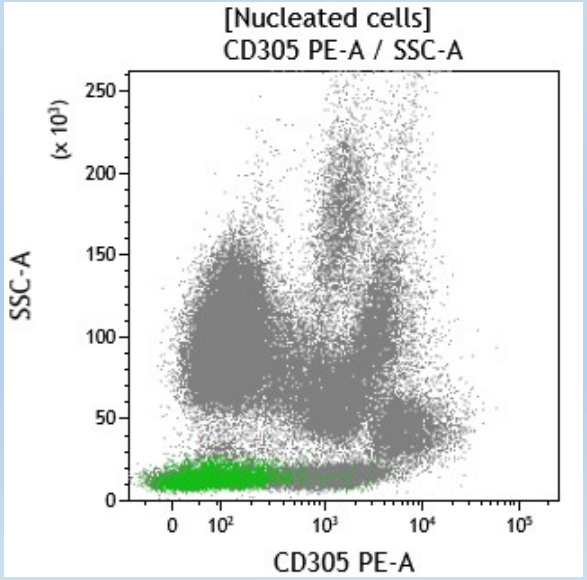






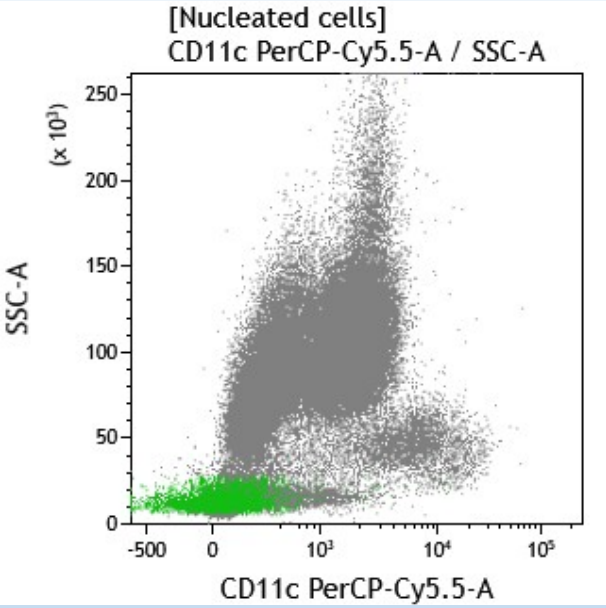


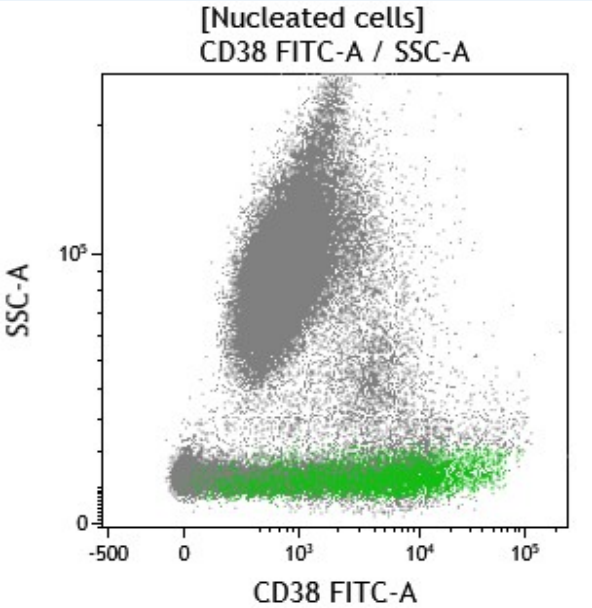


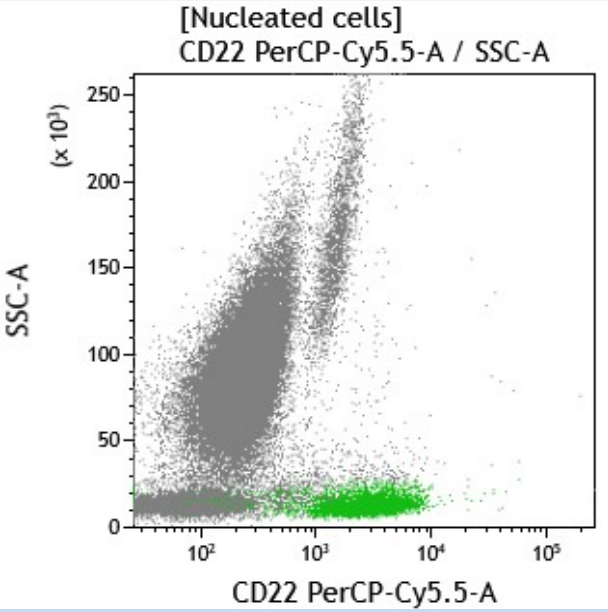


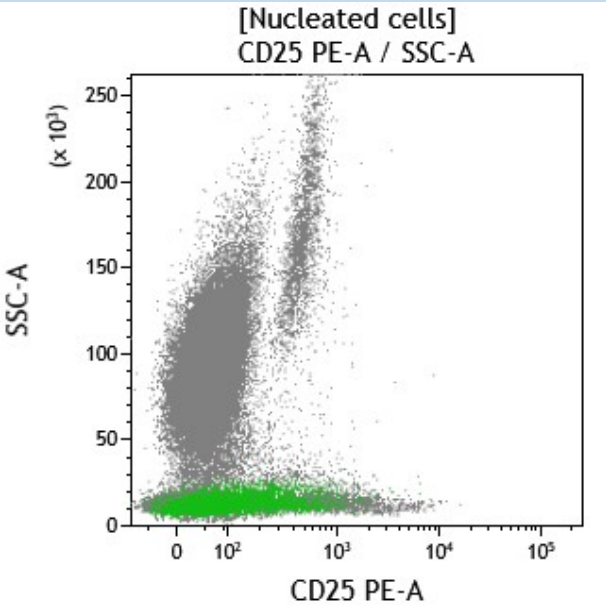
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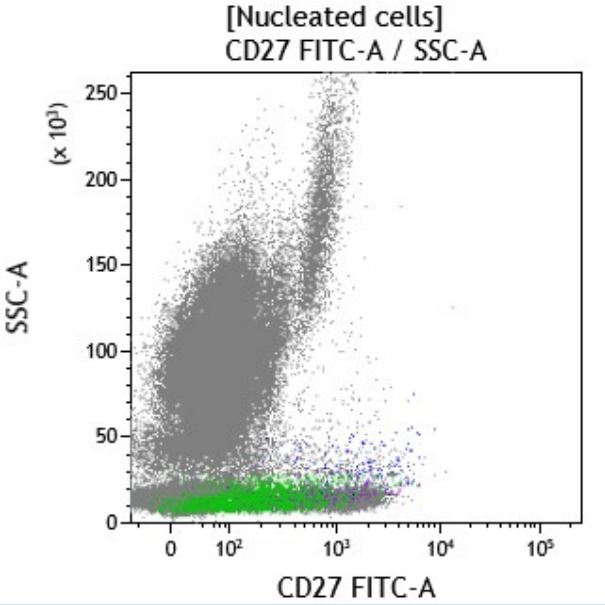
Kazuistika č.1

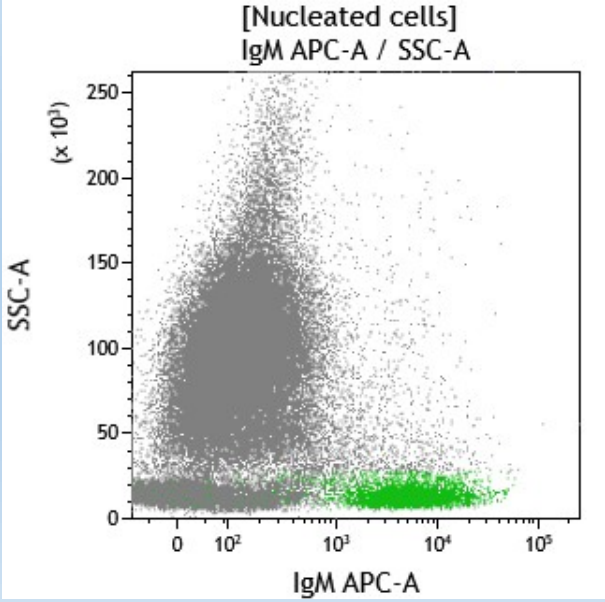






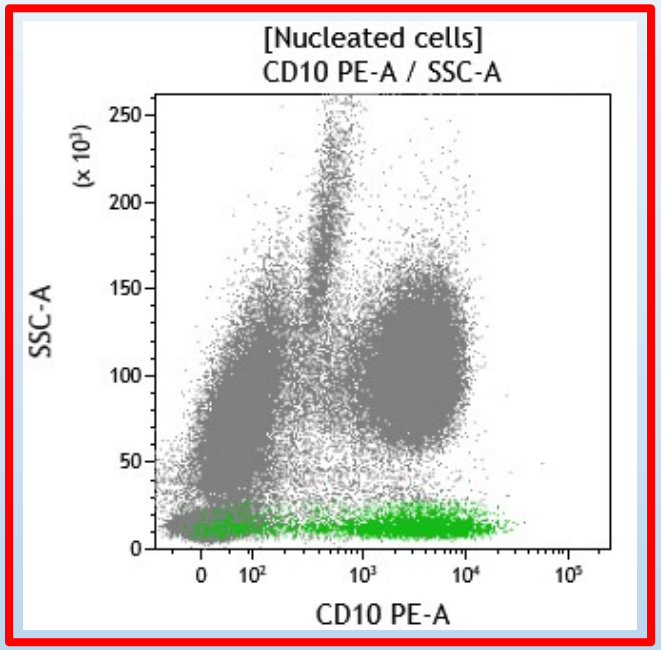


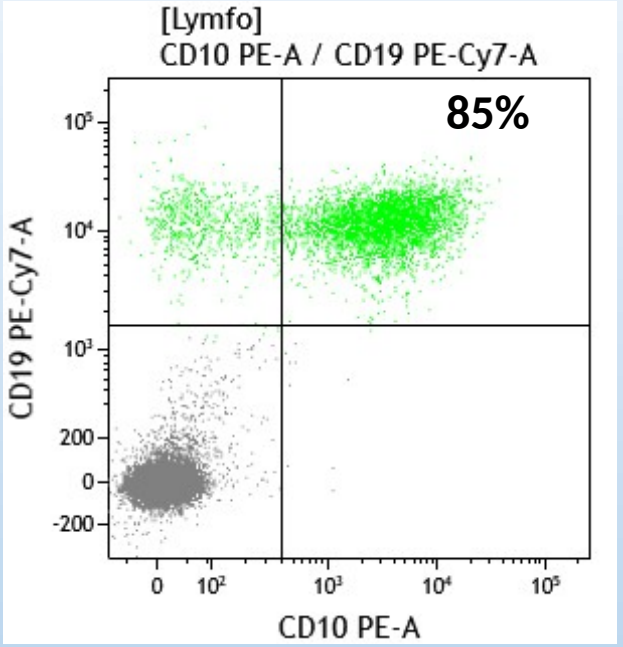




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Kazuistika č. 1





CD10 + ! ⇨ **FL**

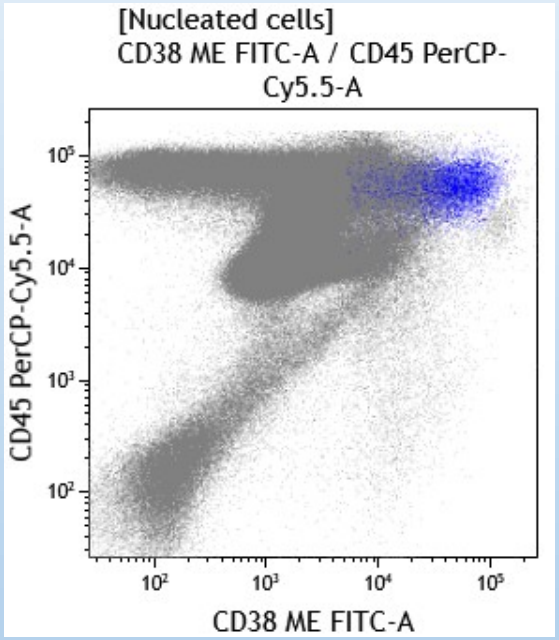
Paraprotein IgM (IgG) u 5 – 20% pacientů s folikulárním lymfomem

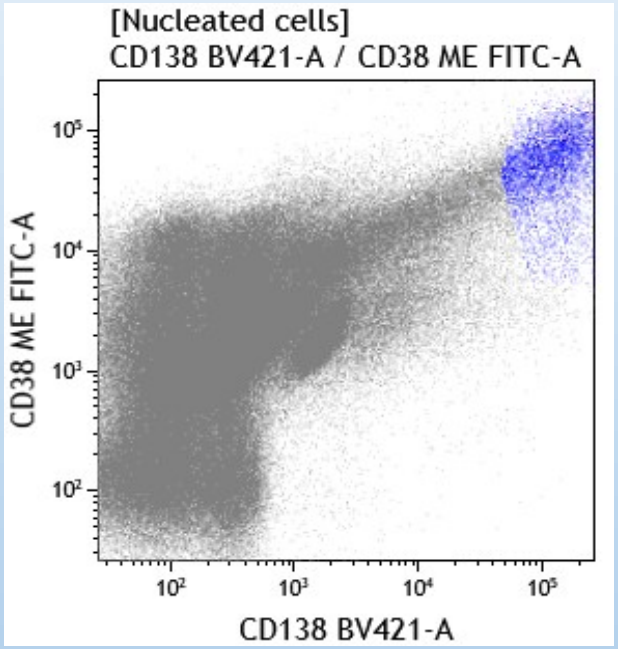
Roger G.Owen, Clinical Lymphoma, June 2000

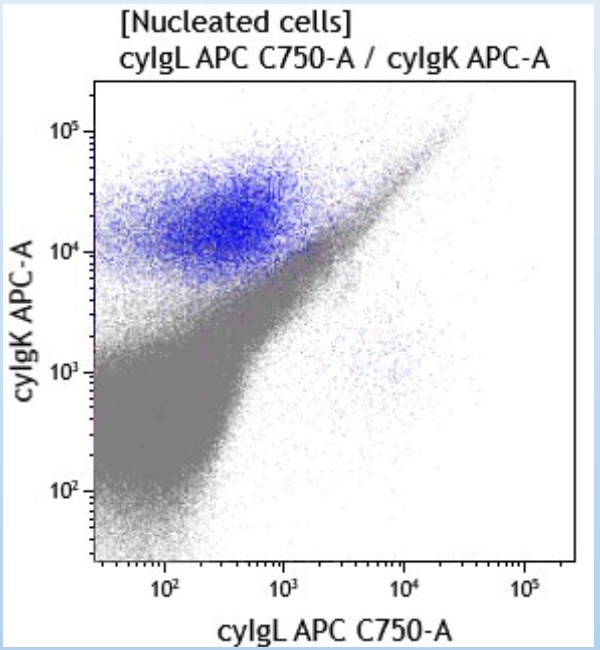
CD10 pozitivita u cca 7% případů LPL

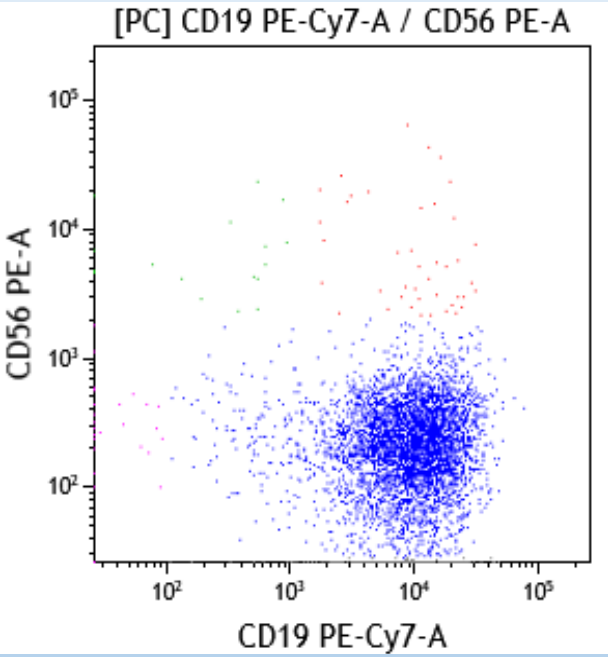
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Kazuistika č.1



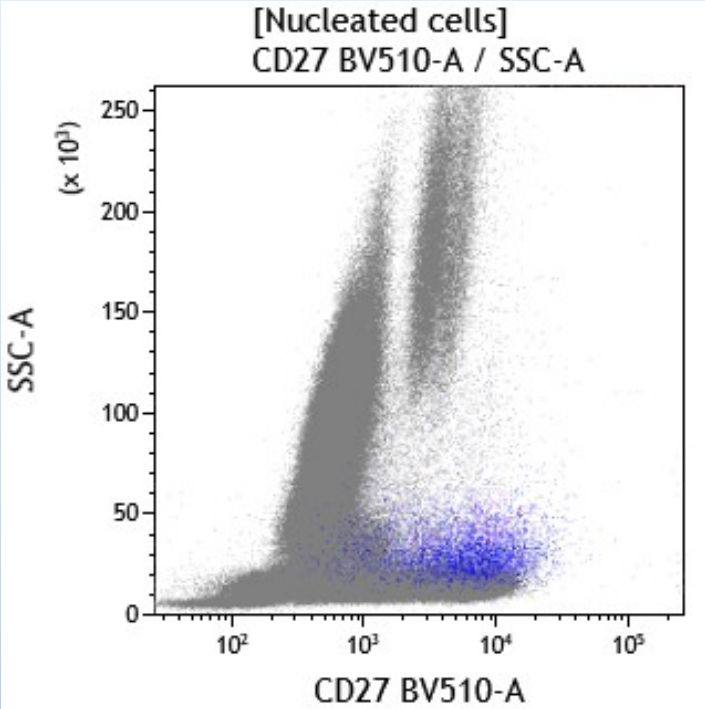


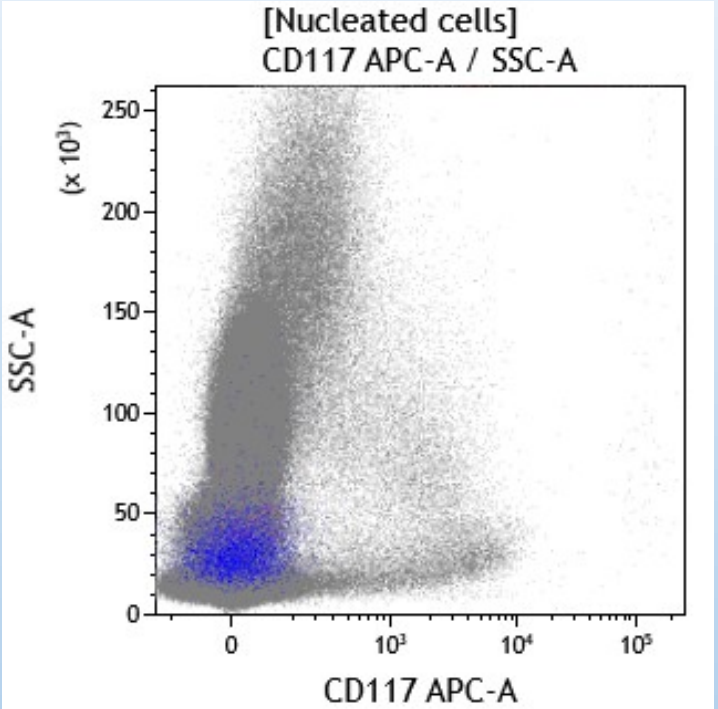


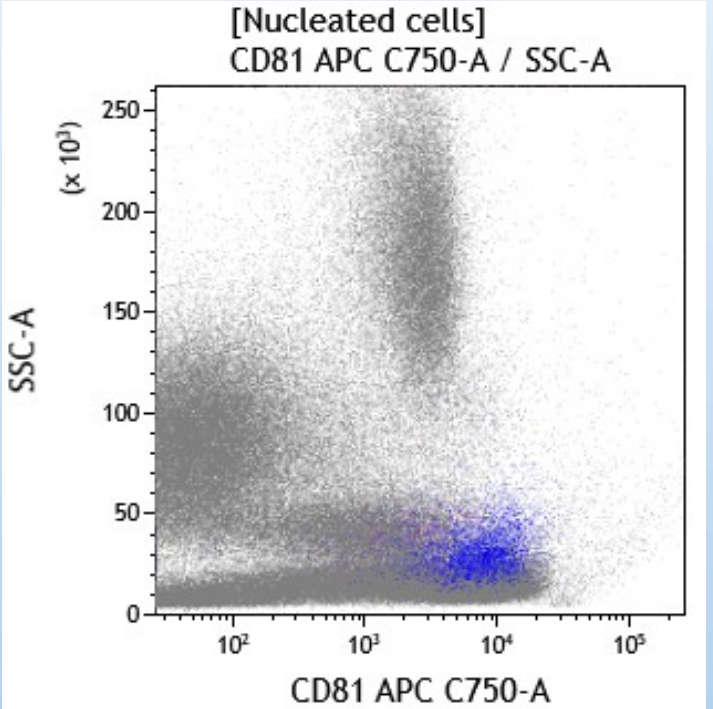


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Kazuistika č.1







Cca 1% PCs – klonální s normálním imunofenotypem
CytKappa+ CD45+ CD19+ CD56- CD27+ CD117- CD81+

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Kazuistika č. 1

Editorial > Clin Lymphoma Myeloma Leuk. 2025 Jan;25(1):23-25. doi: 10.1016/j.clml.2024.09.004. Epub 2024 Sep 12.

CD10-Positive Lymphoplasmacytic Lymphoma: A Diagnostic Pitfall

Yaping Ju [1], Sophie Stuart [1], Yue Zhao [2], Yi Xie [3], Luis F Carrillo [4], Imran Siddiqi [1], Ling Zhang [5], Endi Wang [6]

Affiliations + expand

PMID: 39343717 DOI: 10.1016/j.clml.2024.09.004

No abstract available

Keywords: Bone marrow involvement; CD10; Follicular lymphoma; Lymphoplasmacytic lymphoma; Waldstrom macroglobulinemia.

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Abstract

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Kazuistika č.1

CD10+ LPL/WM

- častěji anémie
- přítomnost paraproteinu IgM
- častěji postihuje KD (v 60%)
- intersticiální postižení KD
- přítomnost monoklonálních PCs

- MYD88, CXCR4

Folikulární lymfom

- častěji lymfadenopatie
- méně časté
- méně časté zasažení KD (v 10%)
- paratrabekulární

- FISH: t(14;18), BCL-2
- exprese BCL-6

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Kazuistika č.1

- U FL postižení kostní dřeně značí horší prognózu nemoci a pokročilejší stav nemoci
- Cca 1/3 low-grade FL transformují do DLBCL nebo jiného high-grade lymfomu
- Agresivní histologická transformace u LPL/WM je neobvyklá
- **Až 20% FL je CD10-** s největším podílem případů u FL grade 3b (DLBCL)
- U FL zřídka **pozitivita CD5** (3%) – spojena s kratším přežitím a vyšším rizikem transformace do DLBCL
- Buňky FL mají slabší expresi CD19 a ve srovnání s normálními buňkami i **slabší expresi CD45 (vzácně negativní)**

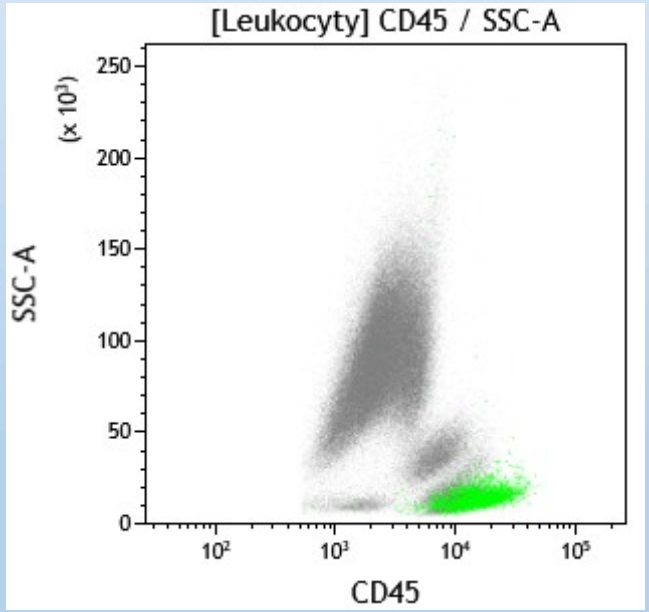
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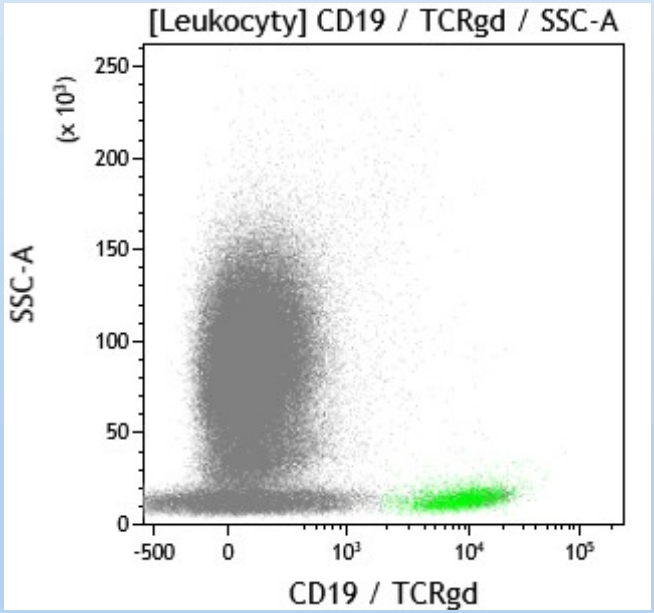
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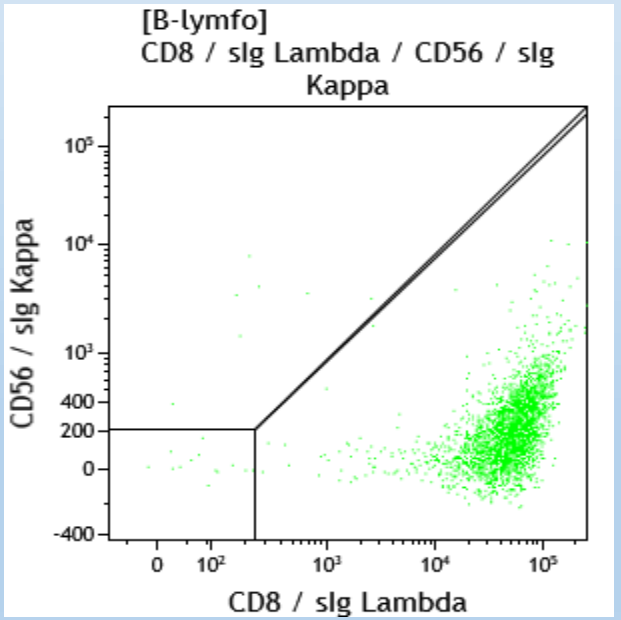
CD5+ folikulární lymfom

- žena, roč. 1962, 21.5.2025 ambulance KHO FNO, léčba od 1/2026 CarT

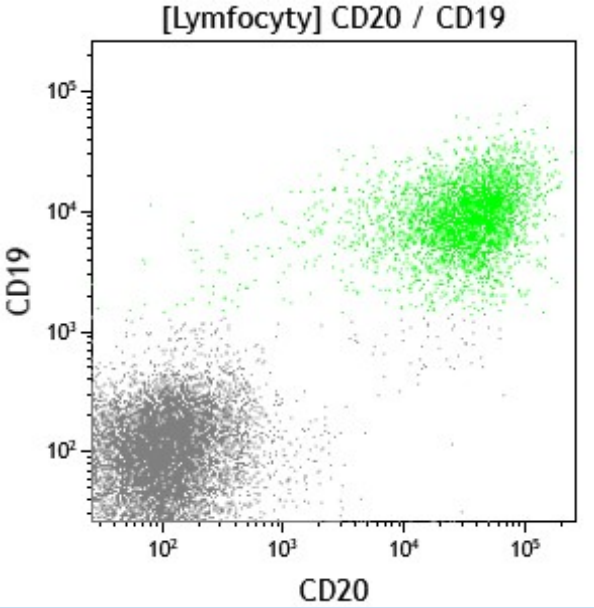
PK

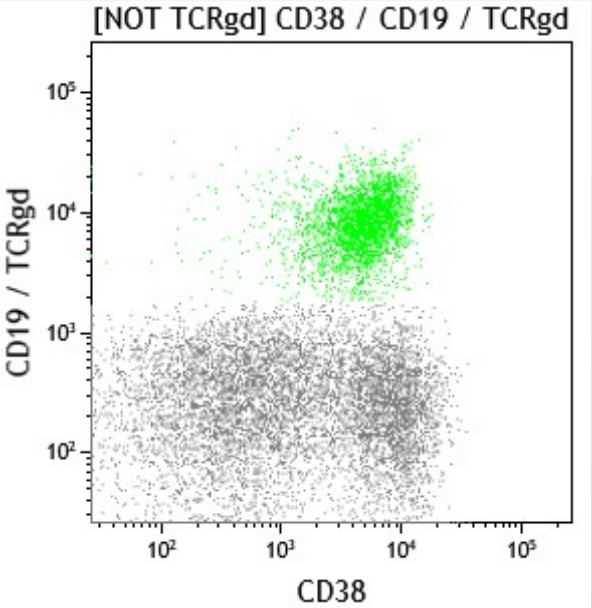


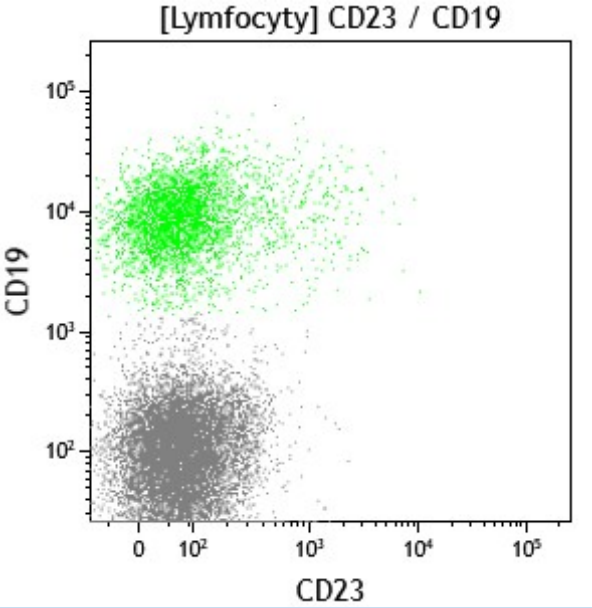


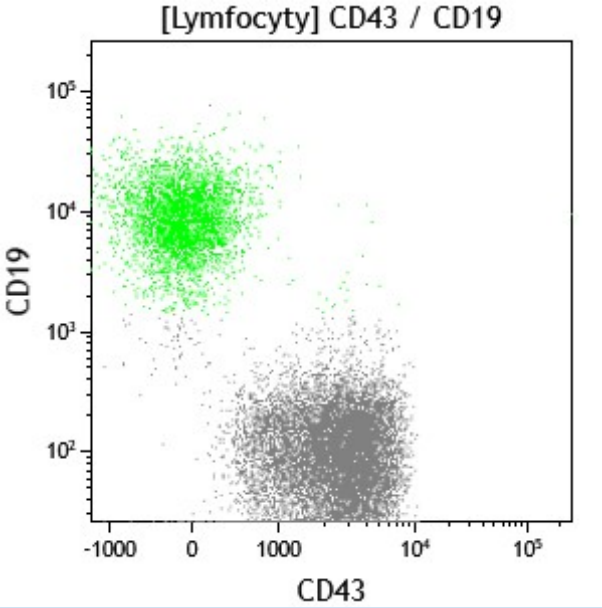


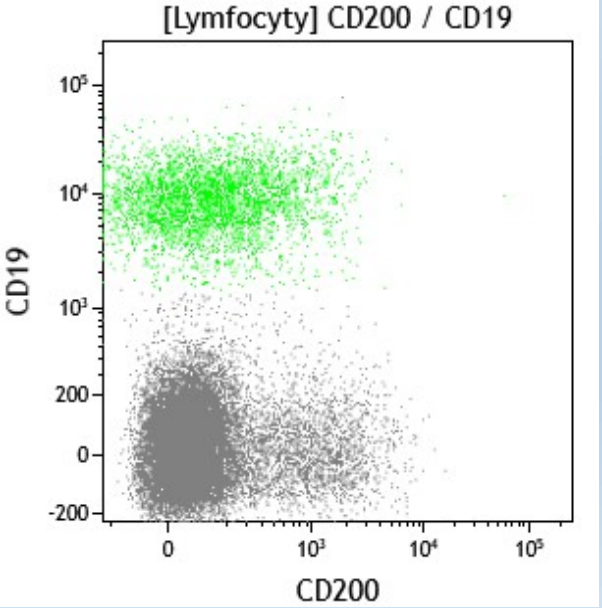
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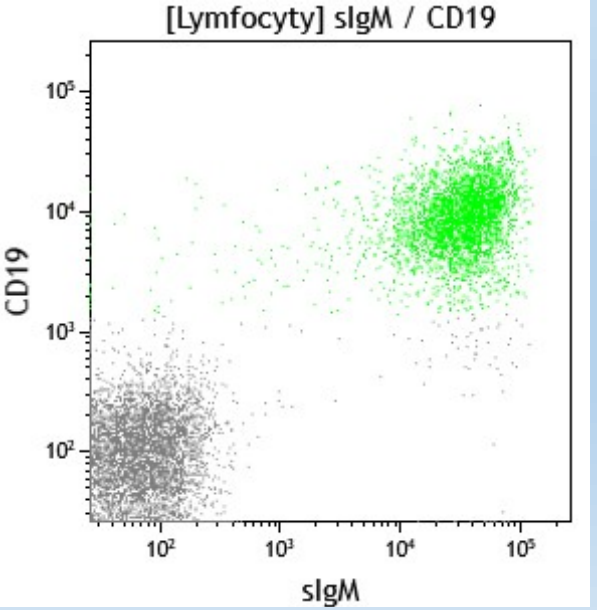






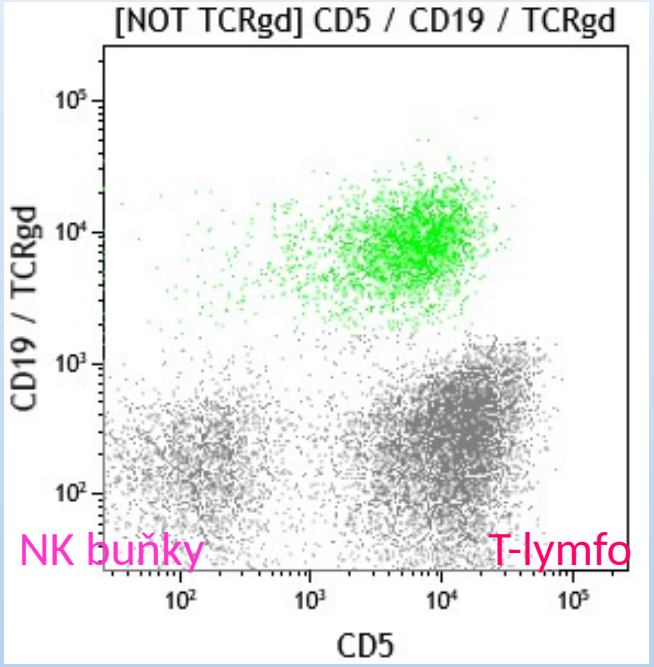


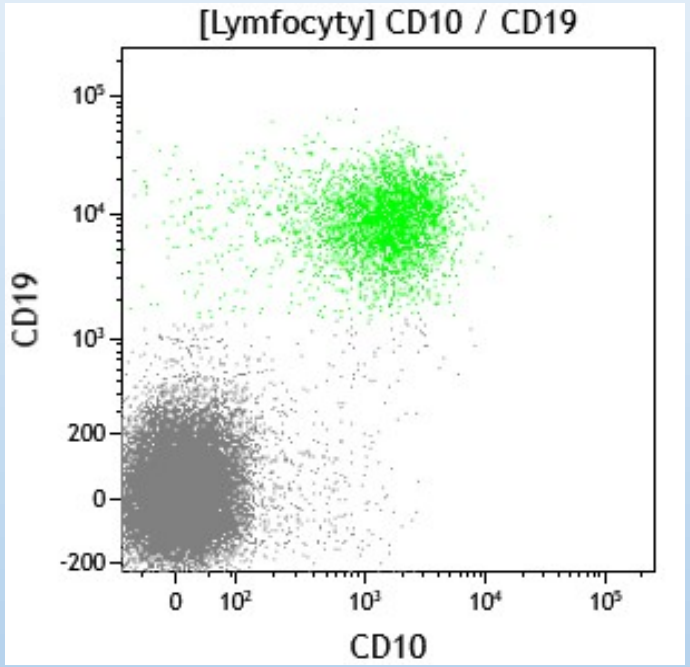




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Kazuistika č.2





CD5+ CD23- CD200- CD20++ sIgM++ → **MCL**

Cca 10% - CD10+ (blastoidní forma MCL)
Cca 25% - CD23+ (indolentní forma MCL)

CD38 pozitivní
CD200 vždy negativní

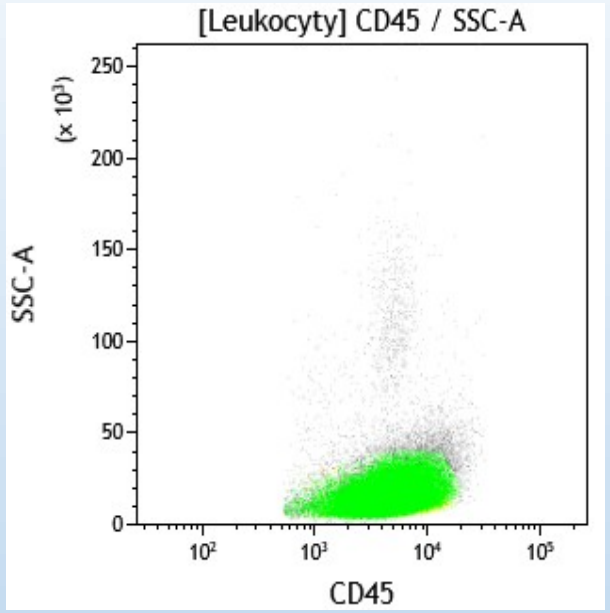
CD10+ CD38+ → **FL CD5+ (DLBCL)**

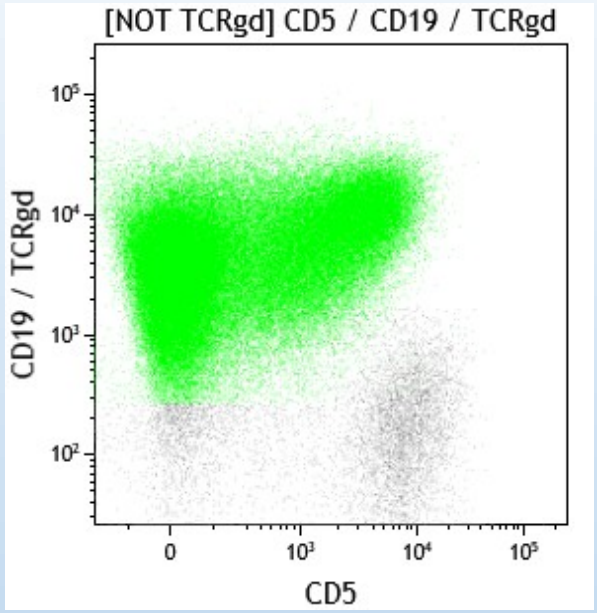
Multiparameter Flow Cytometry in the Diagnosis of Hematologic Malignancies – Anna Porwit, Marie Christine Béné

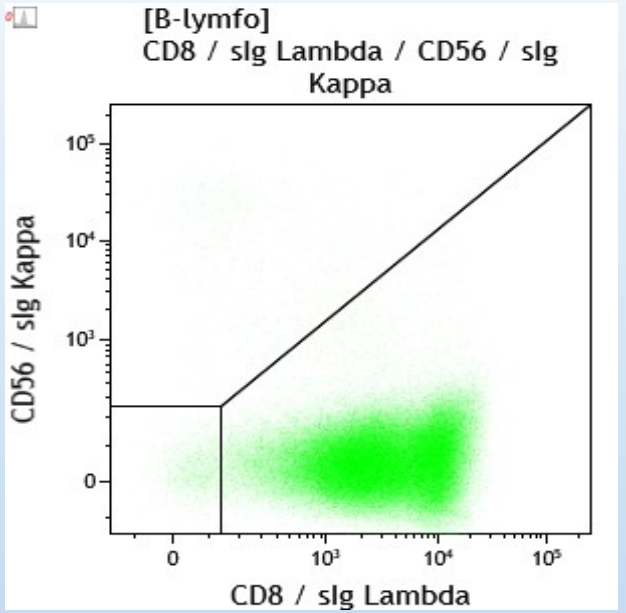
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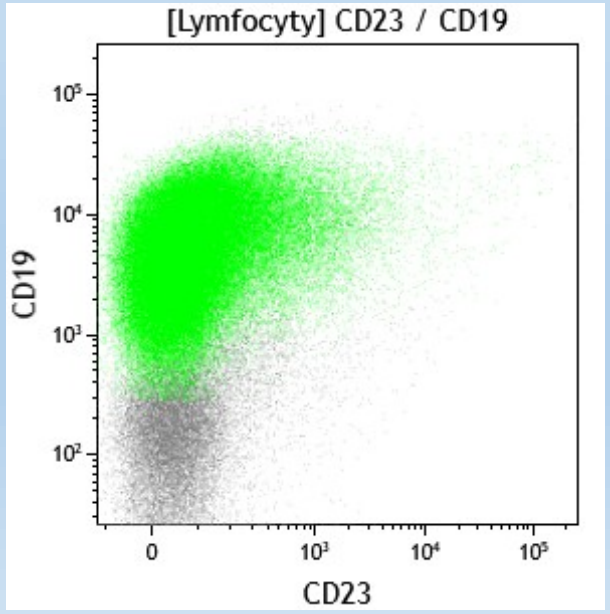
Kazuistika č.2

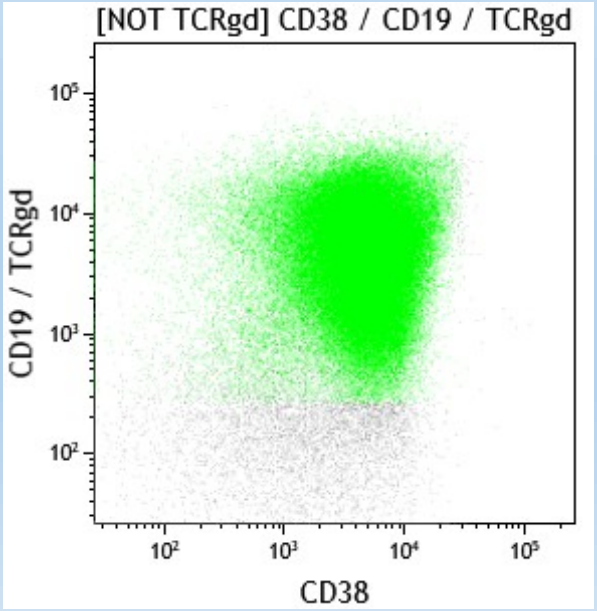
Uzlina

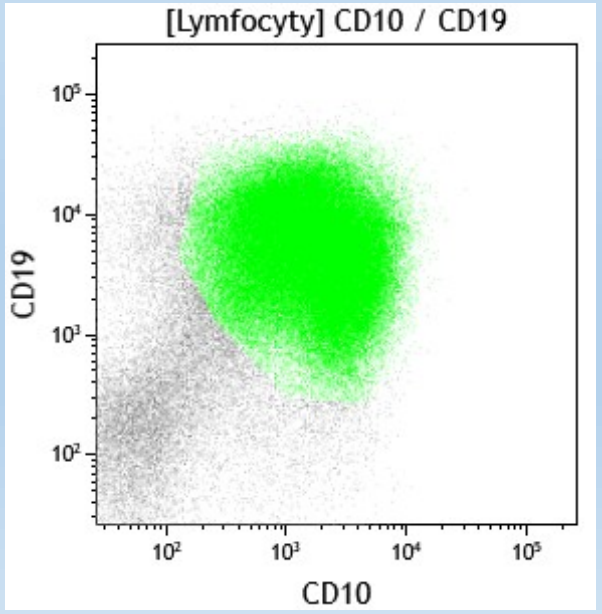










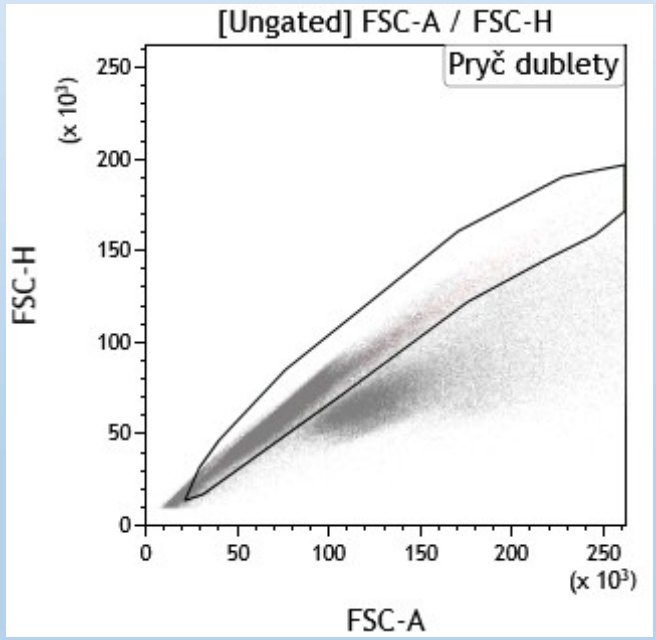


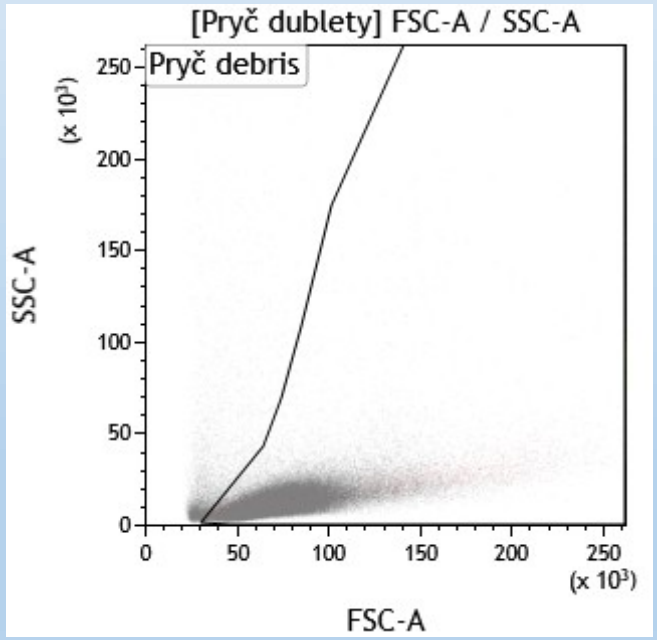
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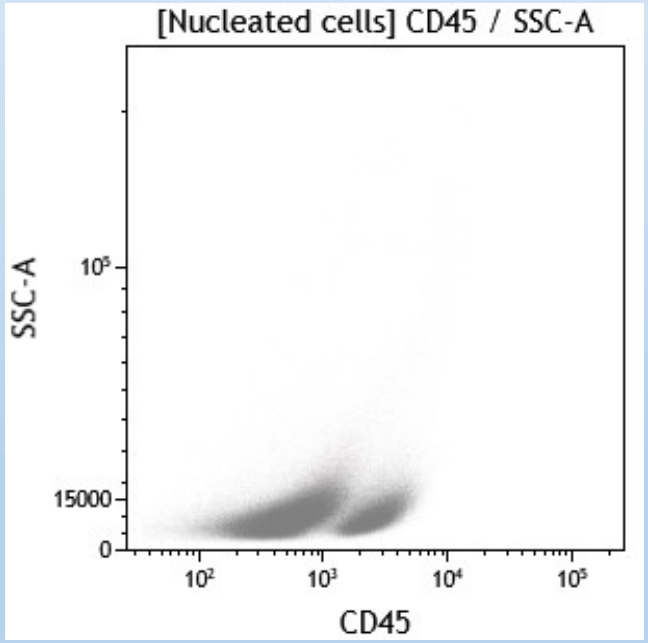
Kazuistika č.3

CD45 low FL

- muž, roč. 1970, 27.2.2020 lymfatická uzlina FNO, akutní lymfadenitida obličeje hlavy a krku

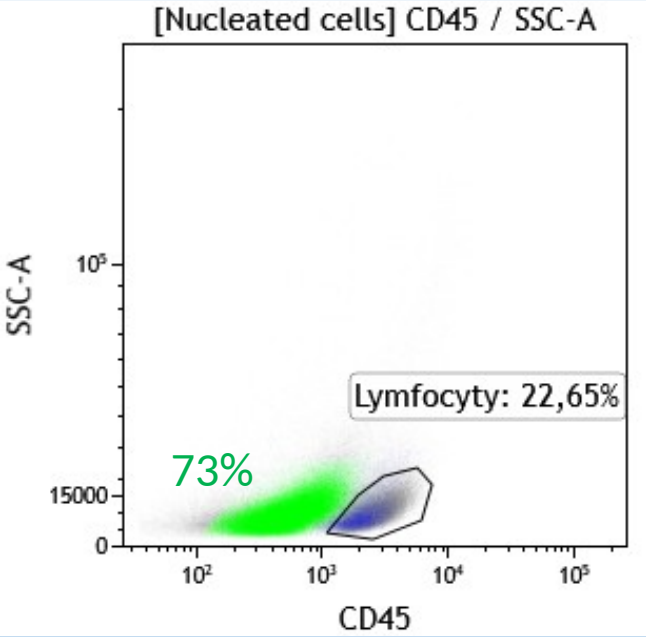


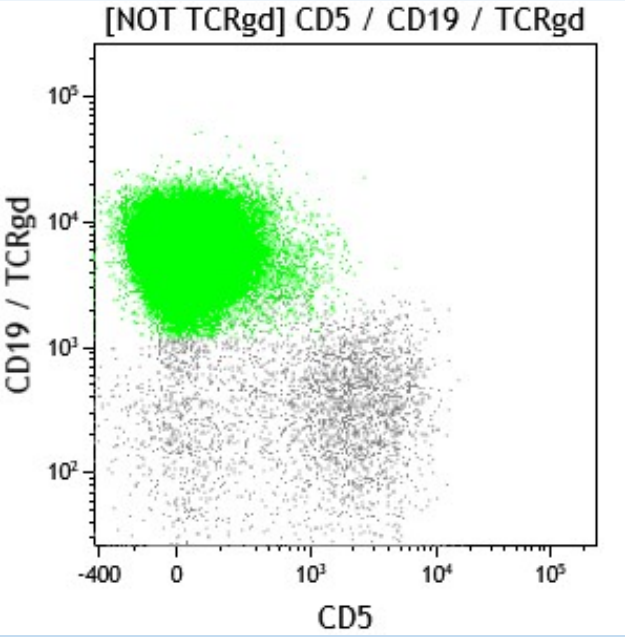


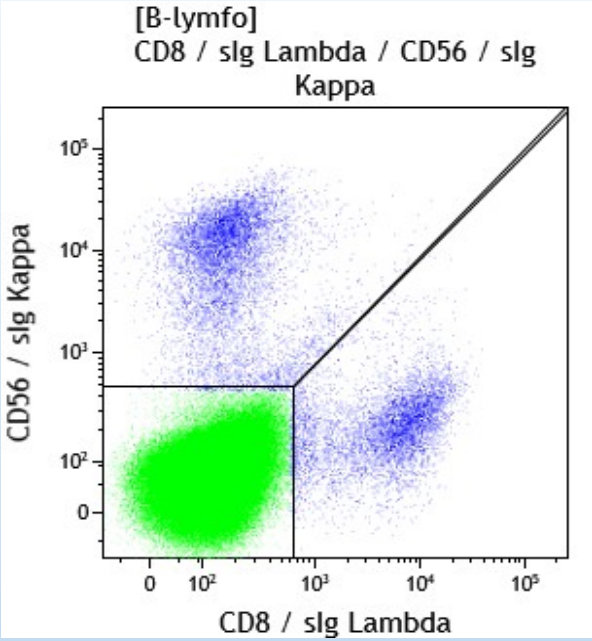


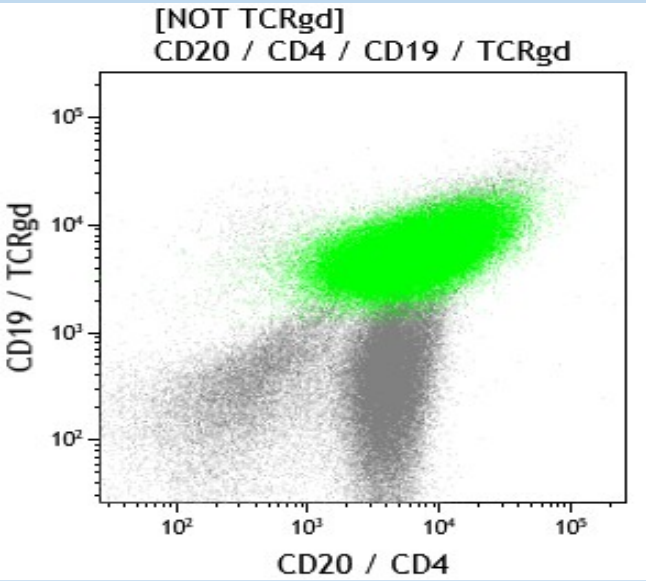
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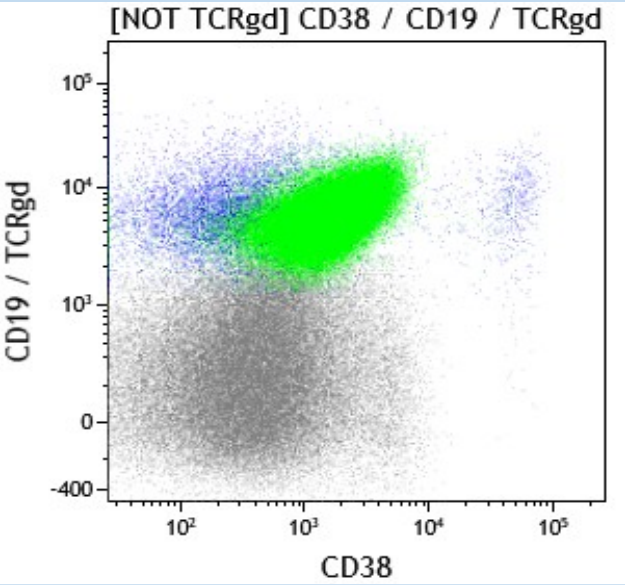
Kazuistika č.3

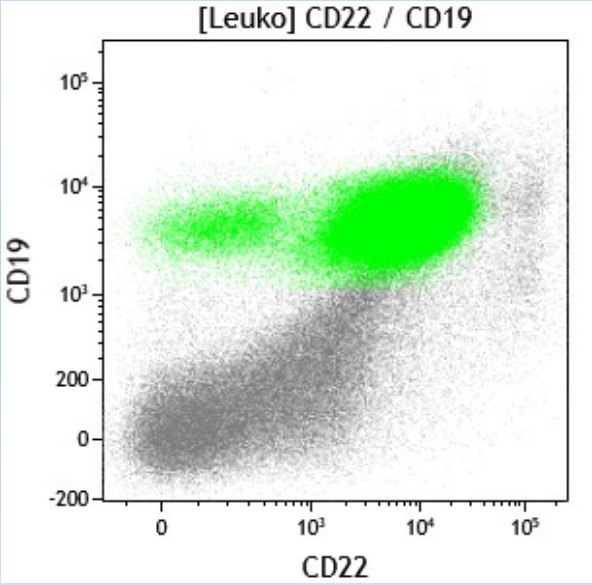






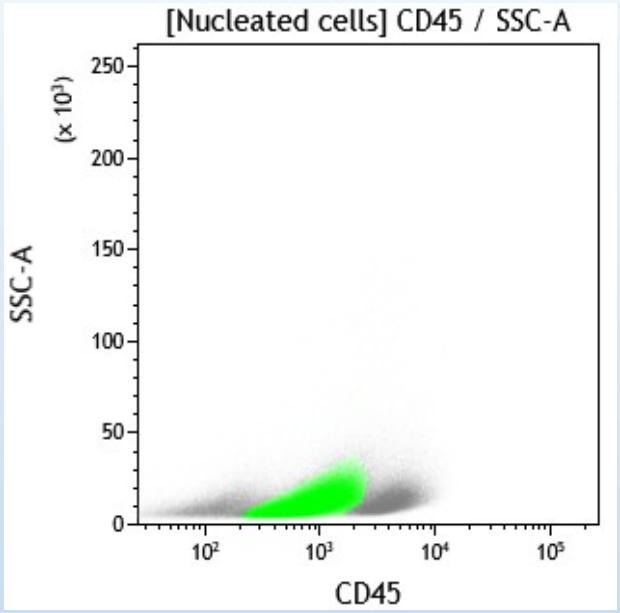


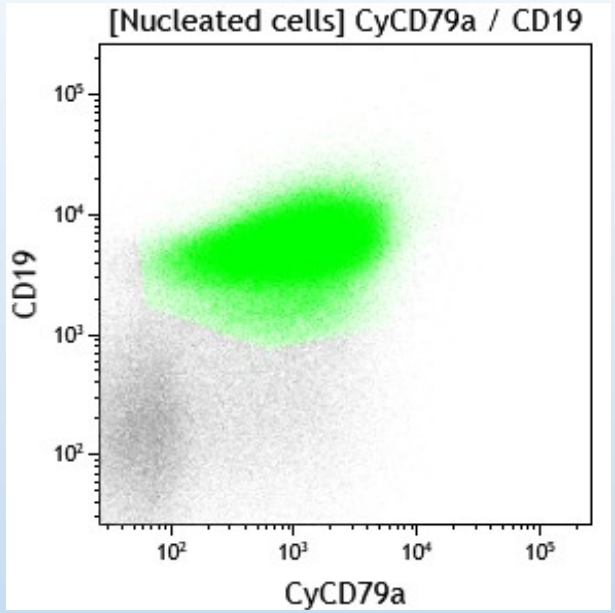


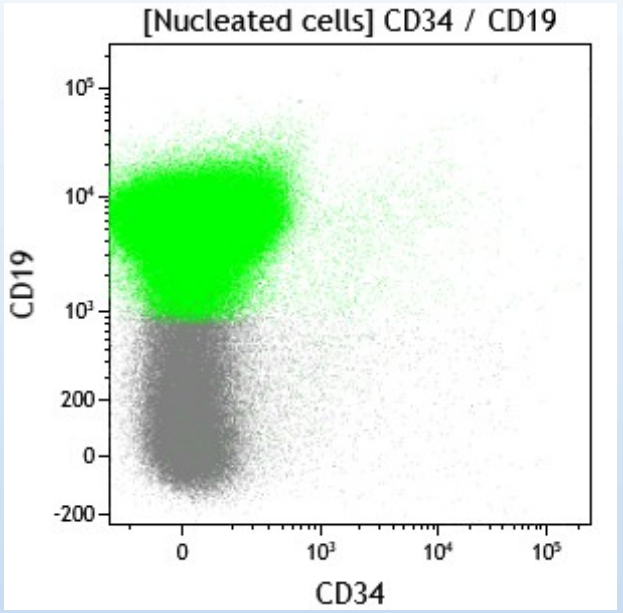


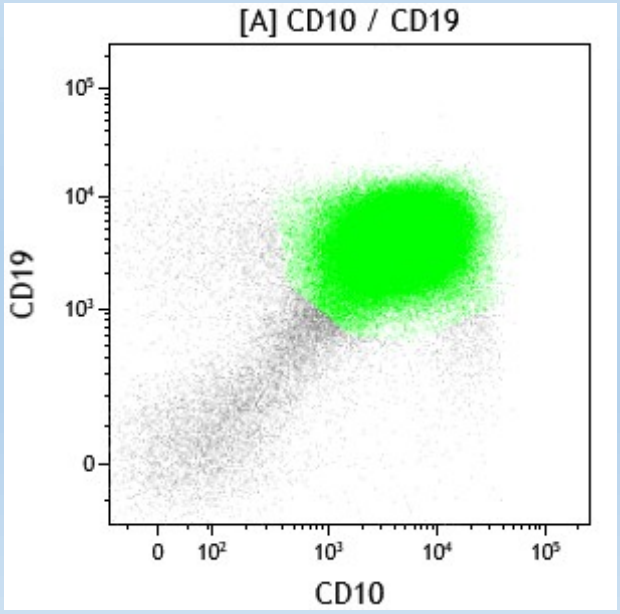
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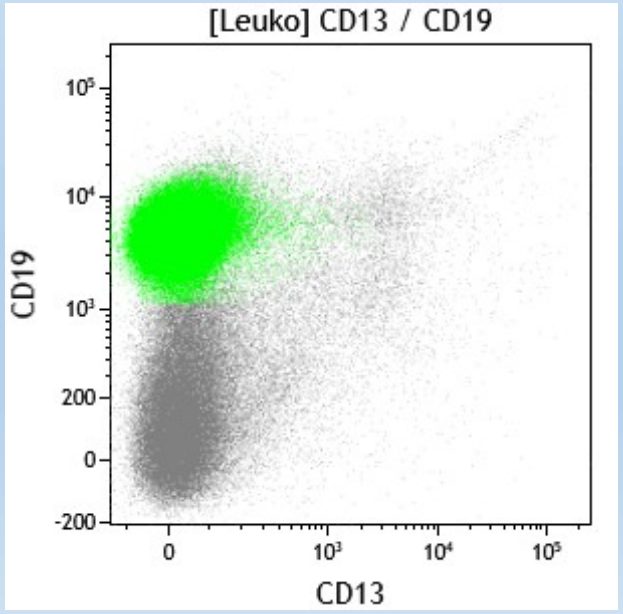
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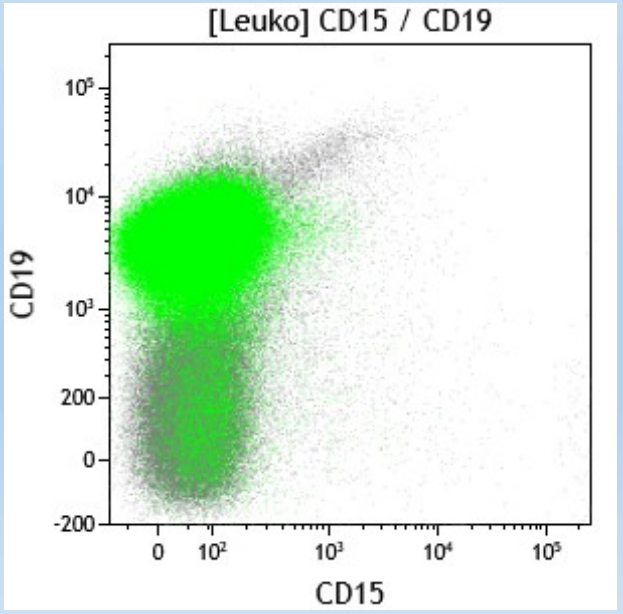






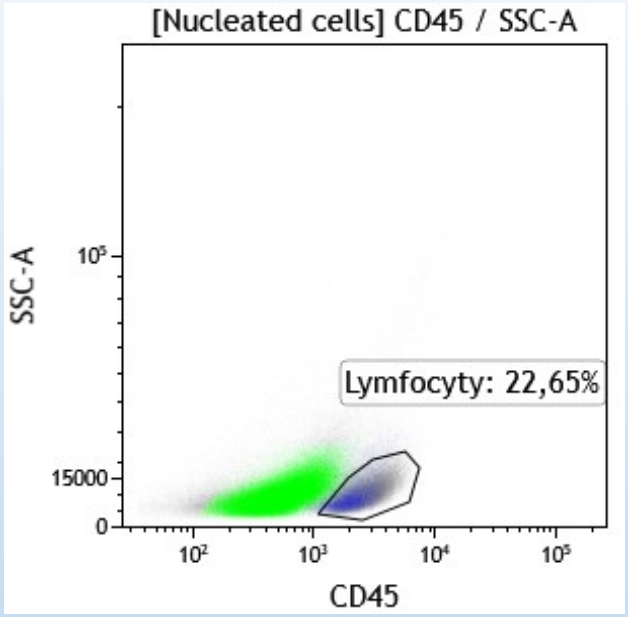


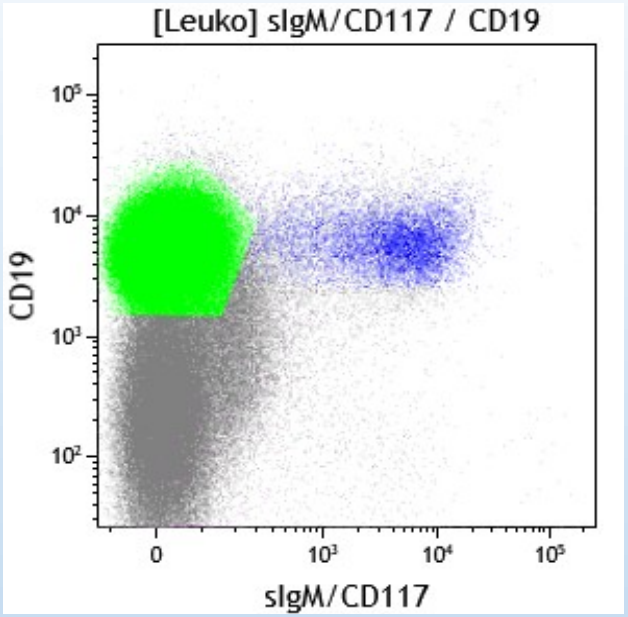


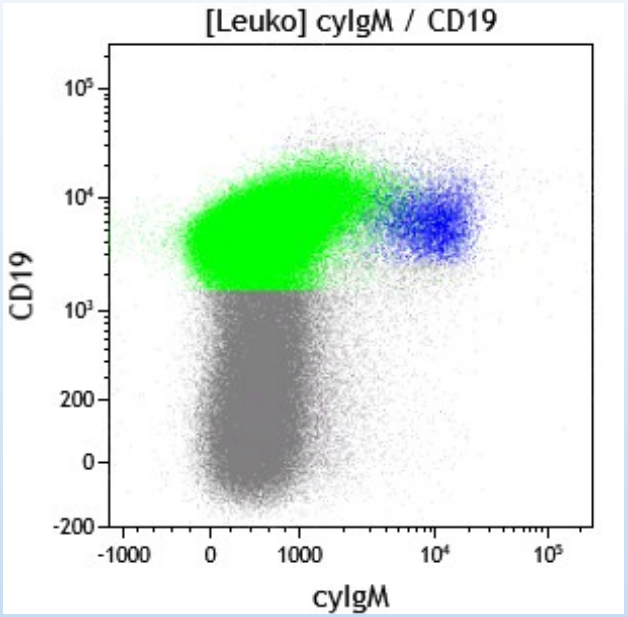


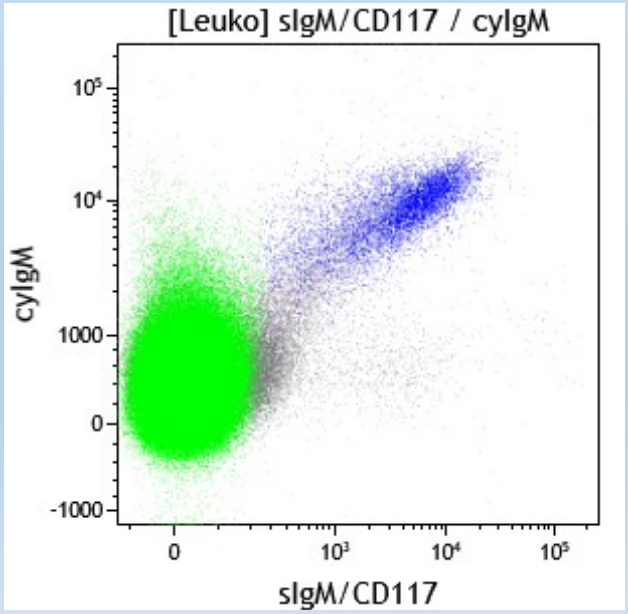
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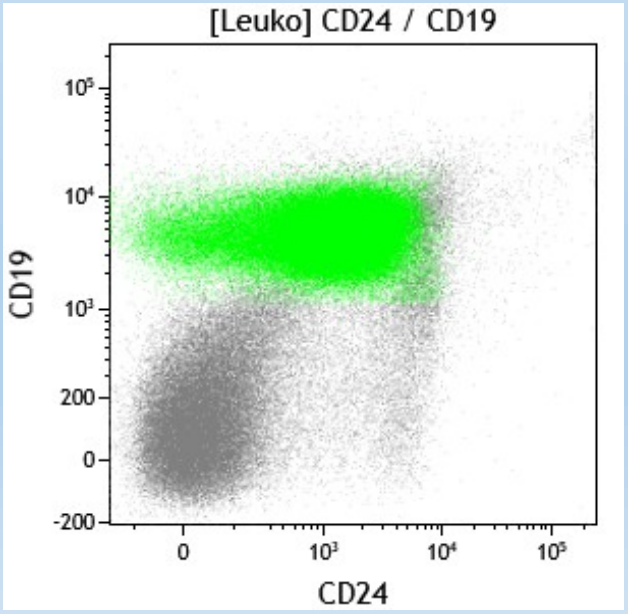
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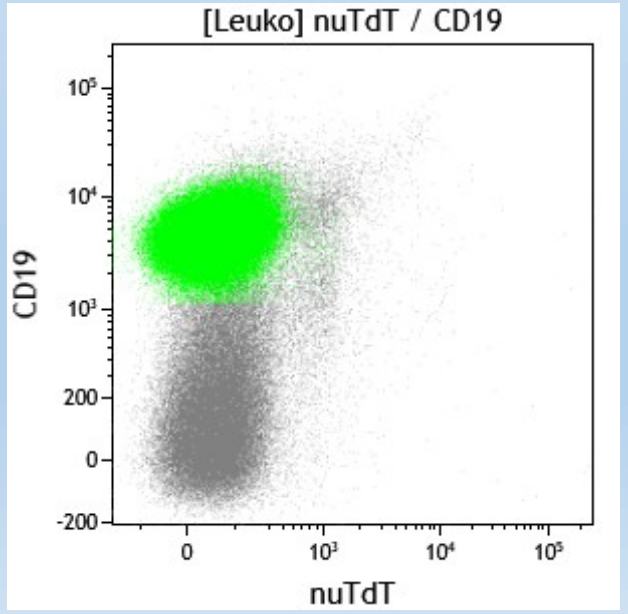






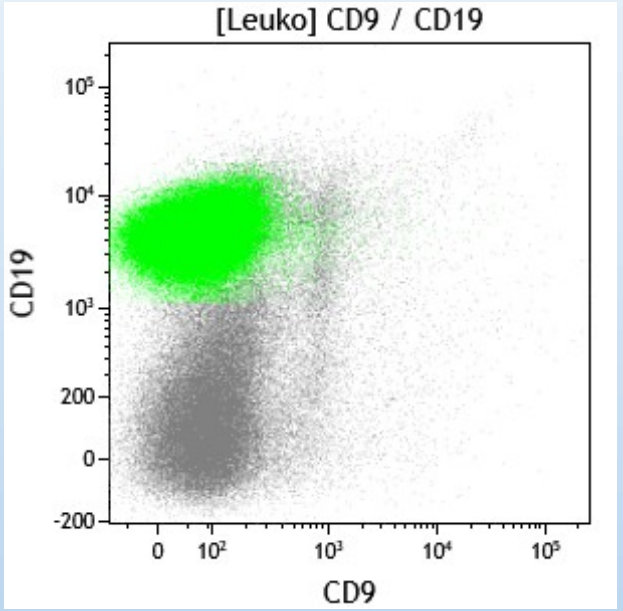


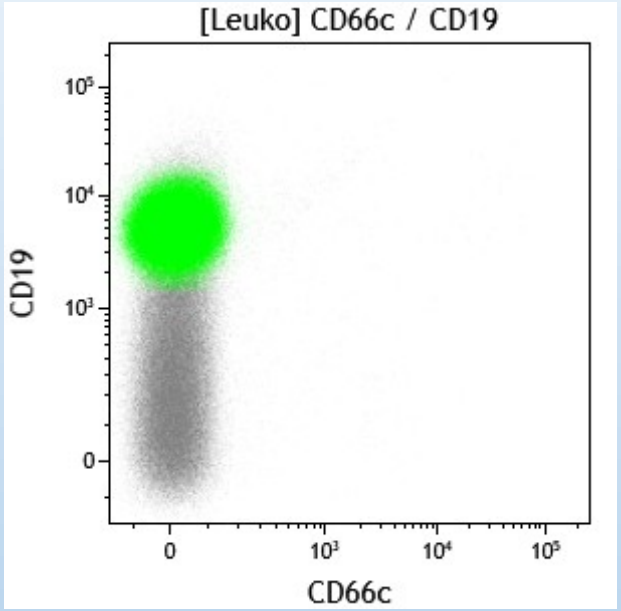


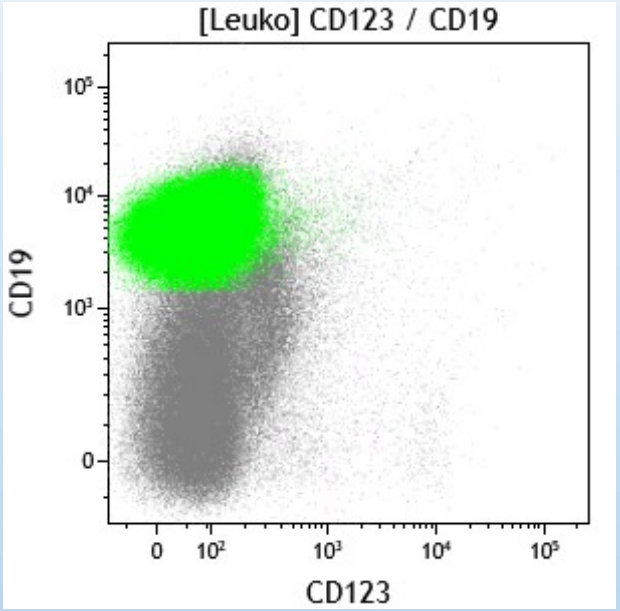


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Kazustika č.3







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Kazuistika č.3

CD45dim cyIgM- sIg- CD10+ CD38+ ⟶ B-ALL

Early or pro-B-cell ALL

CD10⁻, CD19⁺, CD34⁺, TdT⁺, *CD15⁺*

WHO subtype: B-All with t[v;11q23]; *MLL* rearranged. Infants <1yr and adults with 11q23 (*MLL*) rearrangements most notably t(4;11); high WCC (>100), organomegaly and CNS disease common: poor outlook. Other myeloid antigens frequently expressed, such as CD33.

Common B-cell ALL

CD10⁺, CD19⁺, CD34⁺, TdT⁺, *CD25⁺*, *CD13⁺/CD33⁺*

WHO subtype: B-All with t(9;22); *BCR-ABL 1.* Variable immunophenotype but most commonly common B-ALL with high frequency of myeloid antigens (20–75% of CD13 and/or CD33 in different series). Found in15–30% of adults but only 2% of children and generally associated with a poor outcome.

CD10⁺, CD19⁺, CD34⁺, TdT⁺, *CD13⁺/CD33⁺*

WHO subtype: B-All with t(12;21); TEL-AML1 [ETV6-RUNX1]. Found in up to 30% of childwood ALL but <5% of adult cases. Myeloid antigens expressed in <50% of cases. Favourable outcome.

CD10⁺, CD19⁺, CD34⁺, TdT⁺

WHO subtype: B-All with hyperdiploidy and B-ALL with hypodiploidy. The former is common in childhood (25%), rare in adults and is associated with a good prognosis. The latter is found in <5% of ALL and confers a poor outcome.

CD10⁺, CD19⁺, CD34⁺, TdT⁺

WHO subtype: B-All with t[5;14]; IL3-IGH. Rare (<1% of ALL), and associated with a marked polyclonal eosinophilia secondary to IL-3. Common ALL immunophemotype.

Pre-B-cell ALL

CD10⁺, CD19⁺, *CD34⁻*, *cμ⁺*

WHO subtype: t(1:19); E2A-PBX1 (TCF3-PBX1). Generally more mature than cALL, (CD34⁻ and cμ⁻) typically termed pre-B All. CD45 often relatively strongly expressed as compared to other subtypes. Used to confer a poor prognosis; newer protocols seem to have reversed this. Seen in up to 6% of childhood ALL, less common in adults. Approximately 25% of all pre-B ALL exhibit this translocation.

Figure 5.9 Flow cytometric profiles of WHO defined ALL according to genotype. This schematic illustrates how the genetic subgroups of B-ALL relate to the widely accepted immunological classification. The typical antigen expression patterns are highlighted with the notable antigens (including aberrant antigen expression) highlighted in purple italics. Data is summarized from Swerdlow and Campo [1]; see text for further discussion and references.

Tab. 6.3 *Imunologická klasifikace B-lymfoblastické leukemie dle EGIL*

Typ ALL	Podtyp	Hlavní odlišující znaky	Imunofenotyp
prekurzorová B-ALL	early precursor B-ALL	**CD10-**cyIgM-sIg-	CD34+TdT+CD20-CD22-
	common ALL	**CD10+**cyIgM-sIg-	CD34+/-TdT+CD20-/+CD22-/+
	pre-B-ALL	CD10+**cyIgM+**sIg-	CD34-/+TdT+CD20+CD22+/-
zralá B-ALL/Burkittův lymfom		CD10+/-cyIgM+/-**sIg+**	CD34-TdT-CD20+CD22+

Poznámka: Pro všechny typy je společná exprese znaků: CD19, cyCD22, cyCD79a, HLA-DR.

TdT + !!

Restrikce lehkých řetezců je exprimována se slabou intenzitou, v některých případech může i chybět

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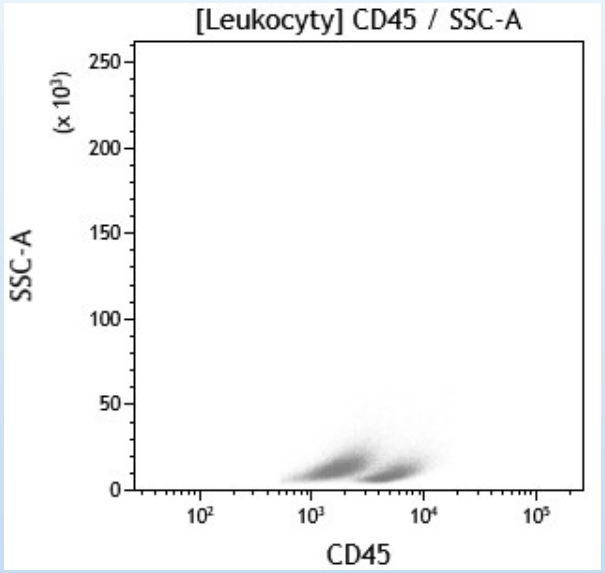
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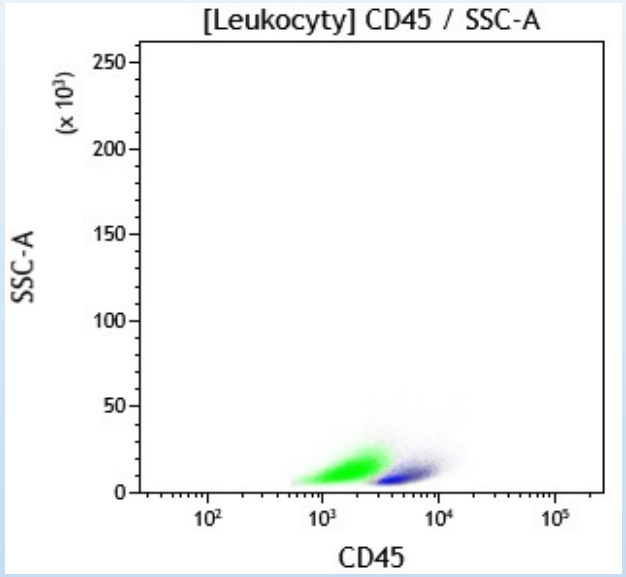
- Folikulární lymfom grade 2 – dg z biopsie z LU (nadkličková vlevo)
- KD negativní dle flow i histologie, PK negativní (zralé polyklonální B-lymfocyty)
- 1* relaps 4/2022, 2* relaps 12/2023, 3* relaps 11/2025
- Od 04/2026 – CarT terapie (Yescarta)
- Dle PET/CT kompletní metabolická a radiologická remise
- Flow KD – 7/2022, 7/2023, 3/2024, 01/2026 – vždy negativní
- Flow LU – 6/2022, 2/2024, 12/2025 – vždy pozitivní

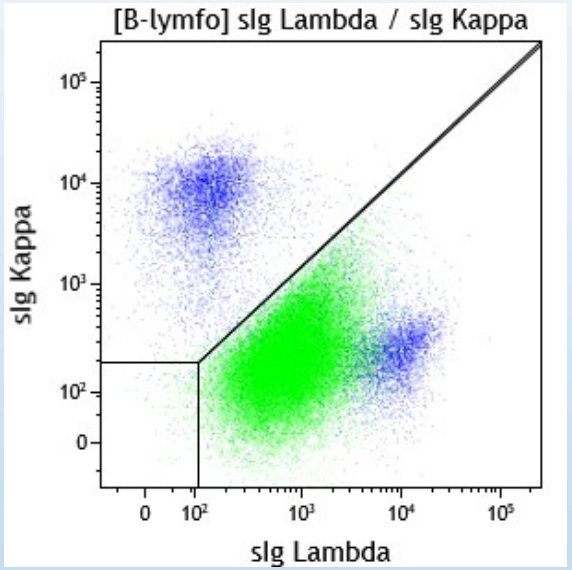
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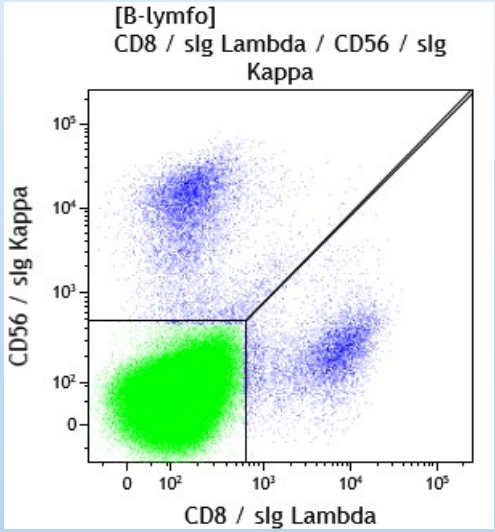
LU 7/2022

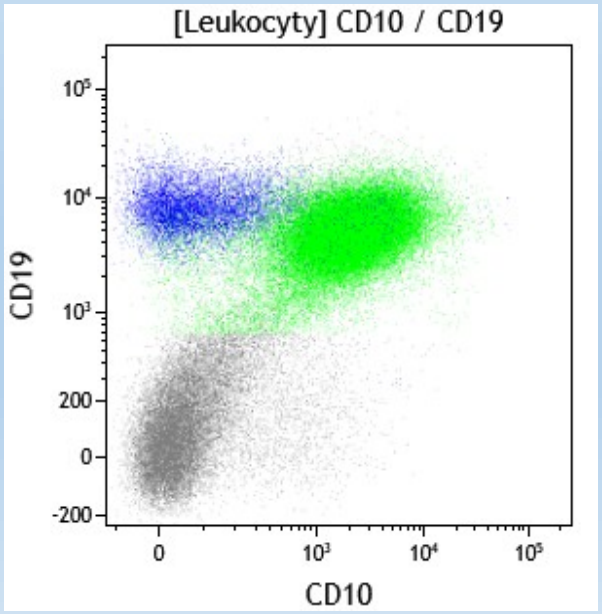


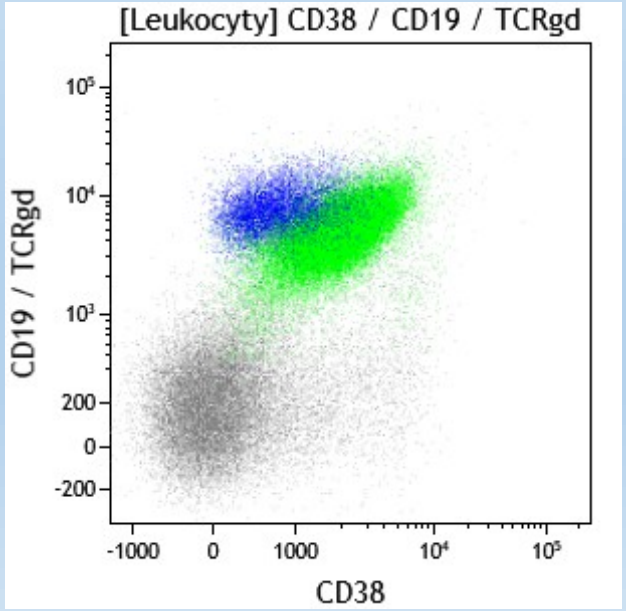


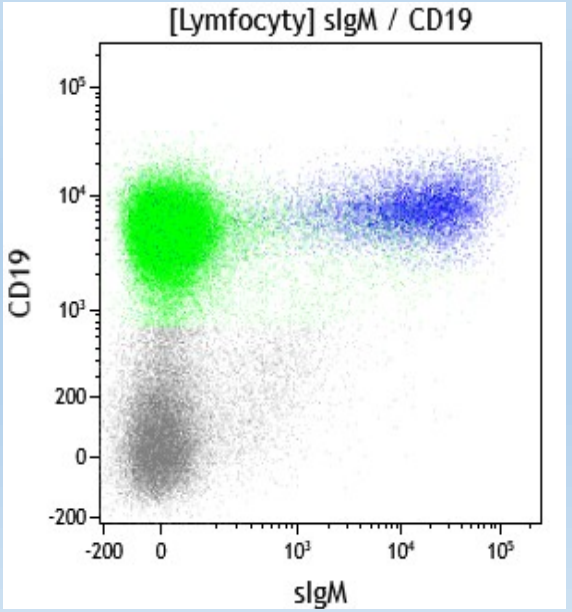


Intracelulární barvení Kappa/Lambda









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Děkuji za pozornost



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