

A Prescriber-Oriented Tool for Reimbursement Indications of Immune Checkpoint Inhibitors in Adult Solid Tumors in Belgium

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Background

Immune checkpoint inhibitors (ICIs) have transformed the treatment landscape for solid tumors. In Belgium, eleven ICIs currently hold reimbursement approval for adult patients. However, reimbursement conditions are published by RIZIV/INAMI per pharmaceutical specialty, not by cancer type, making it challenging for prescribers to quickly identify the most appropriate option for a given diagnosis. A diagnosis-driven approach could streamline treatment selection and improve clinical decision-making.

Objective

To develop a prescriber-customized tool that consolidates reimbursement indications for ICIs by cancer type, disease stage, treatment intent, and line of therapy, thereby facilitating rapid and accurate treatment planning.

Methods

We systematically reviewed all ICI indications in Belgium as of January 28, 2026, along with their reimbursement criteria listed under RIZIV/INAMI and Medical Need Program [1,2]. Based on these data, we designed a comprehensive table mapping ICIs to:

- Body segment
- Cancer type/Histology
- Line of therapy (neo-adjuvant, adjuvant, first, second, third)
- Reimbursement specifications

Results

The resulting tool provides a clear, user-friendly overview of available indications by clinical context. See Table 1 below.

Conclusion

This pragmatic and time-saving tool addresses a critical gap in clinical practice by enabling prescribers to navigate reimbursement conditions efficiently. We recommend its digital integration and monthly update on the Belgian Society of Medical Oncology (BSMO) website to ensure accessibility and sustainability.

Funding

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

Conflicts of interest

The authors report no conflicts of interest

Full PDF available on: <https://github.com/imele90/RIZIV-INAMI-reimbursement-indications-of-ICIs-in-adult-cancer>

References

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2. Federal Agency for Medicines and Health Products (FAMHP). Compassionate use - Medical need. Updated January 27, 2026. Accessed January 28, 2026.

https://www.famhp.be/en/human_use/medicines/medicines/research_development/compassionate_use_medical_need

Table 1: prescriber-oriented tool for reimbursement indications of immune checkpoint inhibitors in adult solid tumors in Belgium, as of January 28, 2026

Body segment/system	Organ/tissue/histology	Setting	Immune checkpoint inhibitor	Specifications
Head and Neck	Squamous cell carcinoma	Neoadjuvant	Pembrolizumab	<ul style="list-style-type: none"> • Monotherapy, if PD-L1 CPS ≥ 1
		Adjuvant	Pembrolizumab	<ul style="list-style-type: none"> • In combination with radiation therapy with or without concomitant cisplatin, then as maintenance monotherapy, if PD-L1 CPS ≥ 1
		1 st line M+	Pembrolizumab	<ul style="list-style-type: none"> • Monotherapy or in combination with doublet platinum/5-FU, if PD-L1 CPS ≥ 1
		2 nd line M+ and beyond	Nivolumab	<ul style="list-style-type: none"> • Monotherapy, if progression under/after platinum-based ChT
Breast	Triple negative breast cancer	Neoadjuvant	Pembrolizumab	<ul style="list-style-type: none"> • In combination with ChT (NB: no indication in T1cN0 disease)
		Adjuvant	Pembrolizumab	<ul style="list-style-type: none"> • Monotherapy regardless of the pathological response after surgery and prior neoadjuvant pembrolizumab-ChT (NB: no indication in T1cN0 disease)

		1st line M+	Pembrolizumab	<ul style="list-style-type: none"> In combination with doublet carboplatine-paclitaxel or with gemcitabine - nab-paclitaxel, if PD-L1 CPS ≥ 10
	Non-small cell lung carcinoma (NSCLC)	Neoadjuvant	Durvalumab	<ul style="list-style-type: none"> In combination with platinum-based ChT, EGFRwt and ALKwt
			Nivolumab	<ul style="list-style-type: none"> In combination with platinum-based ChT, if PD-L1 TC/TPS $\geq 1\%$, EGFRwt and ALKwt
			Pembrolizumab	<ul style="list-style-type: none"> In combination with platinum-based ChT
		Adjuvant	Atezolizumab	<ul style="list-style-type: none"> Monotherapy, following complete resection and prior neoadjuvant platinum-based chemotherapy, if PD-L1 TC $\geq 50\%$, EGFRwt et ALKwt.
			Durvalumab	<ul style="list-style-type: none"> Monotherapy, following complete resection and prior neoadjuvant Durvalumab+ platinum-based ChT, if EGFRwt and ALKwt. Monotherapy, in advanced unresectable disease with PD-L1 TC/TPS $\geq 1\%$, following definitive chemoradiotherapy without progression
			Nivolumab	<ul style="list-style-type: none"> Monotherapy, following complete resection and prior neoadjuvant Nivolumab + platinum-based ChT, if PD-L1 TC $\geq 1\%$, EGFRwt and ALKwt
			Pembrolizumab	<ul style="list-style-type: none"> Monotherapy, following complete resection and prior adjuvant platinum-based chemotherapy, if EGFRwt and ALKwt Monotherapy, following complete resection and prior neoadjuvant Pembrolizumab + platinum-based ChT,
		1st line M+	Atezolizumab	<ul style="list-style-type: none"> Monotherapy, if PD-L1 TC $\geq 50\%$ or IC $\geq 10\%$, EGFRwt and ALKwt.

Thorax				<ul style="list-style-type: none"> In combination with triplet bevacizumab- carboplatine- paclitaxel, in non-squamous NSCLC with liver metastasis
			Cemiplimab	<ul style="list-style-type: none"> Monotherapy, if PD-L1 TC $\geq 50\%$, EGFRwt, ALKwt and ROS1wt In combination with platinum-based ChT, if PD-L1 TC $\geq 1\%$, EGFRwt, ALKwt and ROS1wt
			Nivolumab + Ipilimumab	<ul style="list-style-type: none"> In combination with platinum-based ChT, if EGFRwt and ALK wt
			Pembrolizumab	<ul style="list-style-type: none"> Monotherapy, if PDL1 TPS $\geq 50\%$, EGFRwt and ALKwt In combination with doublet platinum - perimetrexed, in non-squamous NSCLC with EGFRwt and ALKwt In combination with doublet carboplatine – paclitaxel, in squamous NSCLC
		2nd line M+ and beyond	Atezolizumab	<ul style="list-style-type: none"> Monotherapy, after prior chemotherapy In combination with triplet bevacizumab- carboplatine- paclitaxel, in non-squamous NSCLC with EGFR mutation or ALK translocation, following prior EGFR or ALK TKIs
			Nivolumab	<ul style="list-style-type: none"> Monotherapy, after prior chemotherapy
			Pembrolizumab	<ul style="list-style-type: none"> Monotherapy, after prior chemotherapy, if PD-L1 TPS $\geq 1\%$, EGFRwt and ALKwt

		3 rd line M+ and beyond	Atezolizumab	<ul style="list-style-type: none">• In combination with triplet bevacizumab- carboplatine- paclitaxel, in non-squamous small cell lung carcinoma with EGFR mutation or ALK translocation, following two prior lines of EGFR or ALK TKIs
			Pembrolizumab	<ul style="list-style-type: none">• Monotherapy, in NSCLC with EGFR mutation or ALK translocation and PD-L1TPS ≥ 1%, following prior ALK or EGFR TKIs and ChT
	Small cell lung carcinoma	Adjuvant	Durvalumab	<ul style="list-style-type: none">• Monotherapy, in limited-stage disease, following chemoradiotherapy
		1 st line M+	Atezolizumab	<ul style="list-style-type: none">• In combination with doublet carboplatine - etoposide.
			Duravalumab	<ul style="list-style-type: none">• In combination with doublet platinum – etoposide
	Malignant pleural mesothelioma	1 st line M+	Nivolumab + Ipilimumab	<ul style="list-style-type: none">• Not applicable
		Esophagus	Adjuvant	Nivolumab
1 st line M+			Nivolumab	<ul style="list-style-type: none">• In combination with doublet platinum- fluoropyrimidine, in squamous cell carcinoma PD-L1 TPS ≥ 1%• In combination with doublet platinum- fluoropyrimidine, in adenocarcinoma PD-L1 CPS ≥ 5 and HER-2 negative
			Pembrolizumab	<ul style="list-style-type: none">• In combination with doublet platinum - fluoropyrimidine, if PD-L1 CPS≥ 10 and HER-2 negative

Digestive system			Tislelizumab	<ul style="list-style-type: none"> In combination with platinum-based ChT, in squamous cell carcinoma PD-L1 TAP $\geq 5\%$
		2nd line M+ and beyond	Nivolumab	<ul style="list-style-type: none"> Monotherapy, in squamous cell carcinoma following doublet platinum - fluoropyrimidine
			Tislelizumab	<ul style="list-style-type: none"> Monotherapy, in squamous cell carcinoma following prior ChT
	Esophagogastric junction and Gastric adenocarcinoma	Neoadjuvant	Durvalumab*	<ul style="list-style-type: none"> In combination with FLOT regimen
		Adjuvant	Durvalumab*	<ul style="list-style-type: none"> In combination with FLOT regimen then maintenance monotherapy following surgery and prior neoadjuvant Durvalumab –FLOT
			Nivolumab	<ul style="list-style-type: none"> Monotherapy, in esophagogastric junction adenocarcinoma, if residual disease after chemoradiotherapy
		1st line M+	Nivolumab	<ul style="list-style-type: none"> In combination with doublet platinum- fluoropyrimidine, if PD-L1 CPS ≥ 5 and HER-2 negative
			Pembrolizumab	<ul style="list-style-type: none"> In combination with trastuzumab + doublet platinum- fluoropyrimidine, if HER-2 positive and PD-L1 CPS ≥ 1 In combination with doublet platinum - fluoropyrimidine, if HER-2 negative and PD-L1 CPS ≥ 1
			Tislelizumab	<ul style="list-style-type: none"> In combination with doublet platinum- fluoropyrimidine, if PD-L1 TAP $\geq 5\%$ and HER2-negative
		2nd line M+ and beyond	Pembrolizumab	<ul style="list-style-type: none"> Monotherapy, in dMMR/MSI-H gastric adenocarcinoma, following progression under/after at least one ChT

	Hepatocellular carcinoma	1 st line M+	Atezolizumab	<ul style="list-style-type: none"> In combination with bevacizumab
			Durvalumab	<ul style="list-style-type: none"> In combination with Tremelimumab
			Tremelimumab	<ul style="list-style-type: none"> In combination with Durvalumab
	Biliary tract carcinoma	1 st line M+	Durvalumab	<ul style="list-style-type: none"> In combination with doublet cisplatin- gemcitabine
			Pembrolizumab	<ul style="list-style-type: none"> In combination with doublet cisplatin- gemcitabine
	Small intestine	2 nd line M+ and beyond	Pembrolizumab	<ul style="list-style-type: none"> Monotherapy, in dMMR/MSI-H disease, following progression under/after at least one ChT
	Colorectum	1 st line M+	Nivolumab + Ipilimumab*	<ul style="list-style-type: none"> In dMMR/MSI-H disease
			Pembrolizumab	<ul style="list-style-type: none"> Monotherapy, in dMMR/MSI-H disease.
		2 nd line M+ and beyond	Nivolumab + Ipilimumab*	<ul style="list-style-type: none"> In dMMR/MSI-H disease, following fluoropyrimidine-based ChT
			Pembrolizumab	<ul style="list-style-type: none"> Monotherapy, in dMMR/MSI-H disease, following fluoropyrimidine-based ChT
	Anal canal	1 st line M+	Retifanlimab*	<ul style="list-style-type: none"> In combination with carboplatin and paclitaxel in squamous cell carcinoma
	Renal cell carcinoma	Adjuvant	Pembrolizumab	<ul style="list-style-type: none"> Monotherapy, following nephrectomy in disease at high risk of relapse Monotherapy, following nephrectomy and complete metastasectomy

Urinary system		1 st line M+	Avelumab	<ul style="list-style-type: none"> In combination with Axitinib
			Nivolumab	<ul style="list-style-type: none"> In combination with Cabozantinib
			Nivolumab + Ipilimumab	<ul style="list-style-type: none"> In intermediate-risk or poor-risk disease
			Pembrolizumab	<ul style="list-style-type: none"> In combination with Axitinib In combination with Lenvatinib, in intermediate-risk or poor-risk disease
		2 nd line M+ and beyond	Nivolumab	<ul style="list-style-type: none"> Monotherapy, following prior treatment
	Urothelial carcinoma	Neoadjuvant	Durvalumab	<ul style="list-style-type: none"> In combination with doublet cisplatin – gemcitabine, in muscle-invasive bladder tumor
		Adjuvant	Durvalumab	<ul style="list-style-type: none"> Monotherapy, in muscle-invasive bladder tumor following radical cystectomy and prior neoadjuvant Durvalumab + doublet cisplatin - gemcitabine
			Nivolumab	<ul style="list-style-type: none"> Monotherapy, in muscle-invasive bladder tumor PD-L1 TC ≥ 1%, following complete resection with or without prior neoadjuvant cisplatin-based ChT
		1 st line M+	Atezolizumab	<ul style="list-style-type: none"> Monotherapy, in patients not eligible to cisplatin and carboplatin if PD-L1 TPS ≥ 5 %
			Nivolumab	<ul style="list-style-type: none"> In combination with doublet cisplatin- gemcitabine.

Genital system			Pembrolizumab	<ul style="list-style-type: none"> In combination with Enfortumab Vedotin Monotherapy, in patients not eligible to cisplatin and carboplatin, and PD-L1 CPS ≥ 10
		2nd line M+	Avelumab	<ul style="list-style-type: none"> Monotherapy, following prior platinum-based ChT if no progression
			Pembrolizumab	<ul style="list-style-type: none"> Monotherapy, following prior platinum-based ChT
	Endometrium	1st line M+	Dorstalimab	<ul style="list-style-type: none"> In combination with doublet carboplatin- paclitaxel
			Durvalumab	<ul style="list-style-type: none"> In combination with doublet carboplatin –paclitaxel, then maintenance combination with Olaparib in pMMR/MSS disease In combination with doublet carboplatin –paclitaxel, then maintenance monotherapy, in dMMR/MSI-H disease
			Pembrolizumab	<ul style="list-style-type: none"> In combination with doublet carboplatin- paclitaxel
		2nd line M+	Pembrolizumab	<ul style="list-style-type: none"> In combination with Lenvatinib, following progression under/after platinum-based ChT
	Cervix uteri	Peri-irradiation	Pembrolizumab	<ul style="list-style-type: none"> In combination with concurrent chemoradiotherapy in stages FIGO III-IVA
		1st line M+	Pembrolizumab	<ul style="list-style-type: none"> In combination with ChT associated or not with bevacizumab, if PD-L1 CPS ≥ 1
		2nd line M+	Cemiplimab	<ul style="list-style-type: none"> Monotherapy, following progression under platinum-based ChT

Skin	Melanoma	Adjuvant	Nivolumab	<ul style="list-style-type: none"> • Monotherapy, in stages IIB to IV, following complete resection
			Pembrolizumab	<ul style="list-style-type: none"> • Monotherapy, in stage IIB to III, following complete resection
		1 st line M+	Ipilimumab	<ul style="list-style-type: none"> • Monotherapy • In combination with Nivolumab
			Nivolumab	<ul style="list-style-type: none"> • Monotherapy • In combination with Ipilimumab
			Nivolumab + Relatlimab	<ul style="list-style-type: none"> • If PD-L1 TC < 1%
			Pembrolizumab	<ul style="list-style-type: none"> • Monotherapy
	Squamous cell carcinoma	1 st line M+	Cemiplimab	<ul style="list-style-type: none"> • Monotherapy
	Merkel cell carcinoma	1 st line M+	Avelumab	<ul style="list-style-type: none"> • Monotherapy

**Compassionate use program/Medical need program*

ALK: anaplastic lymphoma kinase, CPS: combined positive score, dMMR: deficient mismatch repair, EGFR: epidermal growth factor receptor, FIGO: international federation of gynecology and obstetrics, FLOT: 5-fluorouracil–leucovorin–oxaliplatin–docetaxel, HER-2: human epidermal growth factor receptor 2, IC: Immune cells score, M+: metastatic/advanced unresectable/recurrent disease, MSI-H: microsatellite instability high, MSS: microsatellite stable, N/A: not applicable, PD-L1: programmed death-ligand 1, pMMR: proficient mismatch repair, ROS1: repressor of silencing 1, TAP: Tumor area positivity score, TC: tumor cells score, TPS: tumor proportion score, wt: wild-type.