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Advancing Multilingual Standards: French Translation of the TG-263U1 Radiation Oncology Nomenclature

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ABSTRACT

Purpose: Increasing international collaboration in radiation oncology highlights the need for a standardized nomenclature that is consistent across languages. The AAPM Task Group TG-263U1 established French and Spanish language sub-groups in 2021 to support multilingual implementation of TG-263 conventions. This work describes the development of the French translation produced by the TG-263U1 French sub-group.

Methods: The French translation team consisted of four francophone medical physicists, all AAPM members, two of whom were also members of the Canadian Organization of Medical Physicists (COMP). Their linguistic backgrounds represented northern Africa and multiple Canadian regions (Atlantic provinces, Ontario, and Québec). Two members worked in French-language clinical environments, while the others practiced in English-speaking settings in the United States. A collaborative workflow was used to reach consensus, taking into account regional linguistic differences. Reference tools included Terminologia Anatomica (TA), dictionary of the Académie nationale de médecine, the Language Portal of Canada, TERMIUM Plus, and a manufacturer-provided French translation from Varian (Palo Alto, CA). Upon completion of the draft nomenclature, the translation was shared with the European Society for Radiotherapy and Oncology (ESTRO) and the Société Française de Physique Médicale (SFPM) for external feedback.

Results: All spatial concepts, root names, target classifiers, and TG-263U1 structure nomenclature were successfully translated into French. To ensure compatibility across widely used clinical software systems, the French nomenclature avoids special characters such as accents and diacritics.

Conclusion: A French version of the standardized TG-263U1 nomenclature will be released following publication of the task group report. The availability of multilingual nomenclature is expected to support international clinical practice harmonization, improve research collaboration, and enhance data interoperability across diverse radiation oncology environments.

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INTRODUCTION

A standardized nomenclature is essential for data sharing, clinical trials, and interoperability in radiation oncology.

While TG-263 (1) established a widely adopted English framework, its implementation in non-English clinical environments remains limited.

TG-263U1 introduced a multilingual expansion, including French, with specific constraints related to software compatibility and regional linguistic variation.

This work describes the development of a consensus-based French nomenclature aligned with TG-263U1 and adapted for real-world clinical systems.

METHODS AND MATERIALS

A team of 4 francophone AAPM members, practicing in North America, formed the French translation subgroup of TG-263U1, representing French spoken in Canada and North Africa. One member had additional training as a translator.

TG-263U1 nomenclature was divided among subgroup members and translated using multiple reference sources (2, 3, 4, 5). Then cross-reviewed within the subgroup using an iterative consensus process. Once the translation was completed, it was compared with vendor-provided nomenclature. The translation was then sent to ESTRO and SFPM (French physicist association) for final review. When multiple valid translations existed, the term closest to the original English nomenclature was preferred.

Translation was adapted to ensure compatibility with clinical TPS constraints, eliminating accent aigu (é), accent grave (à, è, ù), accent circonflexe (â, ê, î, ô, û), tréma (ë, ï, ü), and cédille (ç).

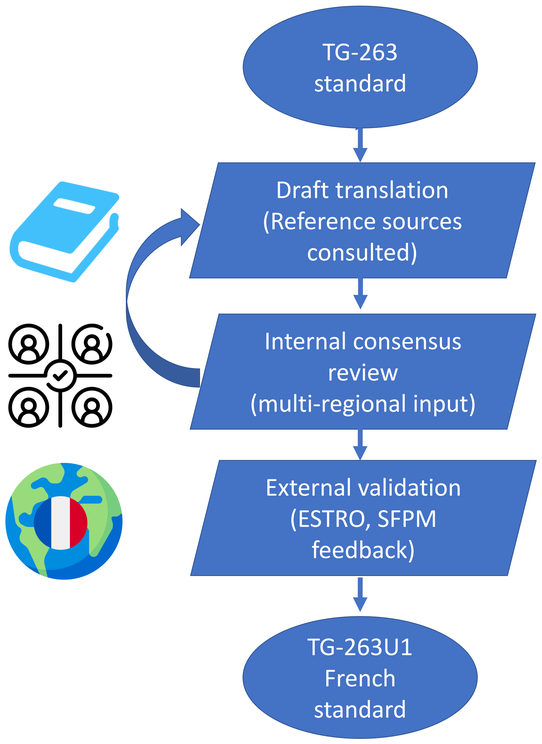

Figure 1. Workflow for development of TG-263U1 French nomenclature

RESULTS

Complete French translation of TG-263U1 nomenclature achieved. See tables 1 to 5.

Table 1. French translation of ICRU target names

Concept	En-263	French	Fr-263
Gross Tumor Volume	GTV	Volume cible macroscopique	GTV
Clinical Target Volume	CTV	Volume cible anatomo-clinique	CTV
Internal Target Volume	ITV	Volume cible interne	ITV
Planning Target Volume	PTV	Volume cible planifié	PTV

Table 2. French translations of target classifiers

Concept	En-263	French	Fr-263
Nodal	n	Nodal	n
Parenchyma	par	Parenchyme	par
Primary	p	Primaire	p
Surgical Bed	sb	Lit chirurgical	lc
Vascular	vas	Vasculaire	vas
Venous thrombosis	v	Thrombose veineuse	v

Table 3. French translations of root categories

Concept	En-263	French	Fr-263
Artery	A	Artère	A
Bone	Bone	Os	Os
Cranial nerve	CN	Nerf crânien	NC
Gland	Glnd	Glande	Glnd
Lymph node	LN	Ganglion lymphatique	GL
Muscle	Musc	Muscle	Musc
Sinus	Sinus	Sinus	Sinus
Space	Spc	Espace	Esp
Vein	V	Veine	V
Vertebral Body	VB	Corps vertébral	CV

Table 4. French translation of spatial categories

Concept	En-263	French	Fr-263
Left	L	Gauche	G
Right	R	Droit	D
Anterior	A	Antérieur	A
Posterior	P	Postérieur	P
Inferior	I	Inférieur	I
Superior	S	Supérieur	S
Nonadjacent	NAdj	Non adjacent	NAdj
Distal	Dist	Distal	Dist
Proximal	Prox	Proximal	Prox
Middle	M	Moyenne	M

Table 5. French translations of anatomic structures (sample)

Concept	En-263	French	Fr-263
Brain	Brain	Cerveau	Cerveau
Lymph nodes of pelvis - obturator Left	LN_ Obturator _L	Ganglions lymphatiques du pelvis - obturateurs gauches	GL_ Obturateur_G
Lung – lower lobe of left	Lung_LLL	Poumon - lobe inférieur gauche	Poumon_LIG
Small Bowel - Ileum	Ileum	Intestin grêle - Iléon	Intestin_Ileon

DISCUSSION

Balancing linguistic accuracy and technical constraints
- The removal of accents and diacritics ensured compatibility across major TPS platforms
- Simplification required careful review to maintain clarity and avoid ambiguity

Managing regional variation
- Regional variations in French terminology were addressed through consensus, with preference given to usage in France when appropriate
- Standardized abbreviations promote consistency across clinical environments

Value of a consensus-based process
- Multi-institutional collaboration strengthened robustness of the terminology
- External review by ESTRO and SFPM improved international relevance and acceptability

Clinical and research impact
- Enables consistent structure naming across multilingual institutions
- Facilitates data pooling and analysis for multi-institutional studies

Improved patient safety
- ICRU target acronyms (GTV, CTV, ITV, PTV), as shown in Table 1, were preserved to maintain consistency with established clinical usage

Standardization across languages highlights the tension between linguistic fidelity and technical interoperability, which may inform future multilingual nomenclature efforts

CONCLUSIONS

- A standardized French TG-263U1 nomenclature was successfully developed
- The approach ensures compatibility with clinical software while preserving anatomical meaning
- The framework supports multilingual interoperability in radiation oncology
- Adoption of TG-263U1 is expected to enhance collaboration and data sharing

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