



INSTITUT NATIONAL DE LA TRANSFUSION SANGUINE

Département d'Immunologie Plaquettaire

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EST-IL PERTINENT DE REALISER UN GENOTYPAGE PLAQUETTAIRE DANS D'AUTRES SYSTEMES HPA QUE HPA-1, -3, -5 ET -15 DANS L'ALLOIMMUNISATION PLAQUETTAIRE?

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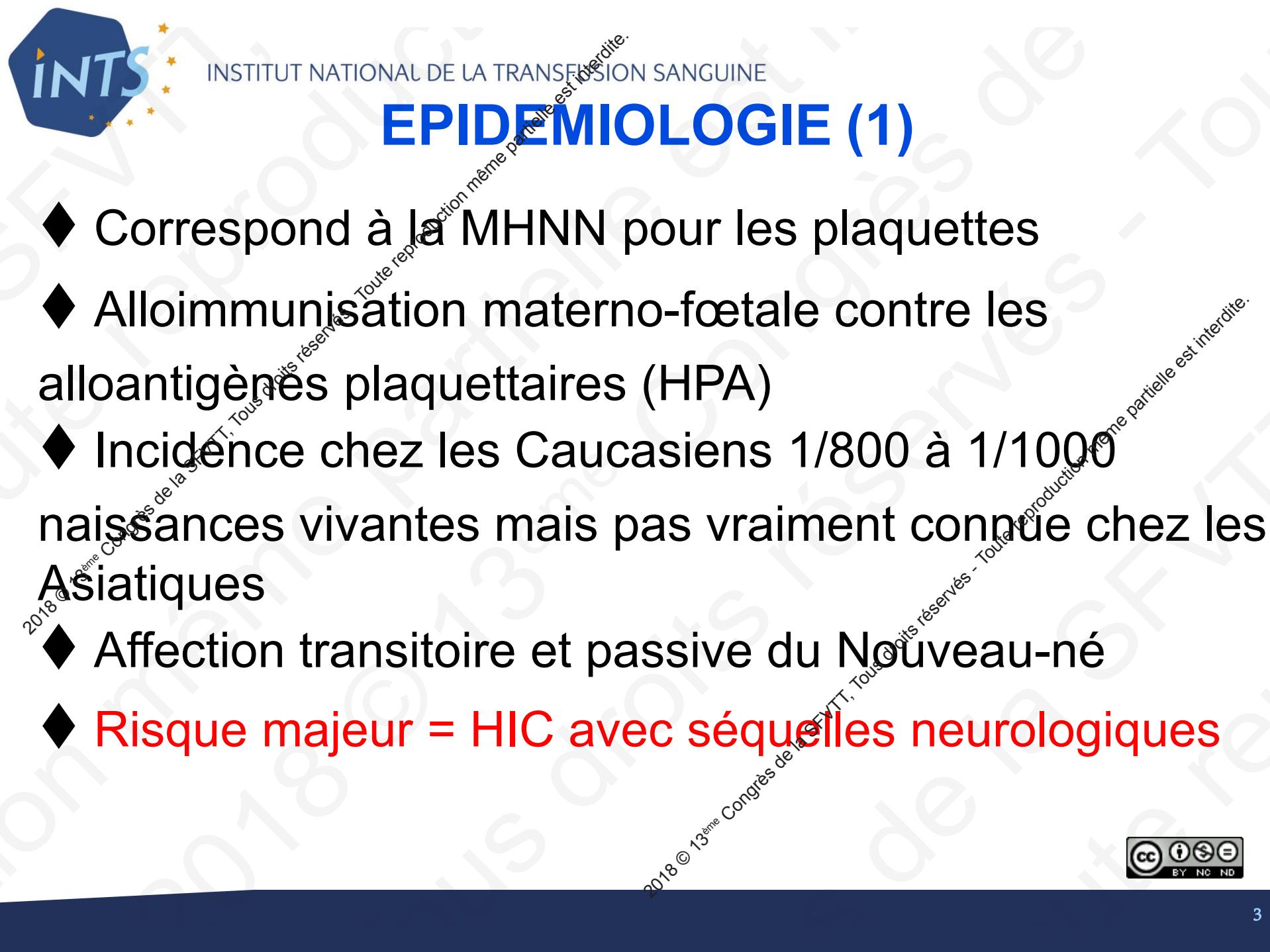
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Conflit d'intérêt: R. PETERMANN

Employment	No conflict of interest to disclose
Research support	No conflict of interest to disclose
Scientific advisory board	No conflict of interest to disclose
Consultancy	No conflict of interest to disclose
Speakers bureau	No conflict of interest to disclose
Major stockholder	No conflict of interest to disclose
Patents	No conflict of interest to disclose
Honoraria	No conflict of interest to disclose
Travel support	No conflict of interest to disclose
Other	No conflict of interest to disclose



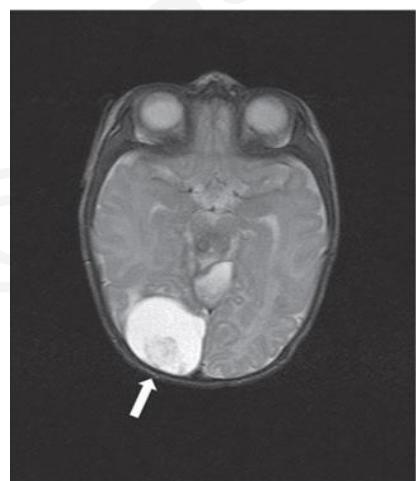
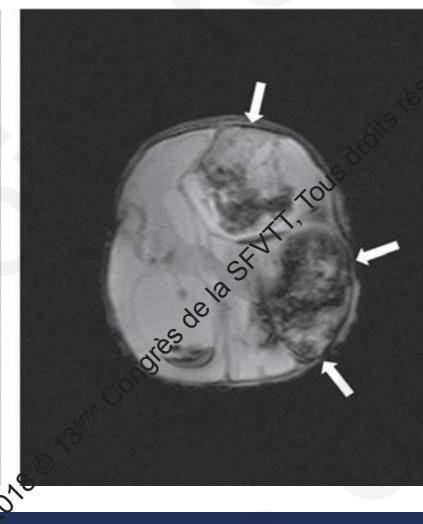
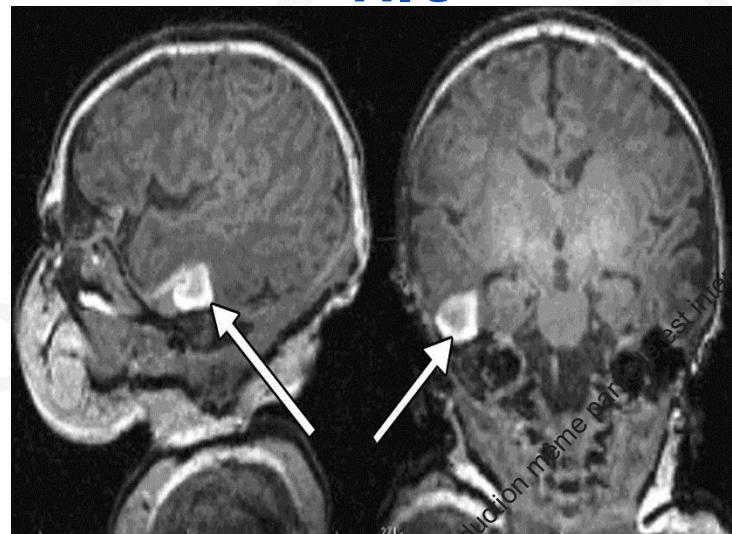


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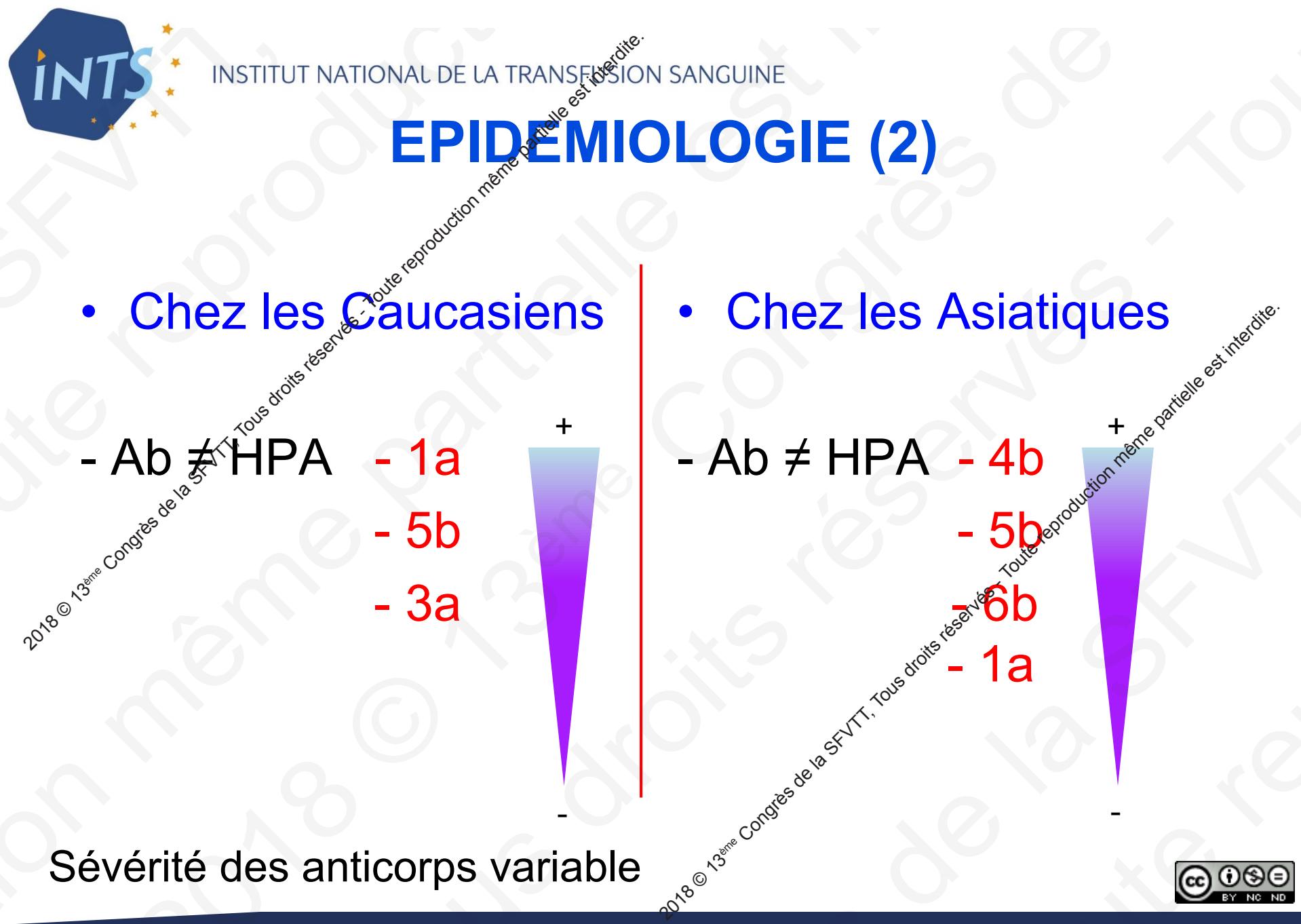


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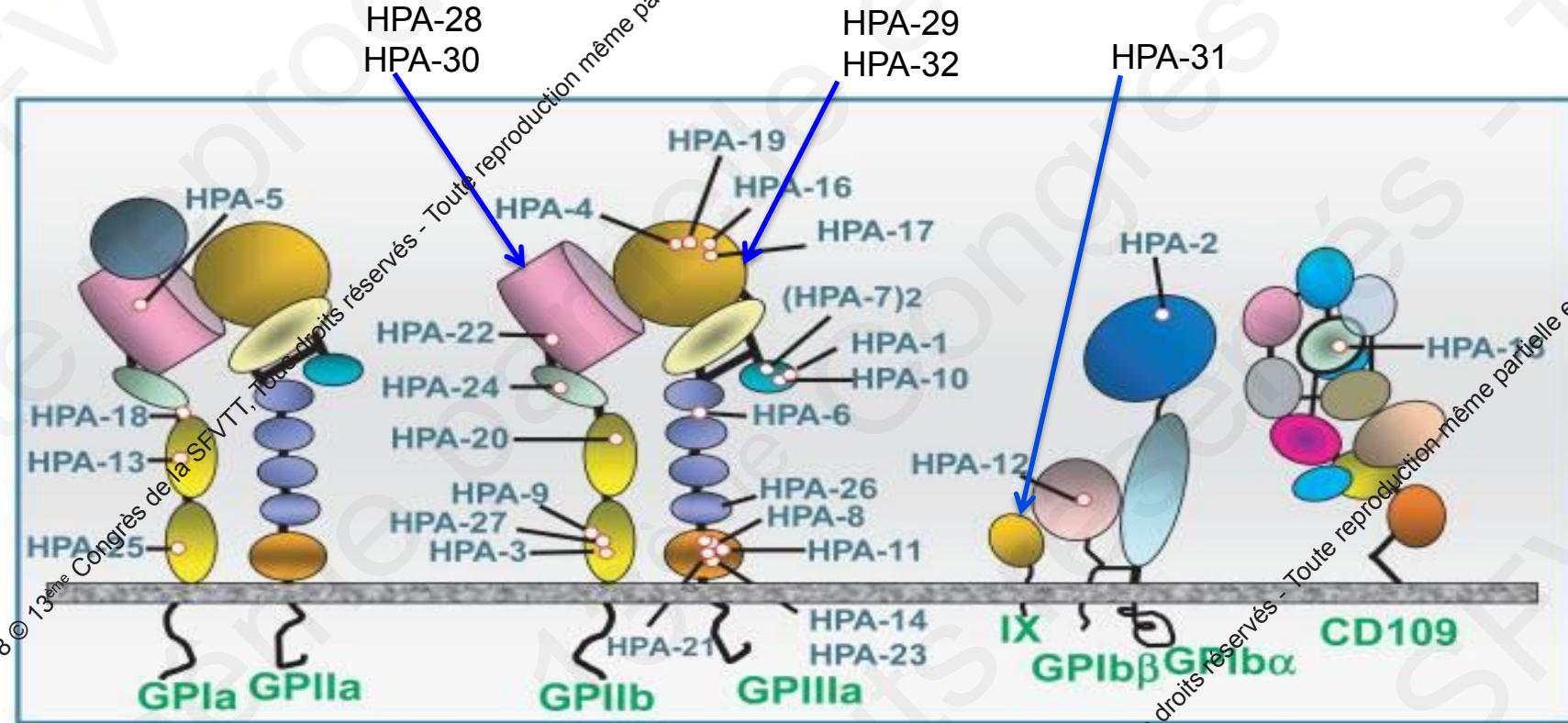
HIC



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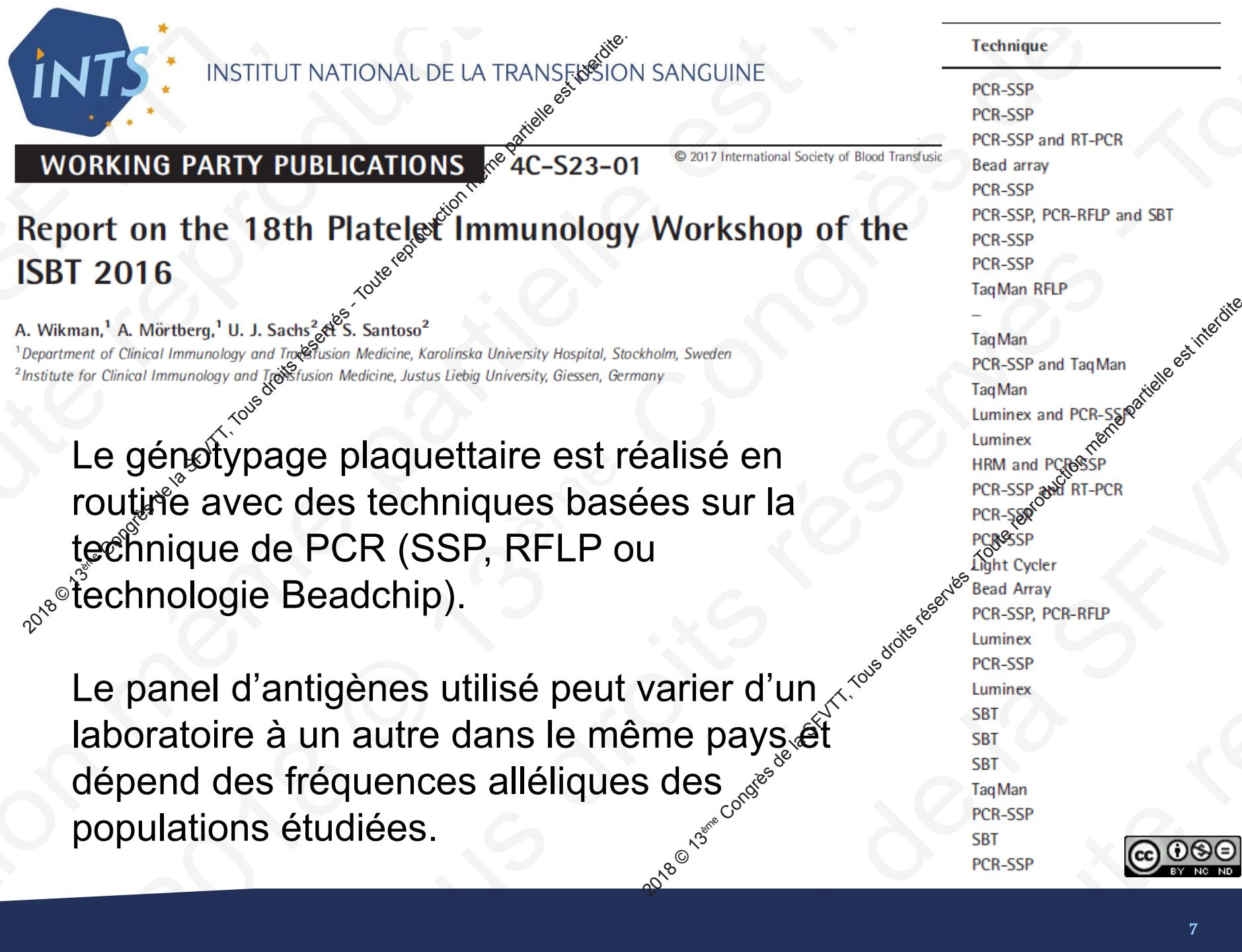
NOMENCLATURE HPA



Peterson JA, McFarland JG, Curtis BR, Aster RH. Neonatal alloimmune thrombocytopenia: pathogenesis, diagnosis and management. Br J Haematol. Apr 2013; 161(1): 3–14 modified by Human Platelet Antigens : polymorphism HPA www.ebi.ac.uk_ipd_hpa_table2

Les antigènes plaquettaires humains (HPA) sont liés aux polymorphismes d'allèles situés sur 8 gènes codant pour les principaux complexes glycoprotéiques plaquettaires (GPIIa, GPIIbIIIa, GPIbIX) et CD109.





BUT DE L'ETUDE

Déterminer si le panel d'antigènes utilisé au laboratoire était en adéquation avec notre activité concentrée sur l'allo-immunisation materno-foetale (FNAIT) et post-transfusionnelle du fait du mélange ethnique des populations à Paris et de l'origine des échantillons reçus (DOM et TOM)





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METHODES

Deux dispositifs médicaux de diagnostic in vitro (DM-DIV) pour le génotypage plaquettaire en routine

HPA Beadchip genotyping kit (BioArray Solutions, Immucor)

HPA-Ready-Gene kit (Inno-train Diagnostik GmbH)

PCR-SSP « in house » pour le génotypage plaquettaire des groupes HPA rares ou privés

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RESULTATS

Recueil des données à partir du LIMS



Période du 01/01/2015 to 31/12/2017

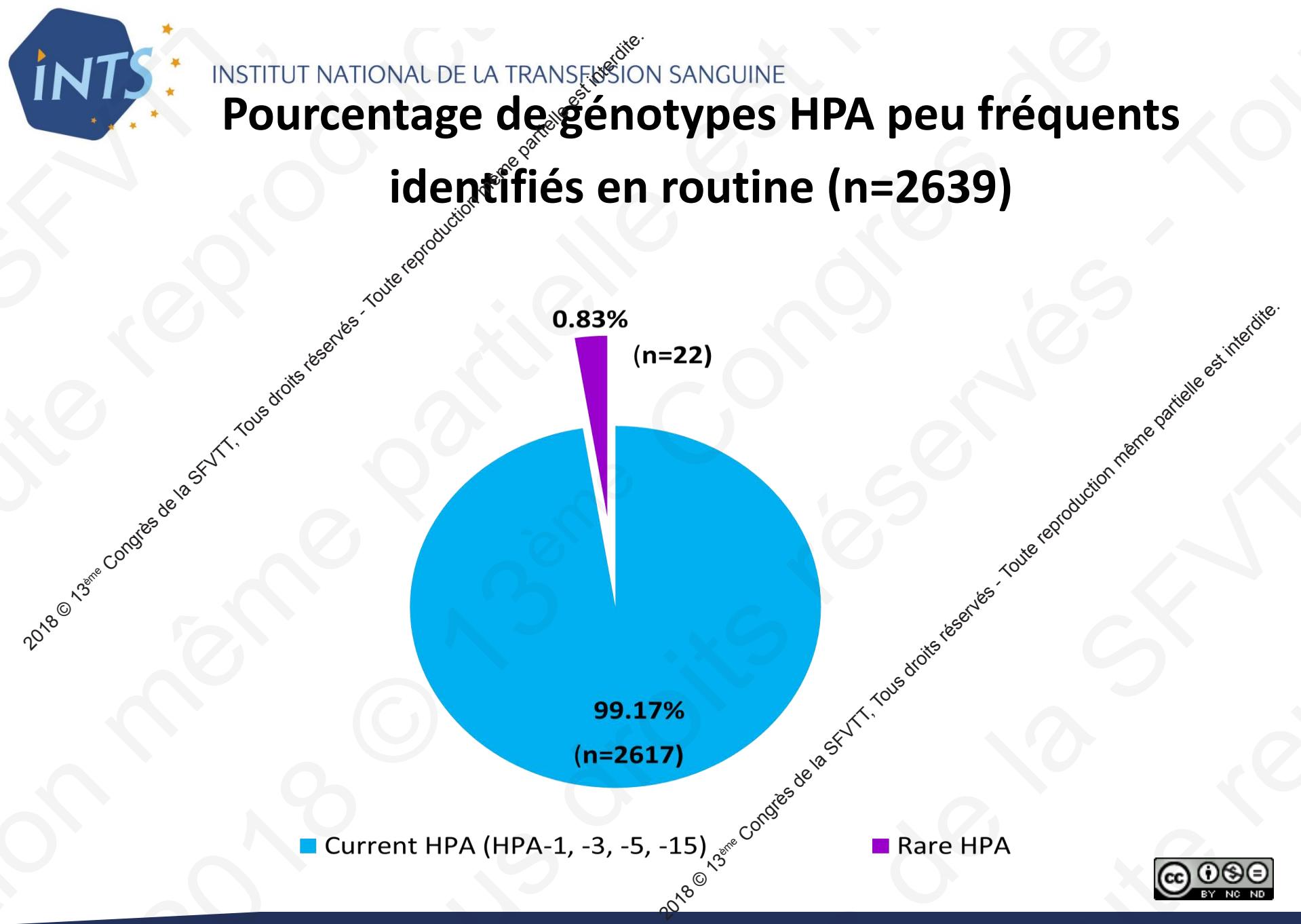


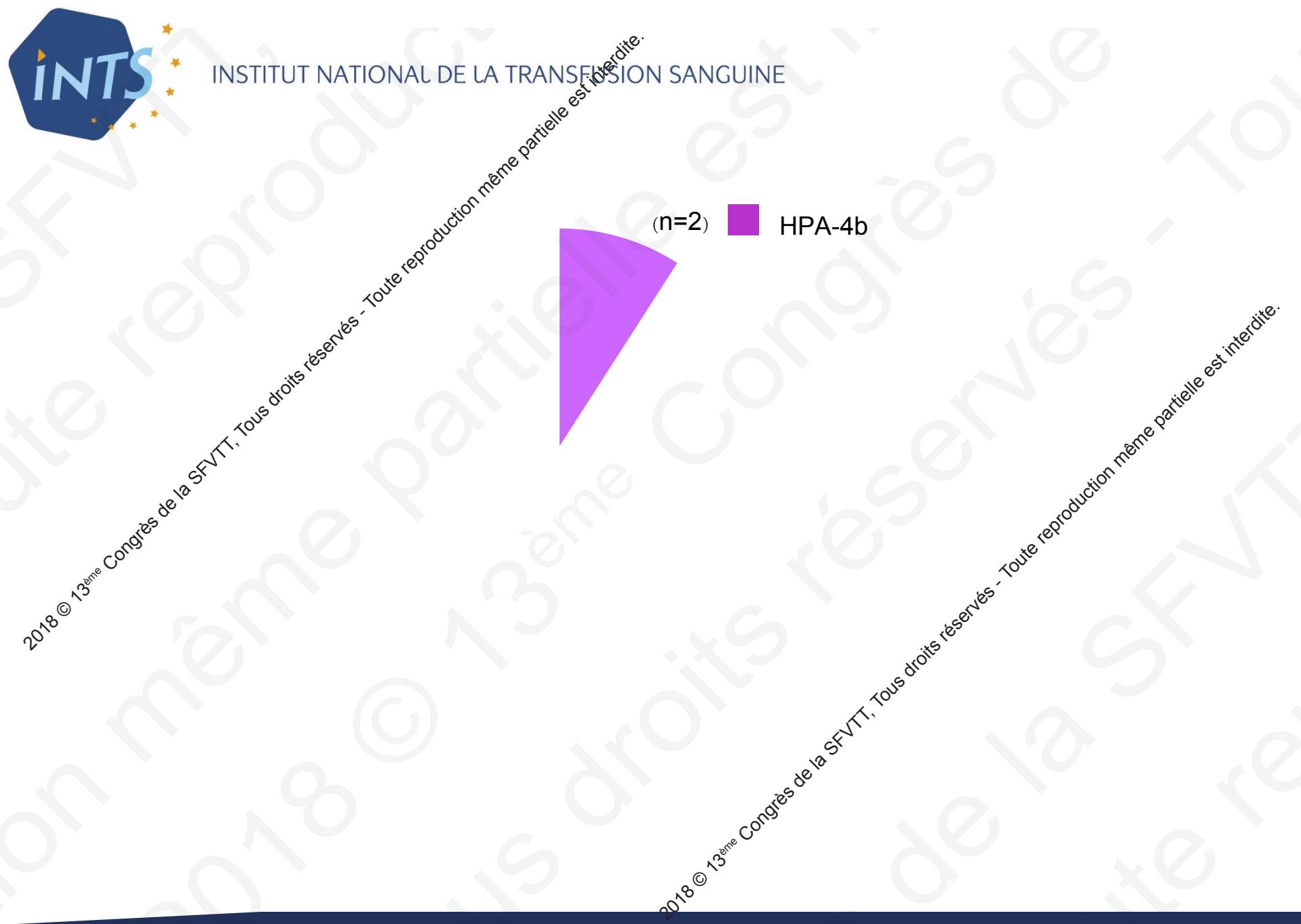
2639 génotypages HPA

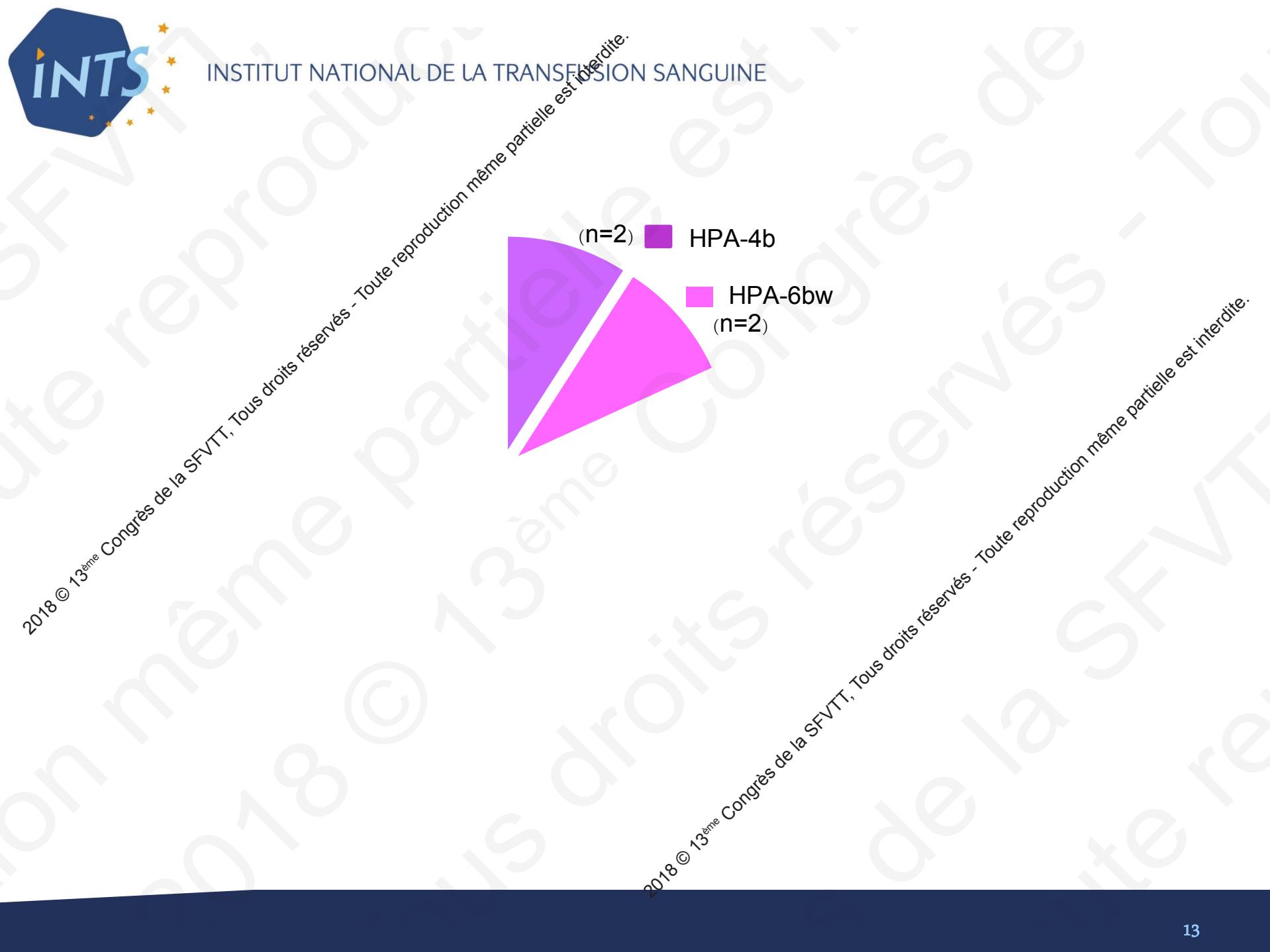


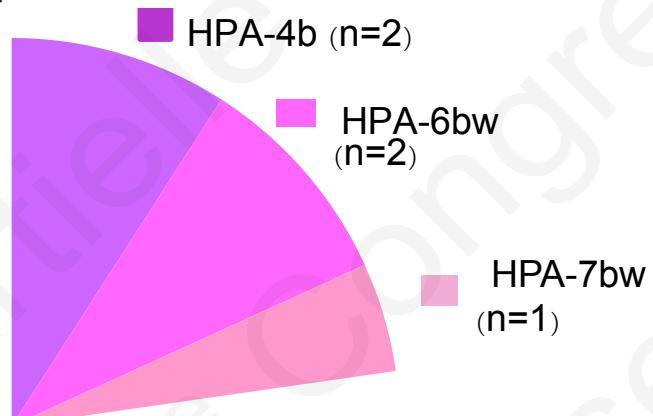
Contexte de FNAIT le plus souvent

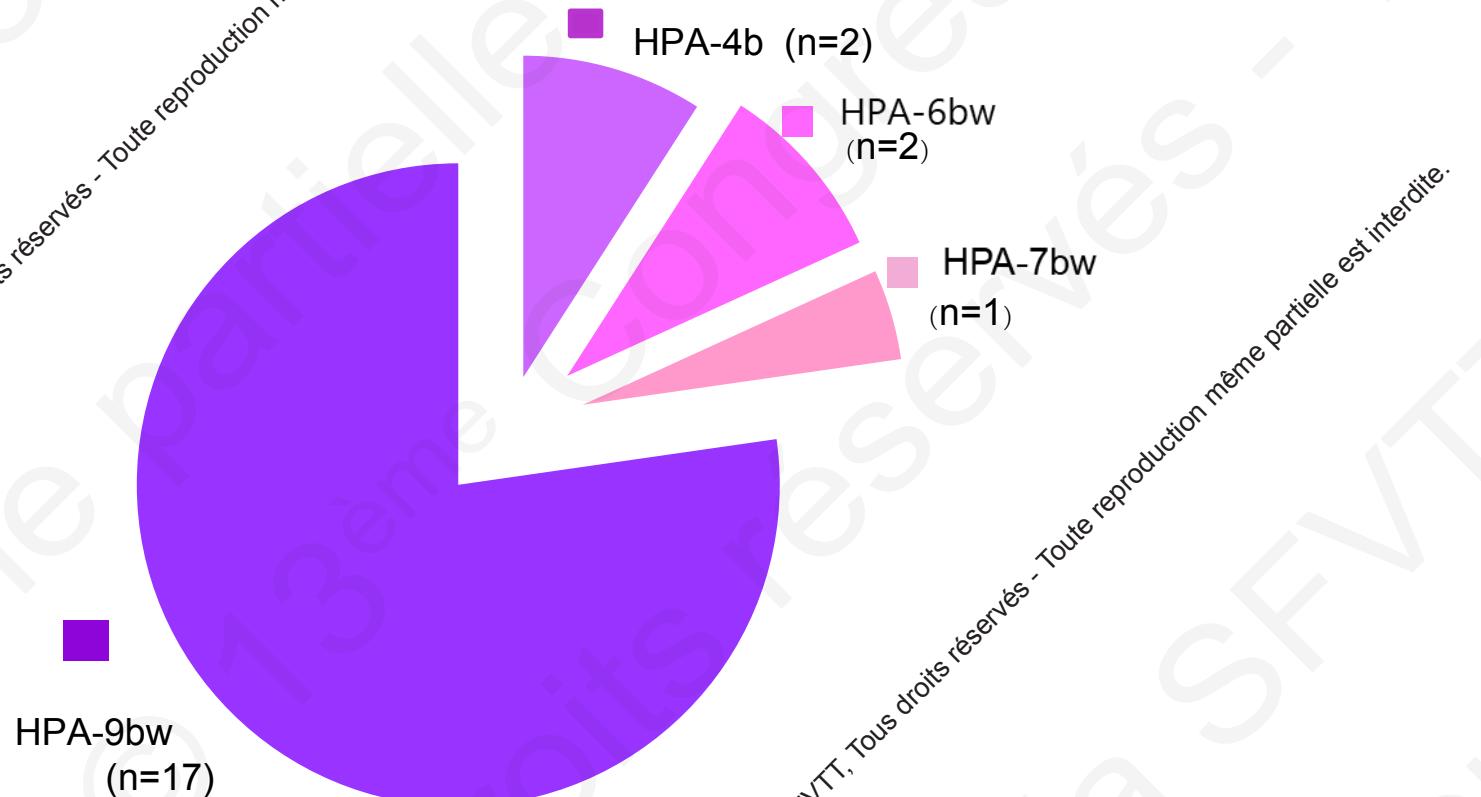


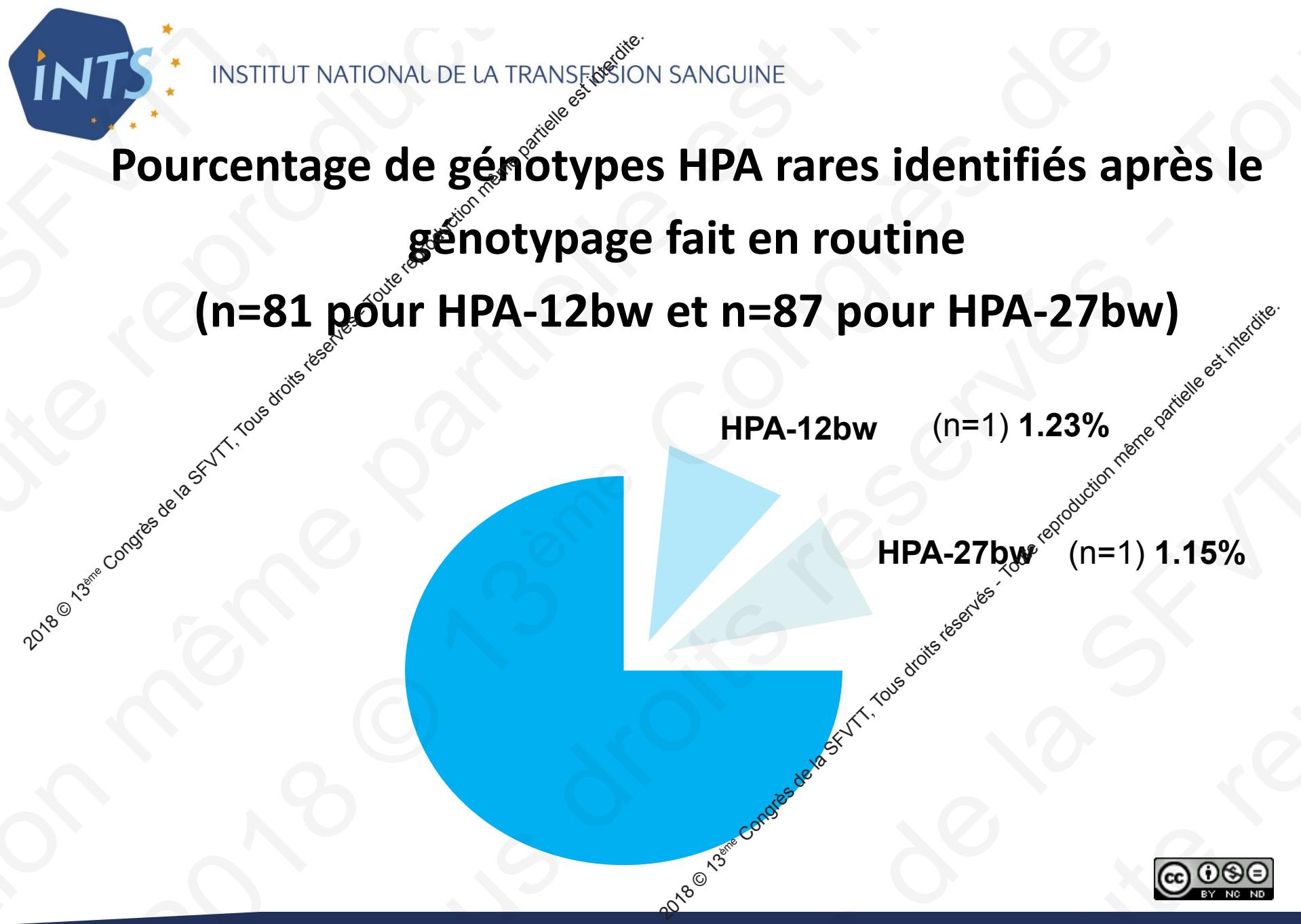


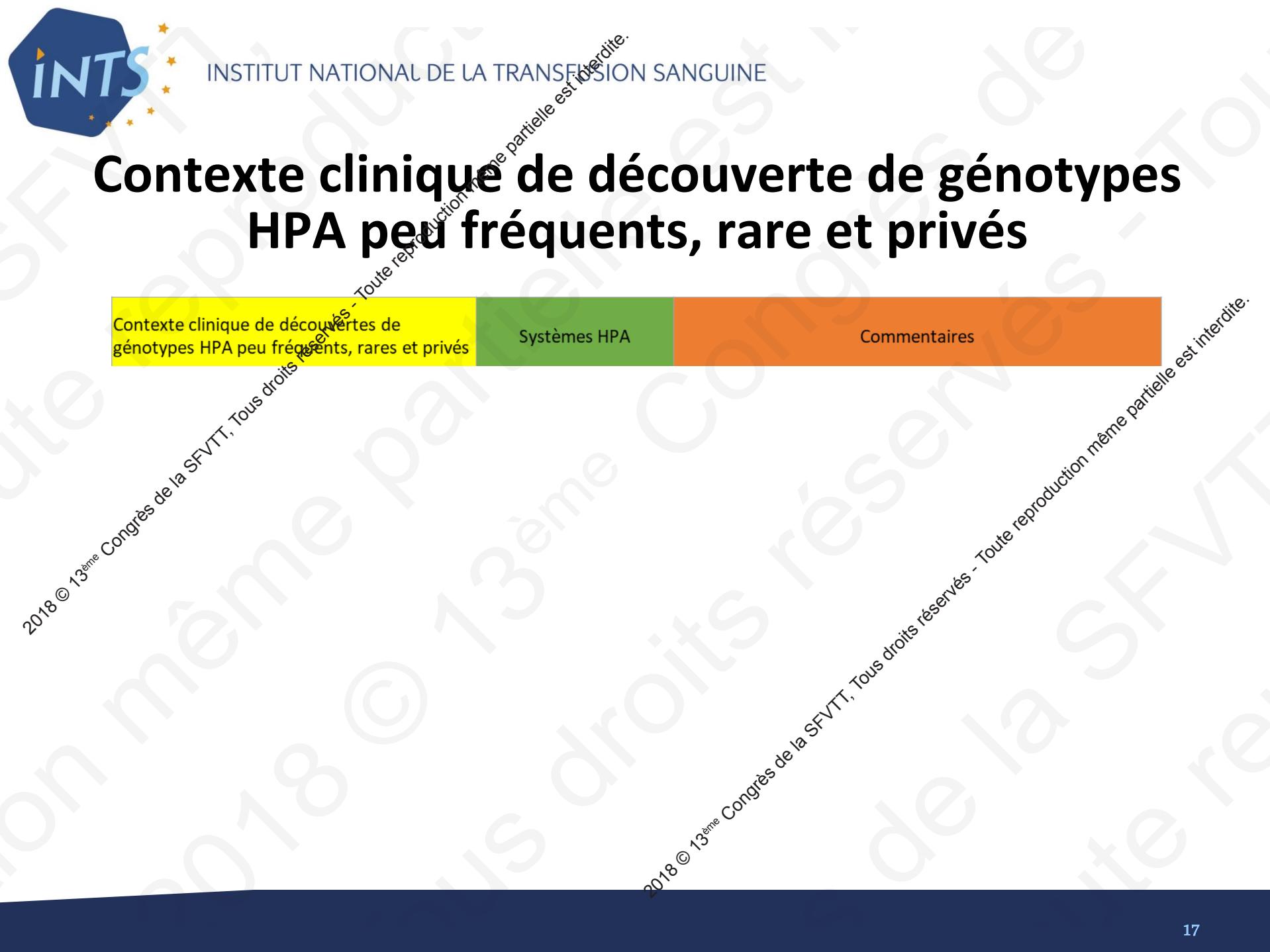
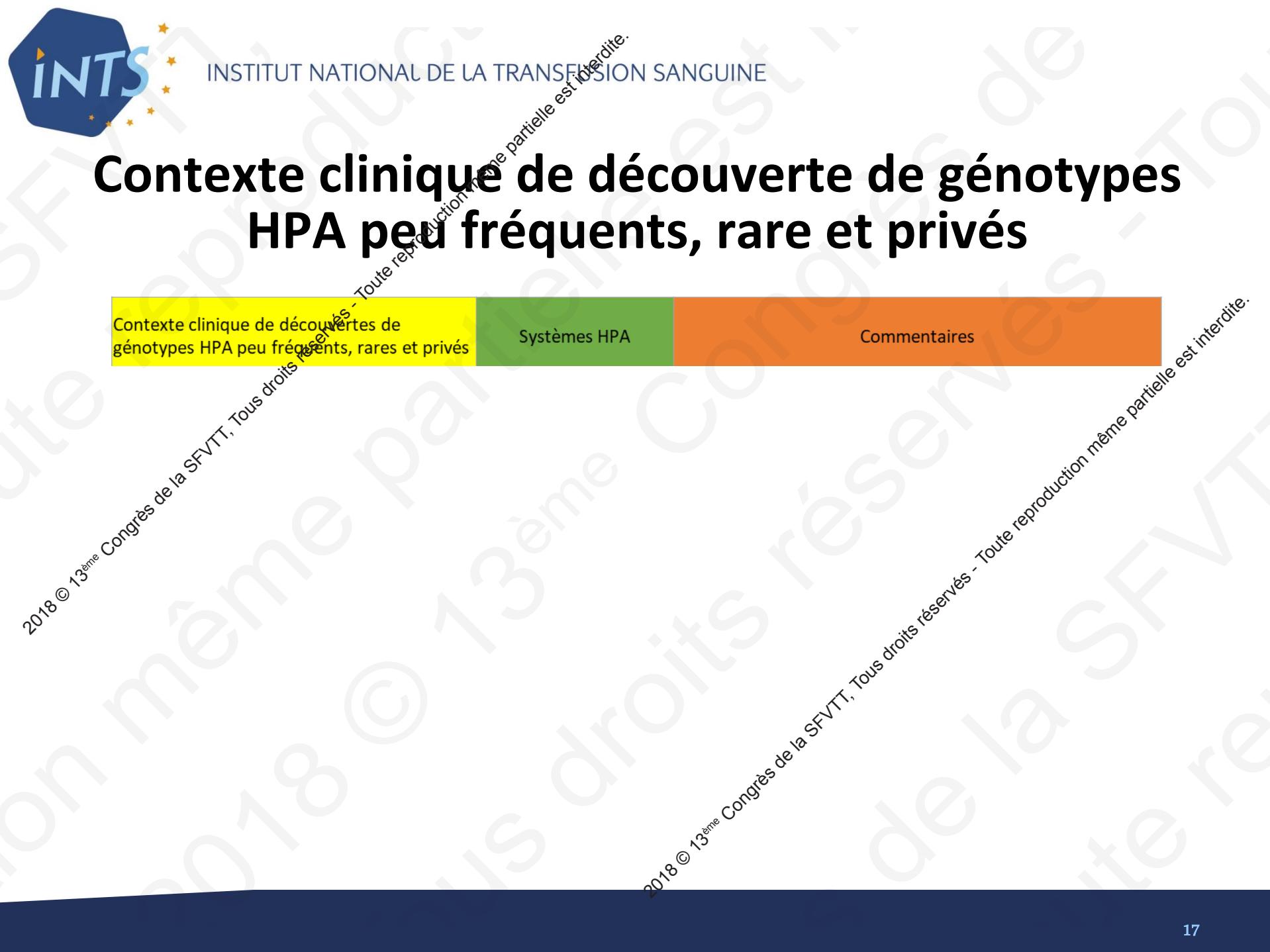
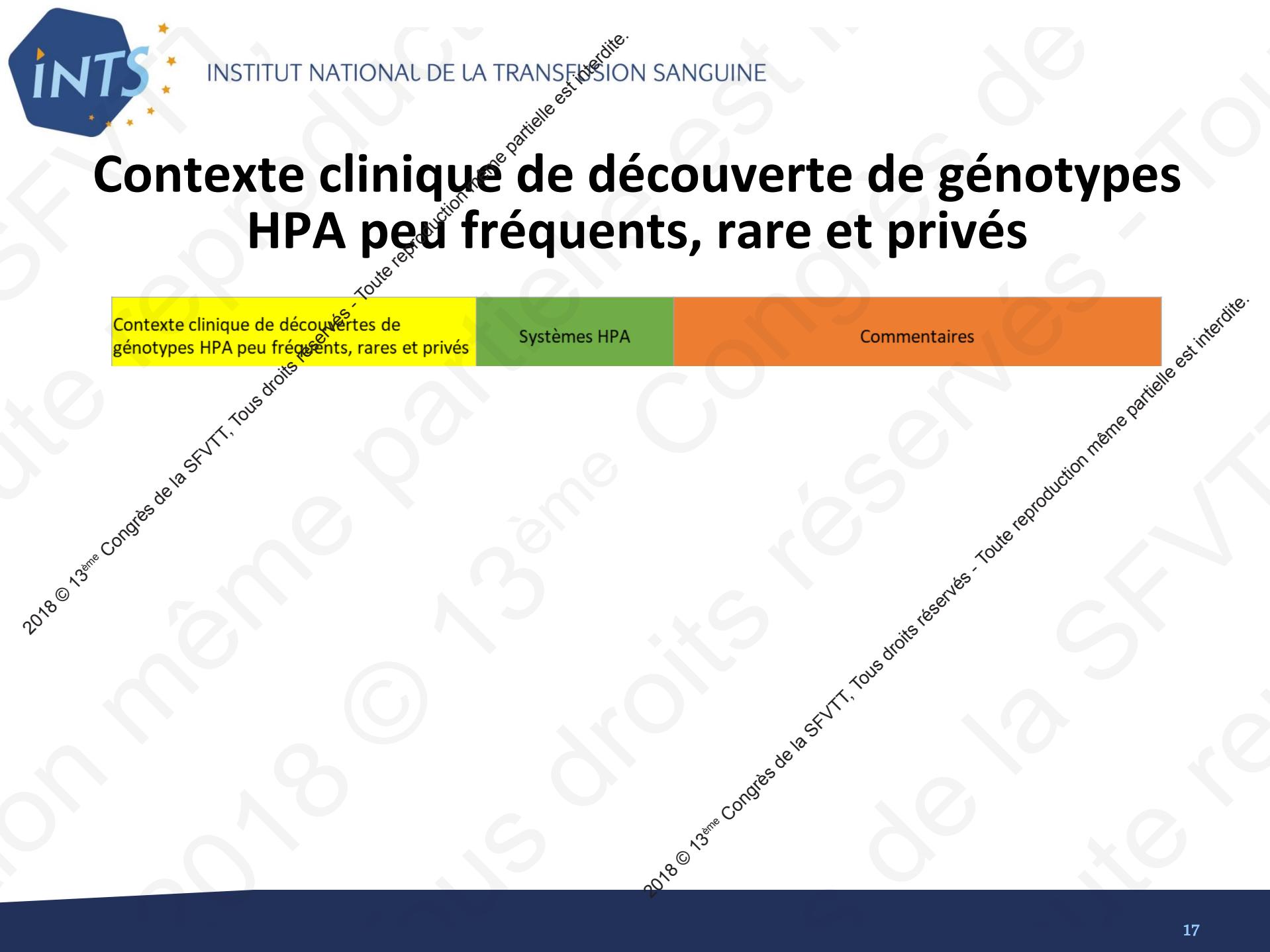
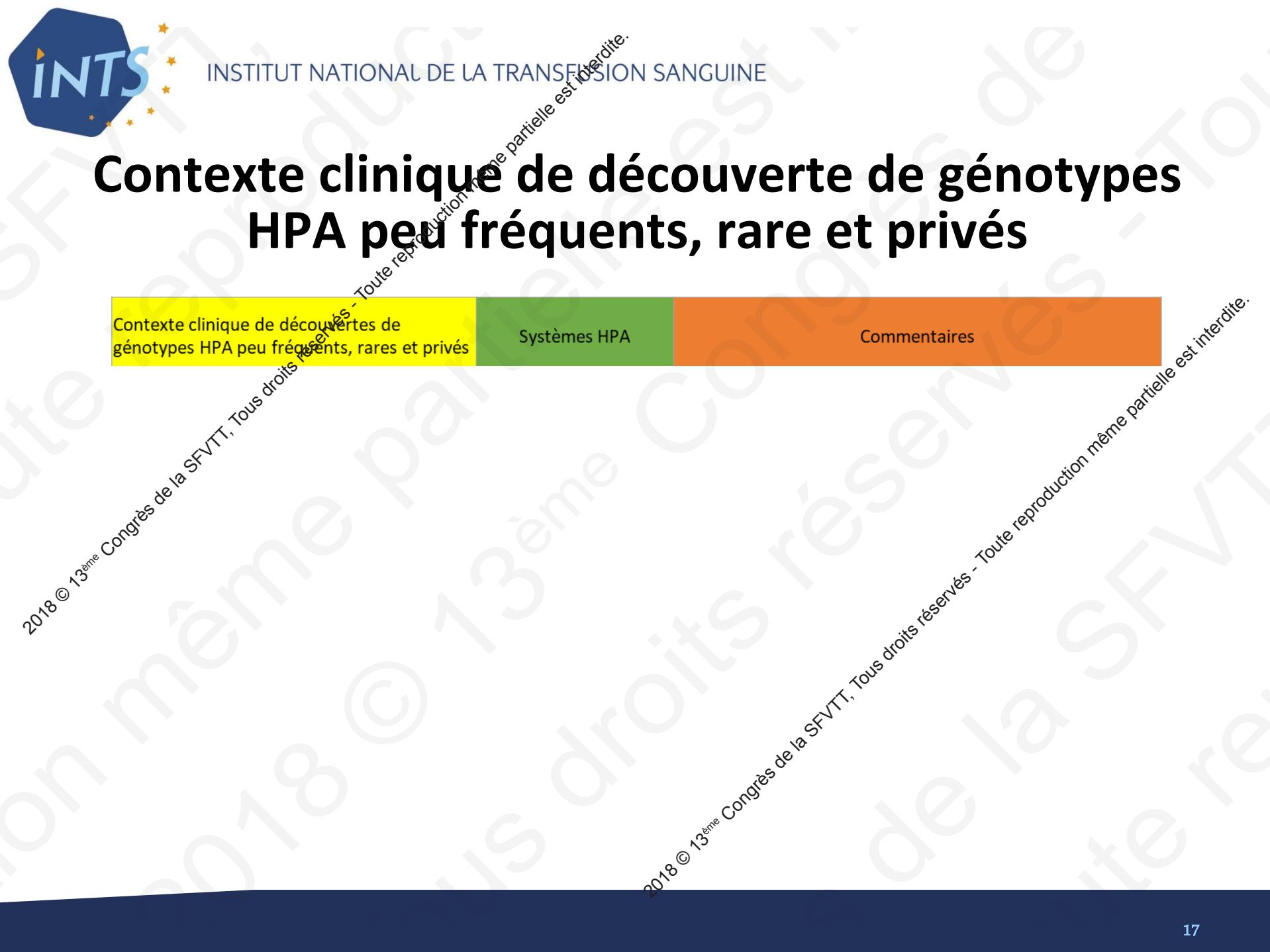
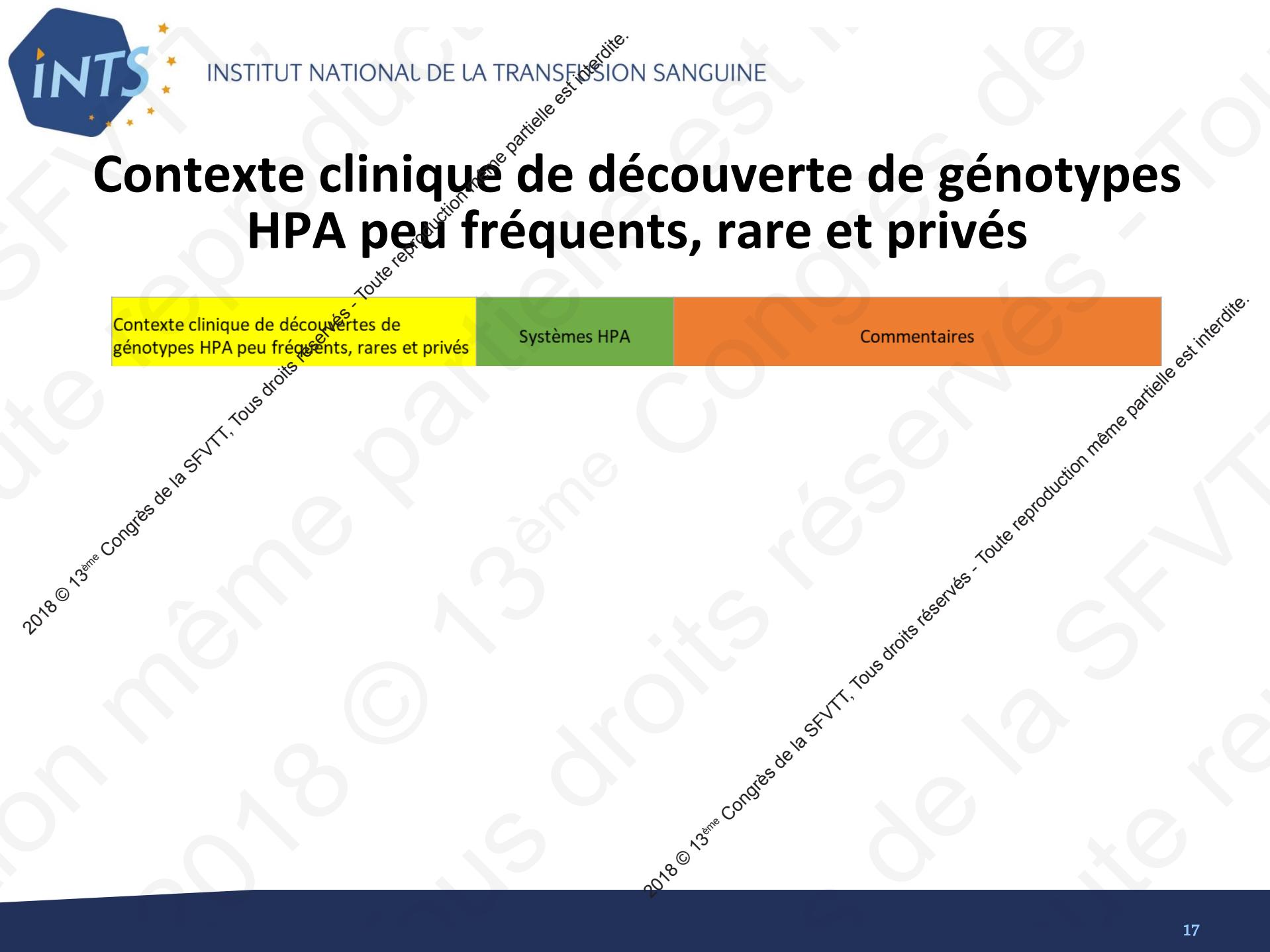
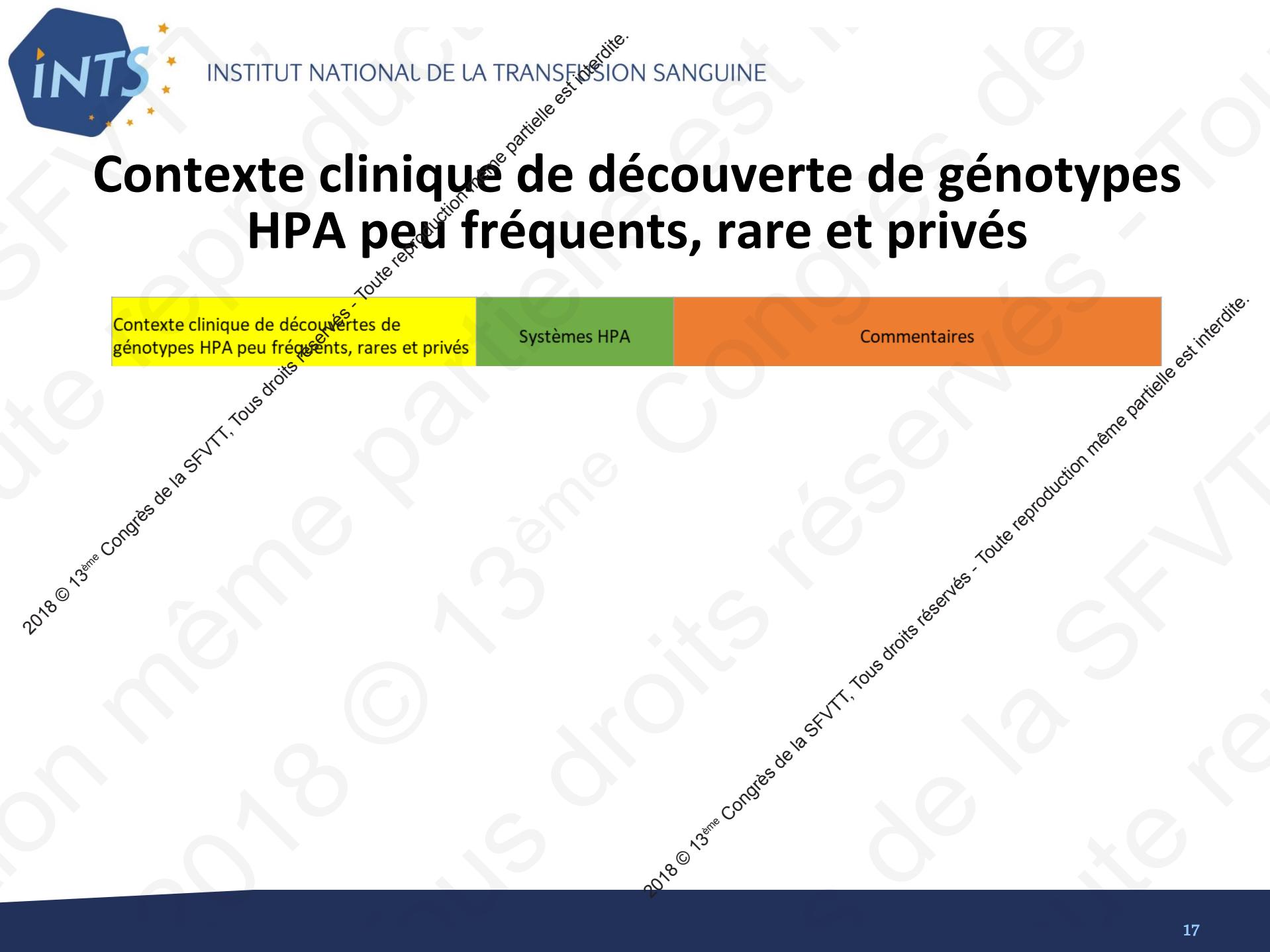
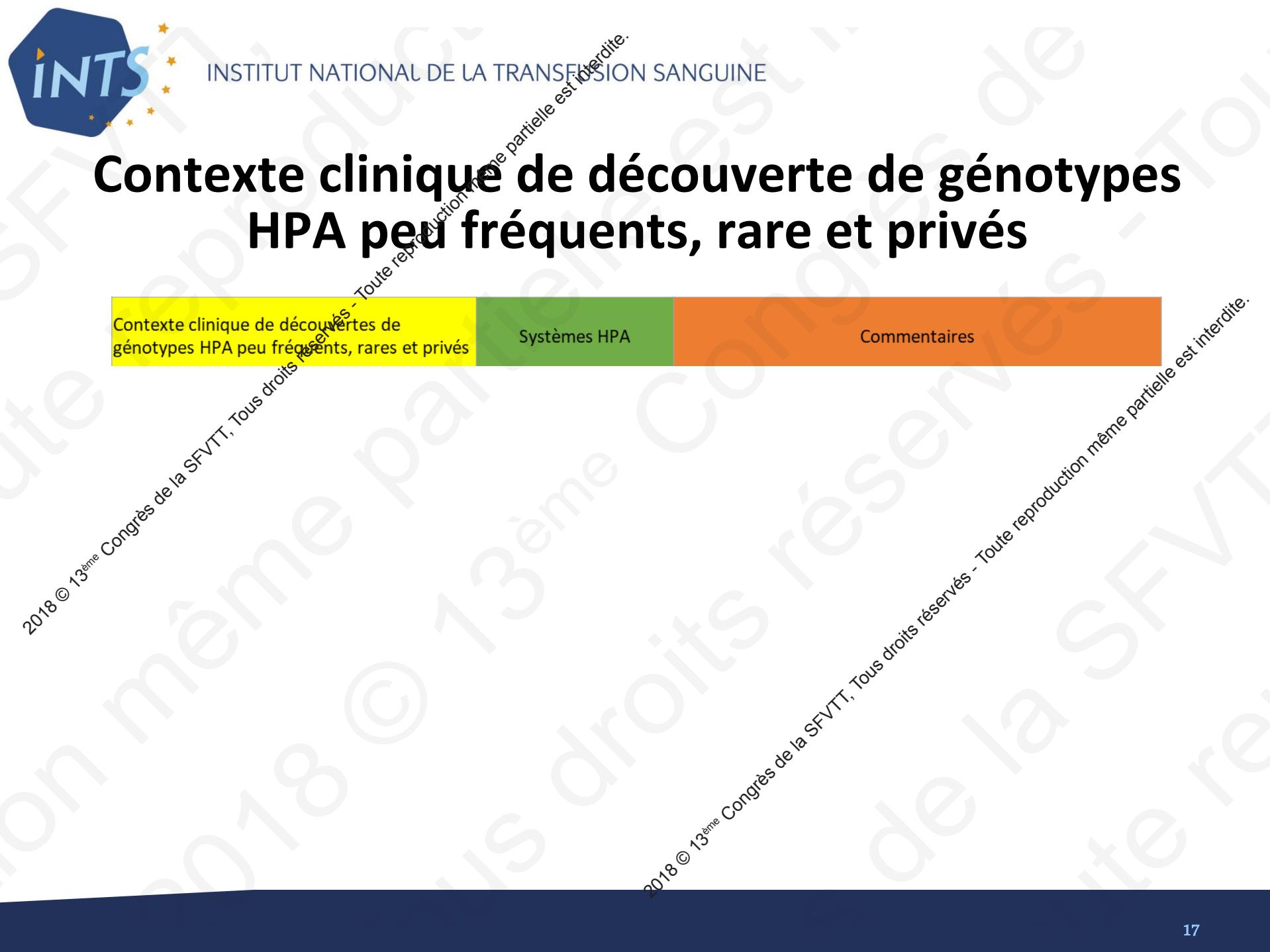
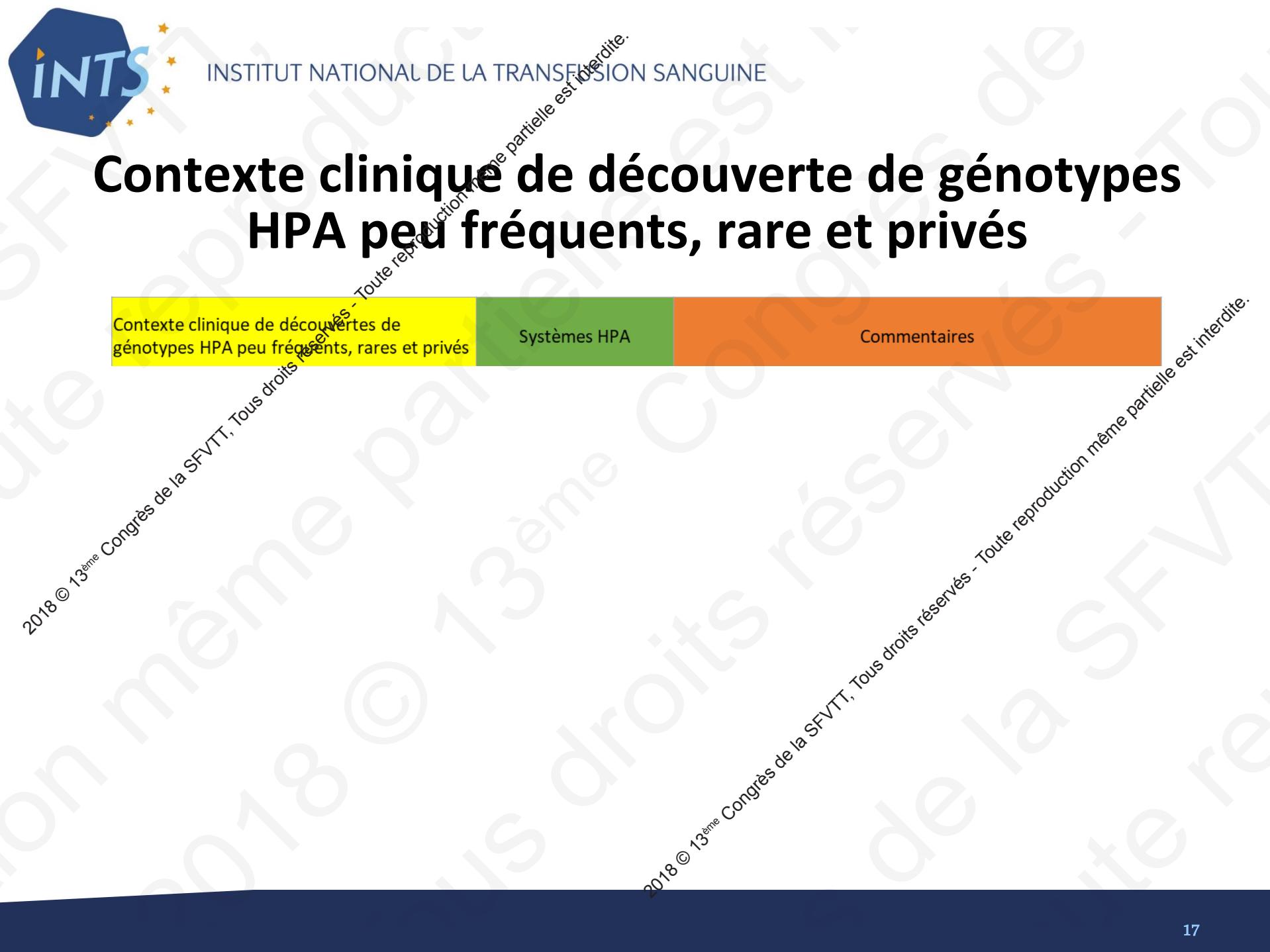
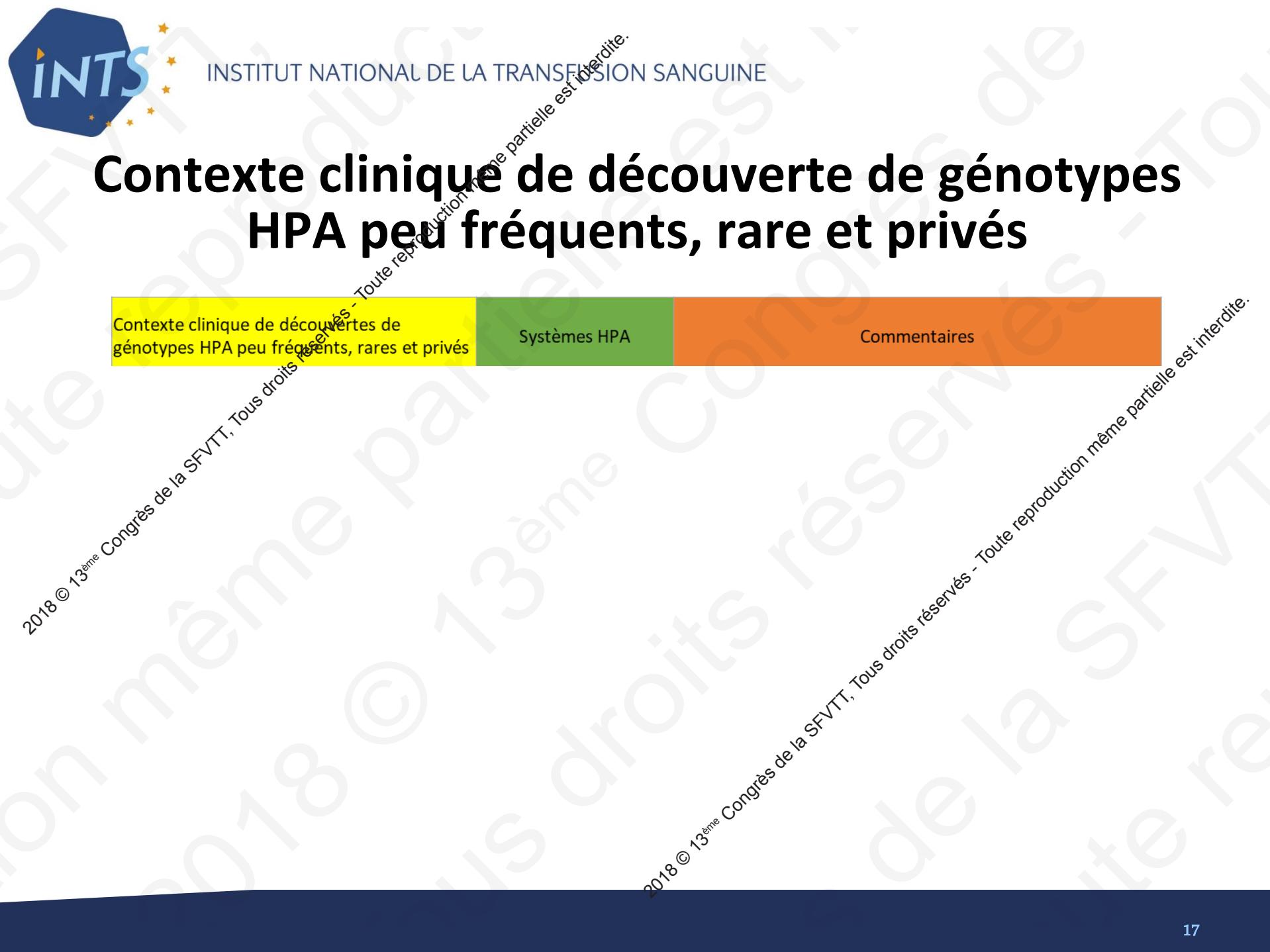
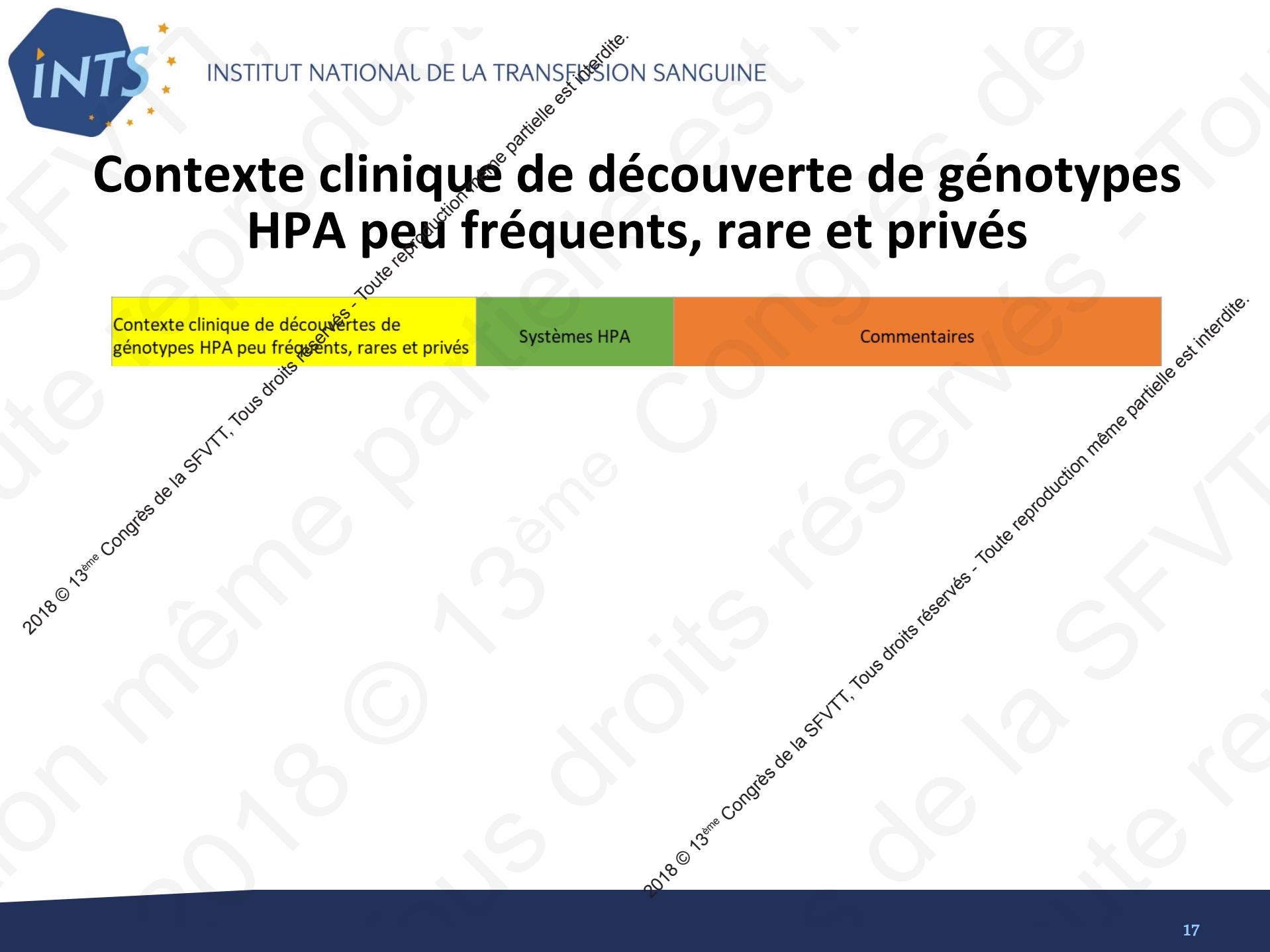
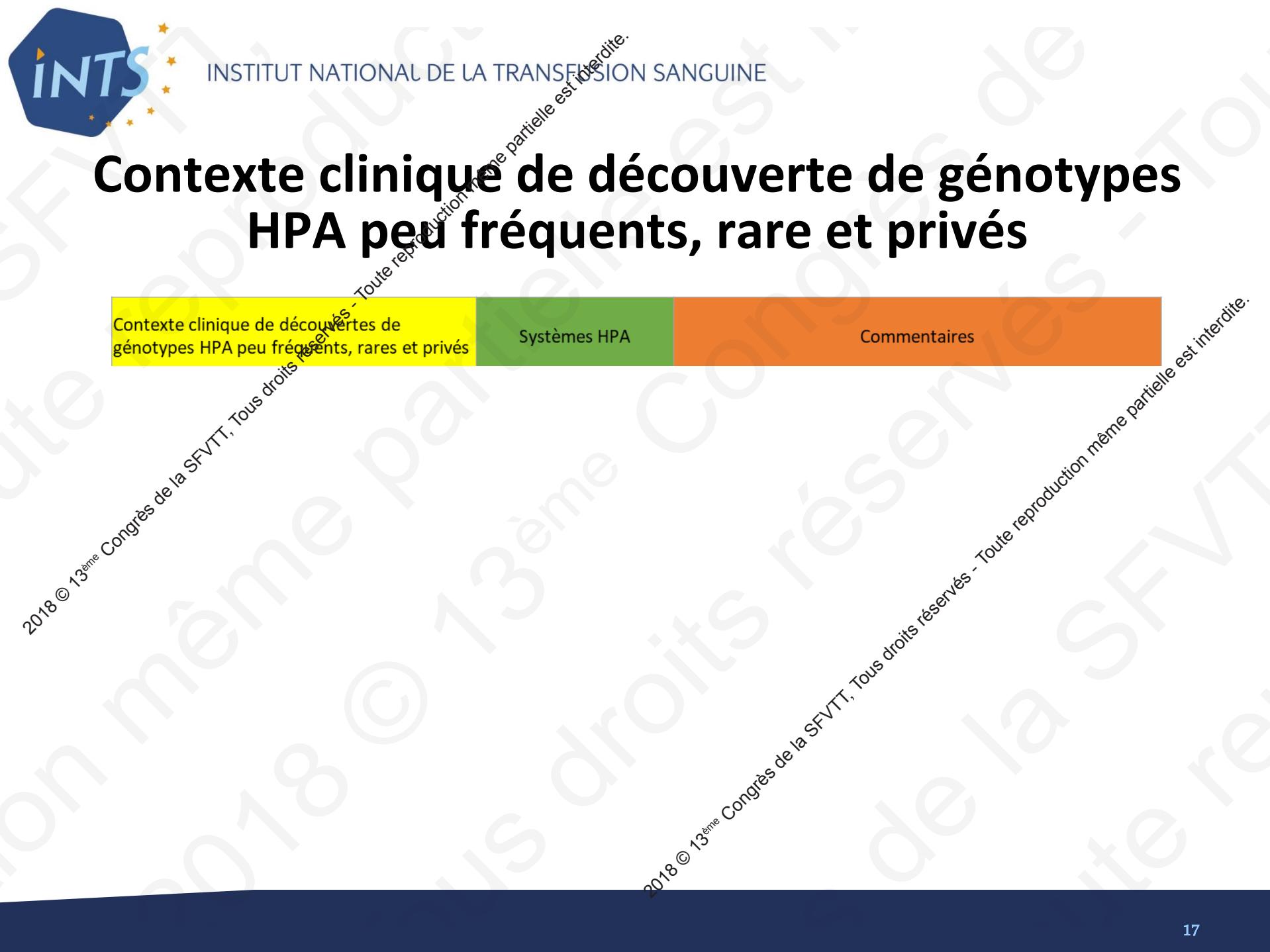
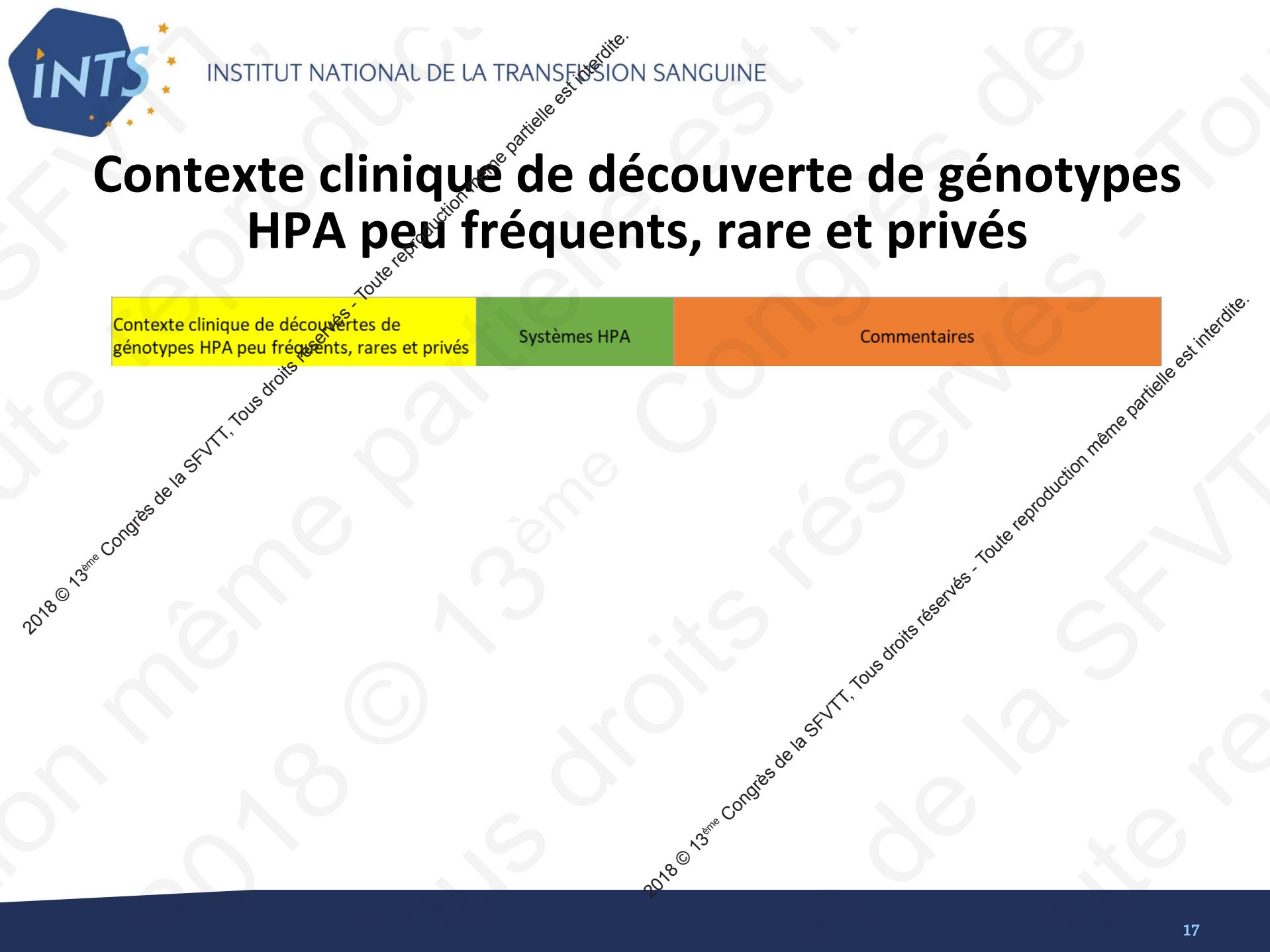
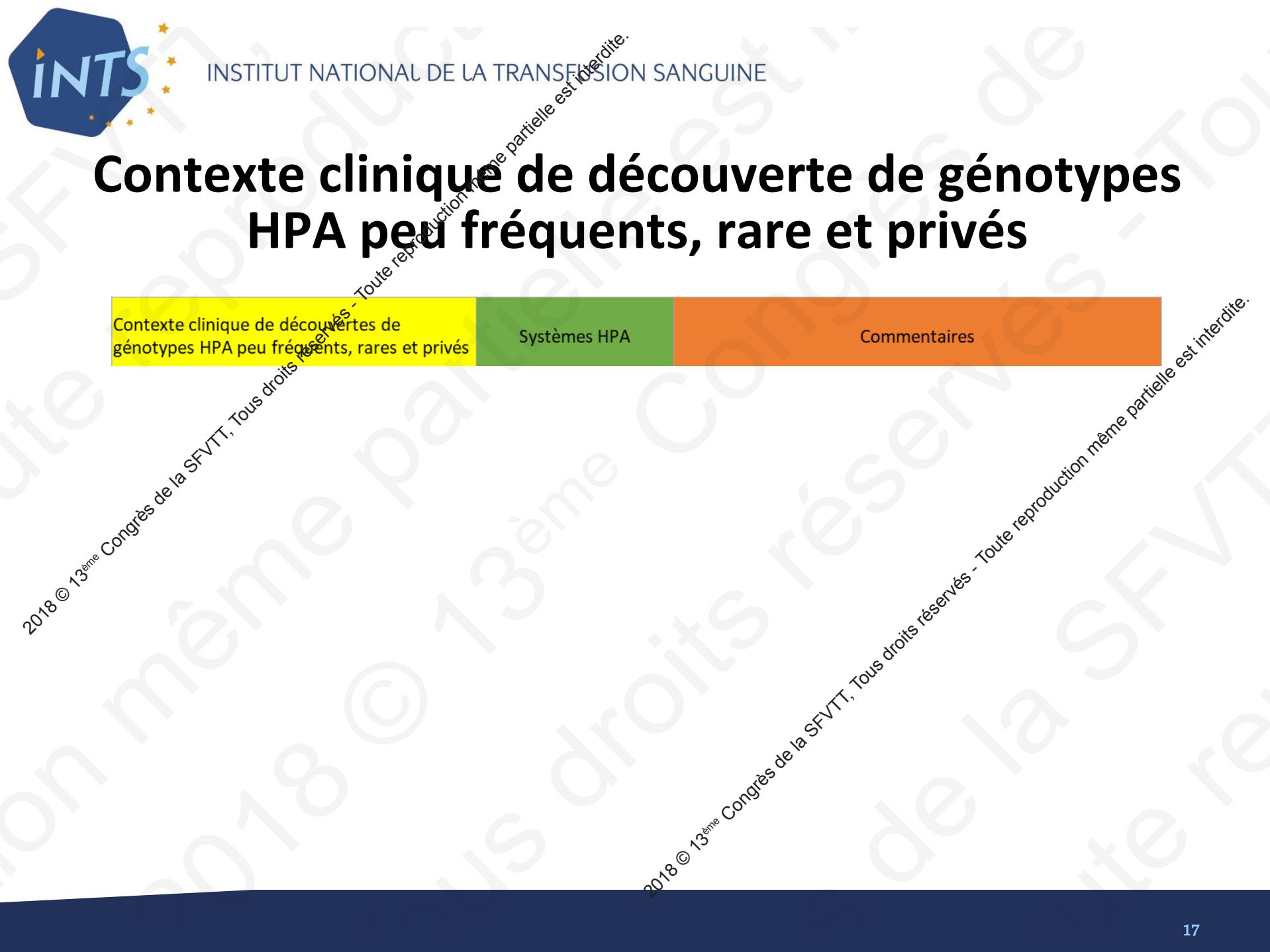
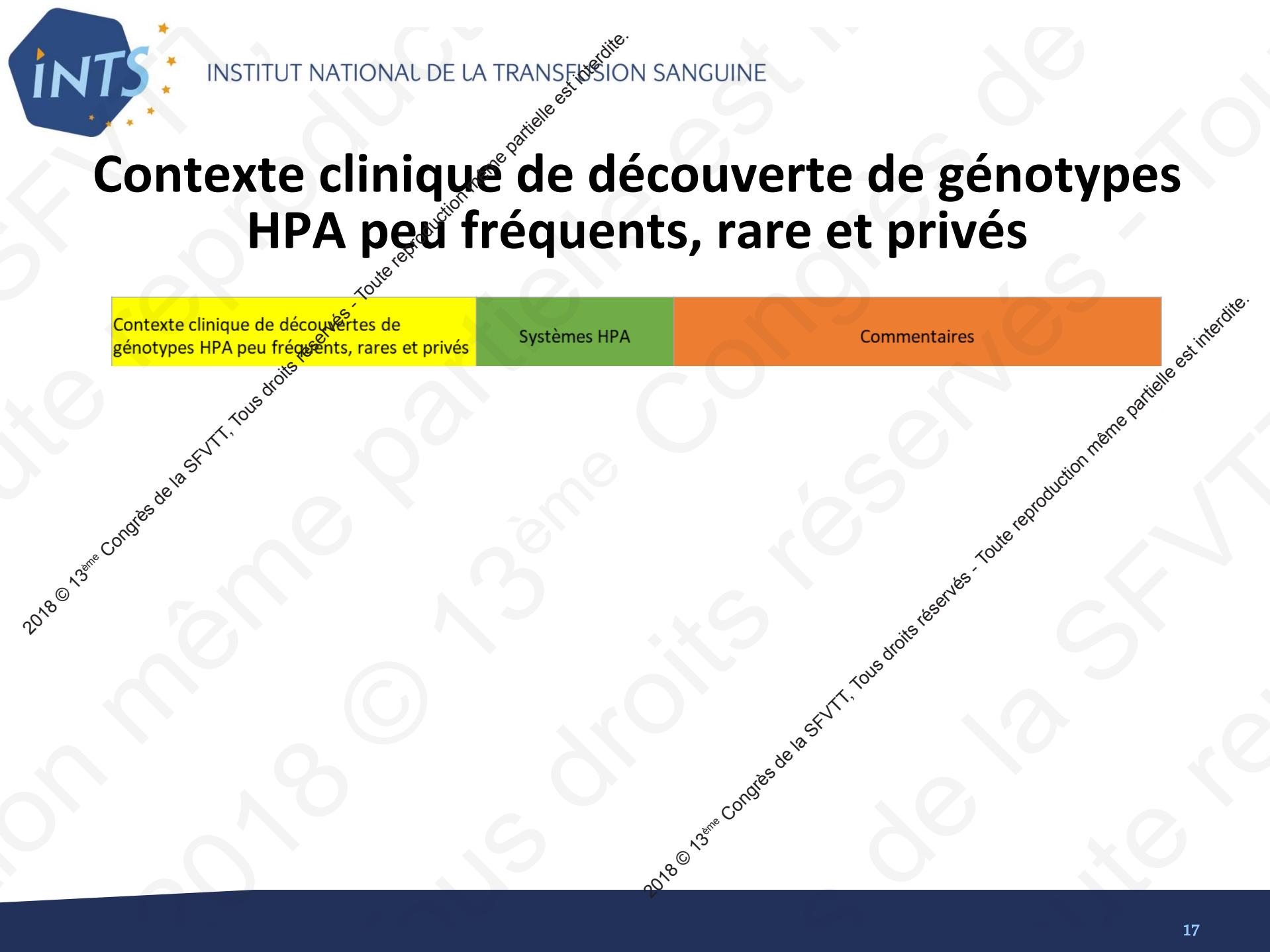
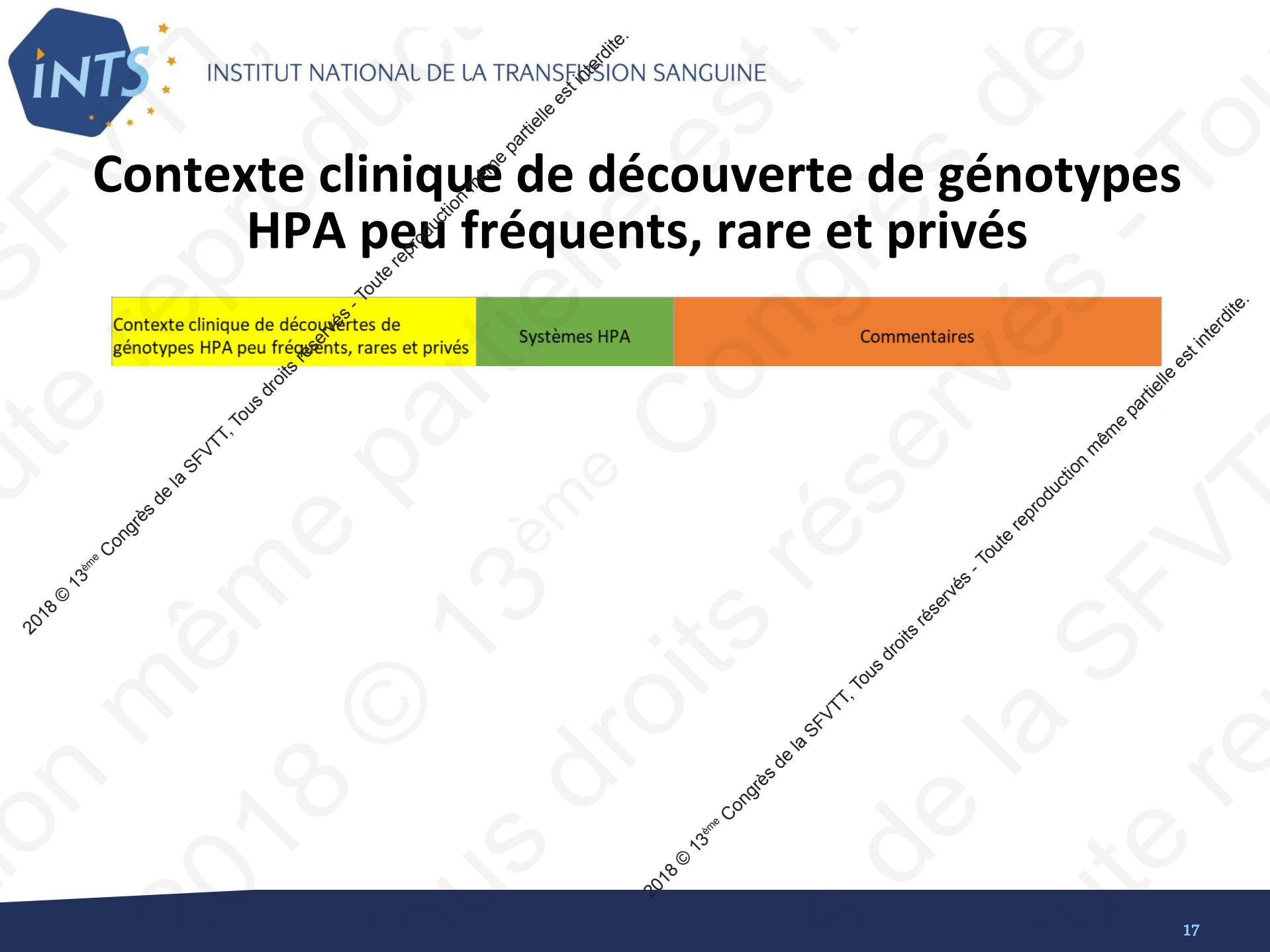
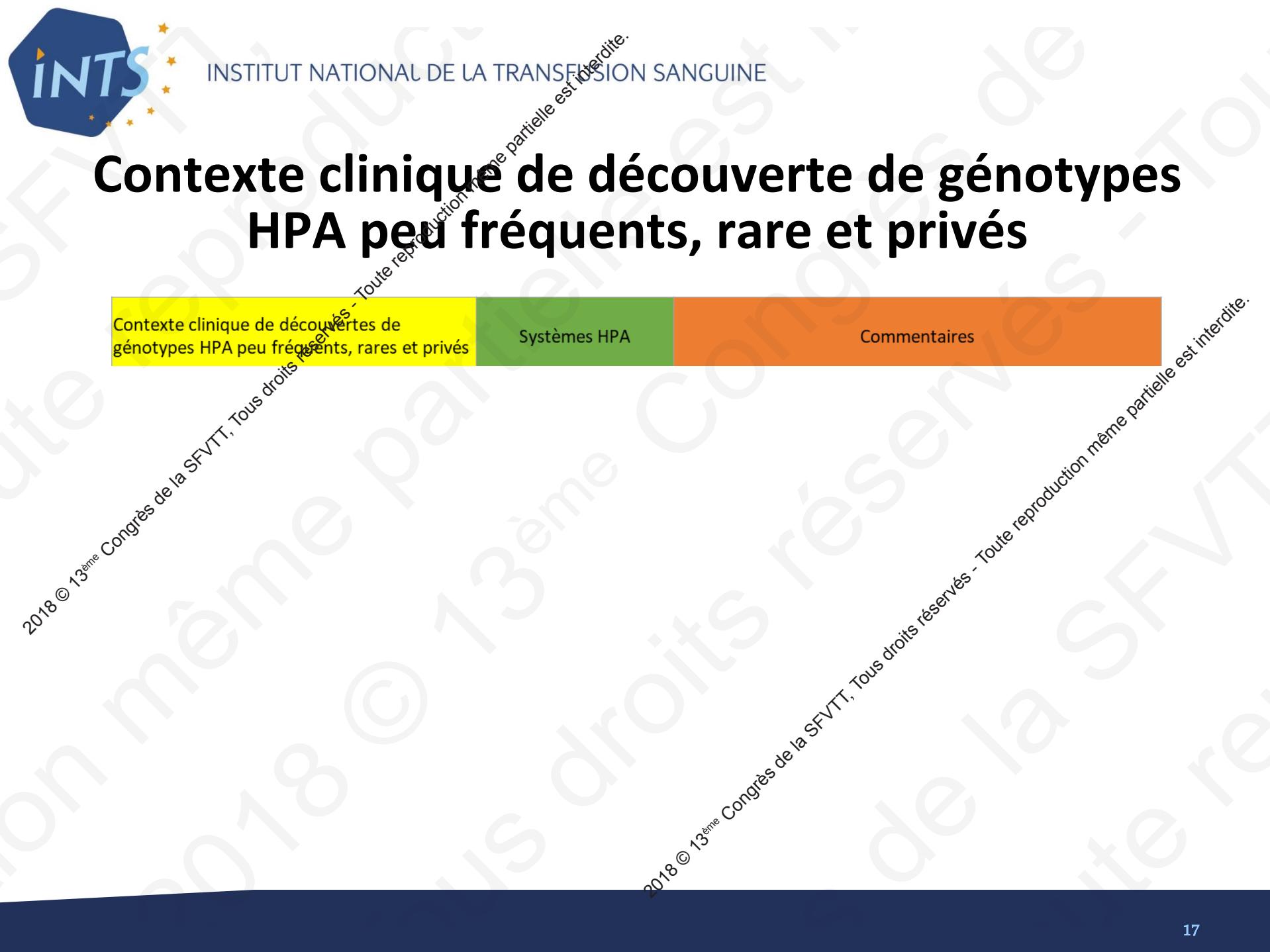
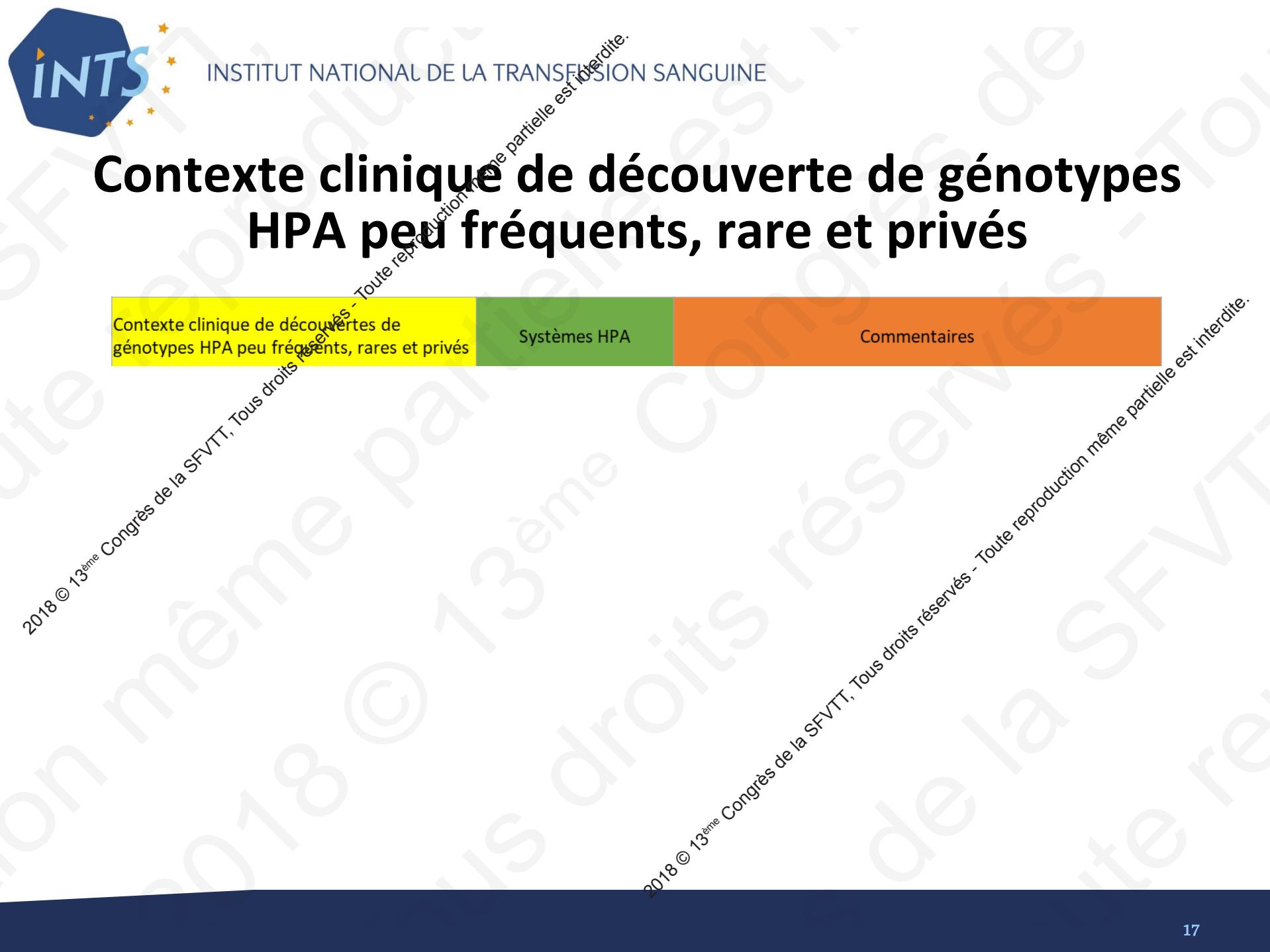
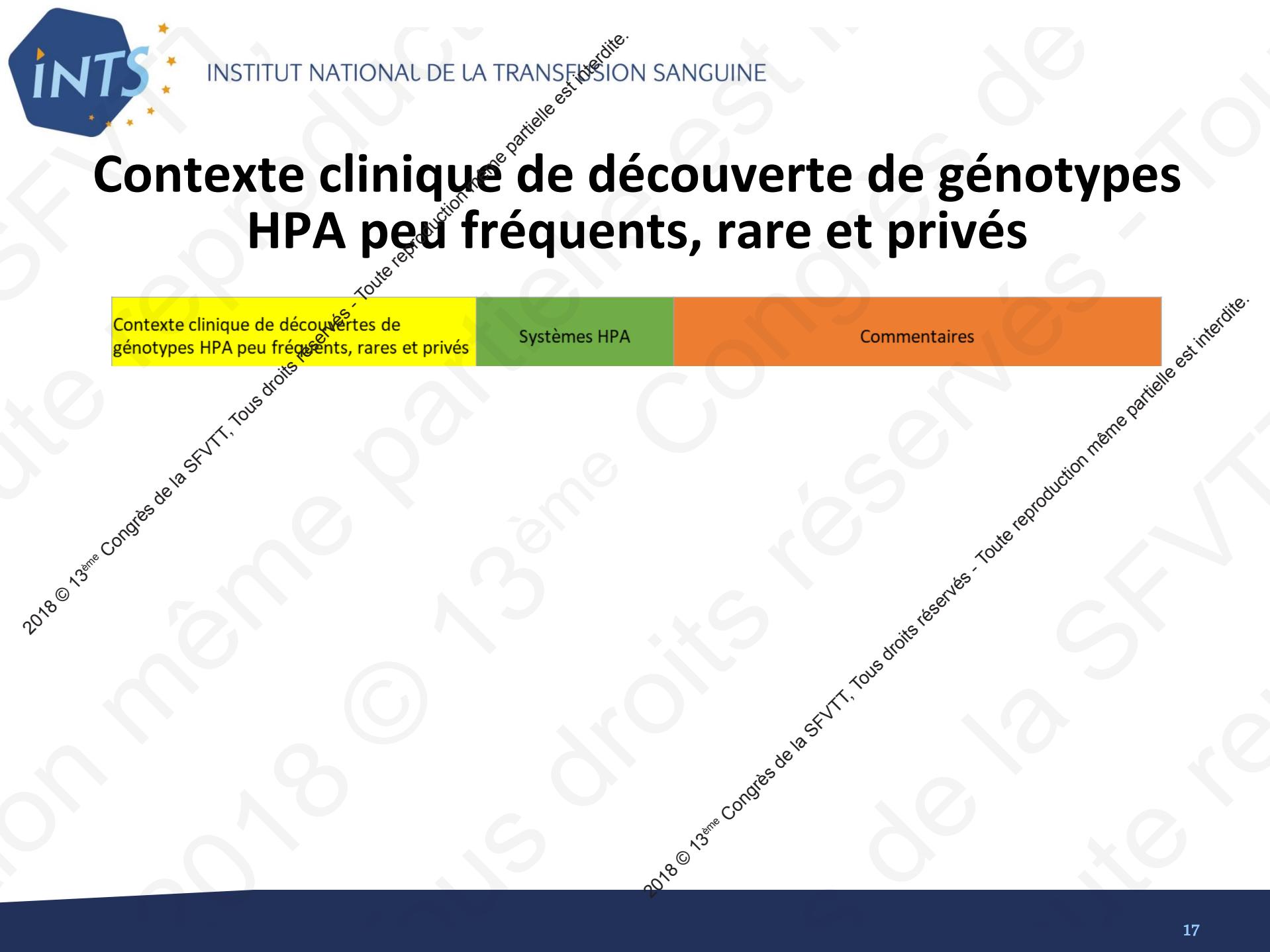
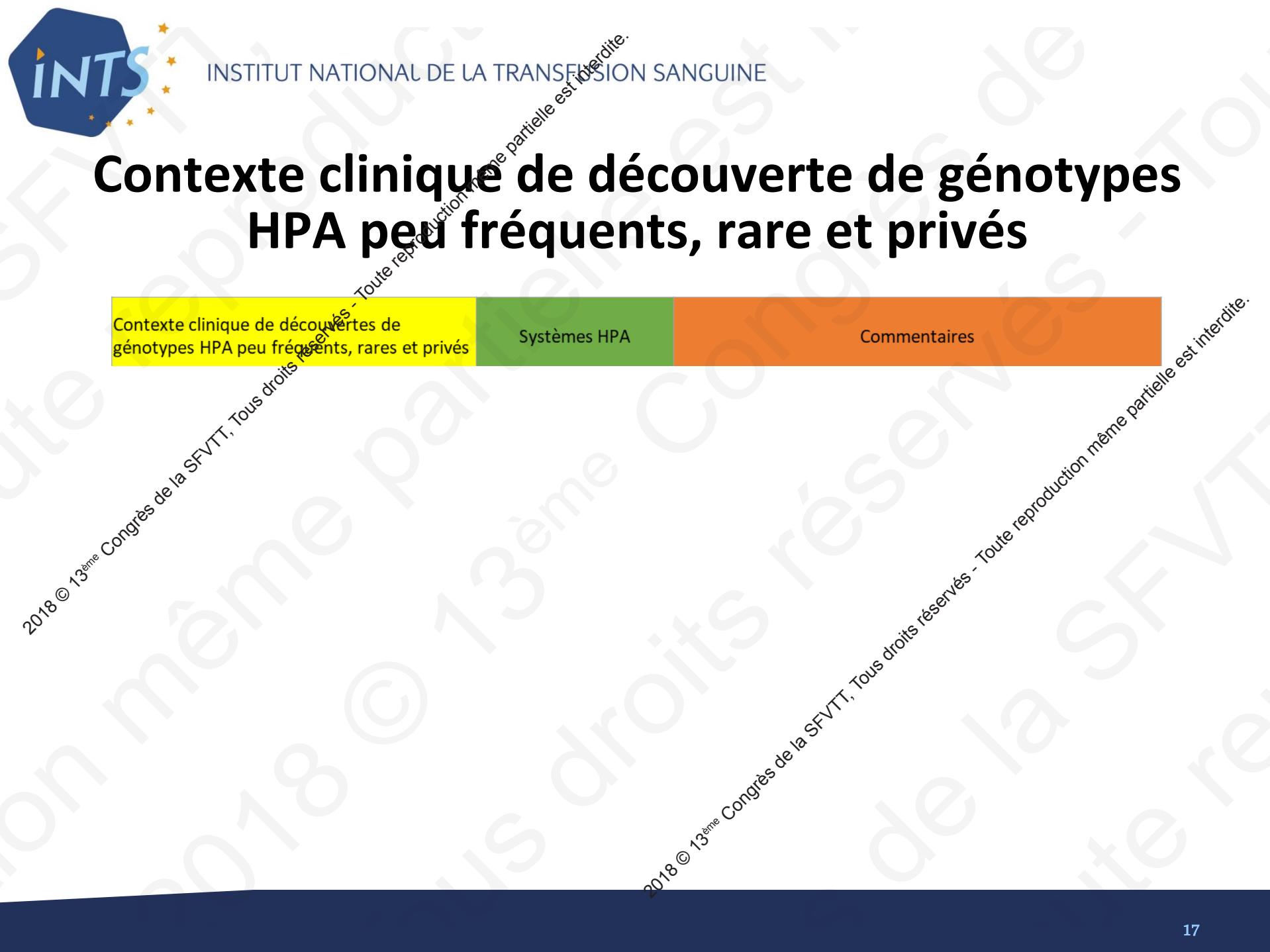
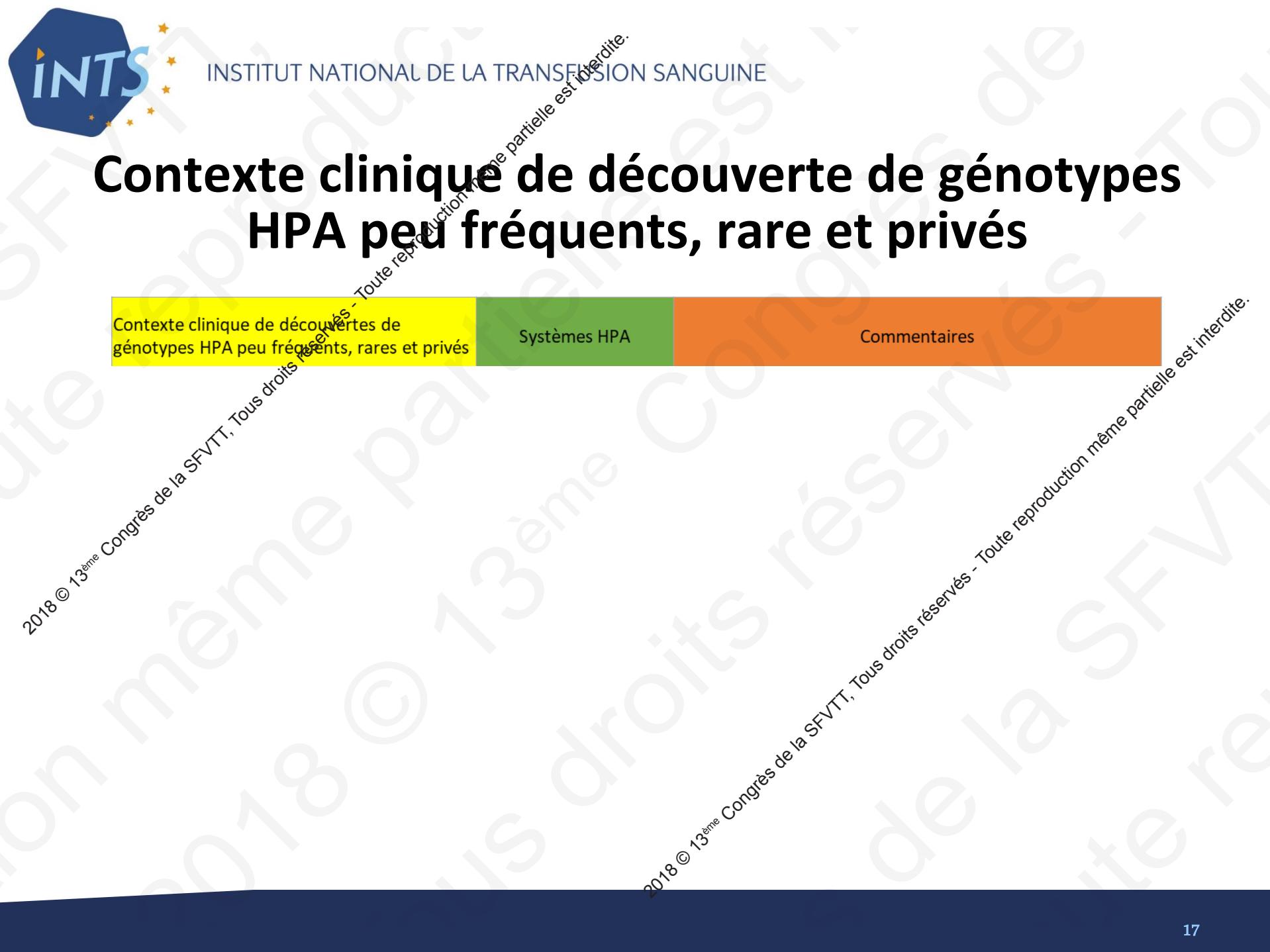
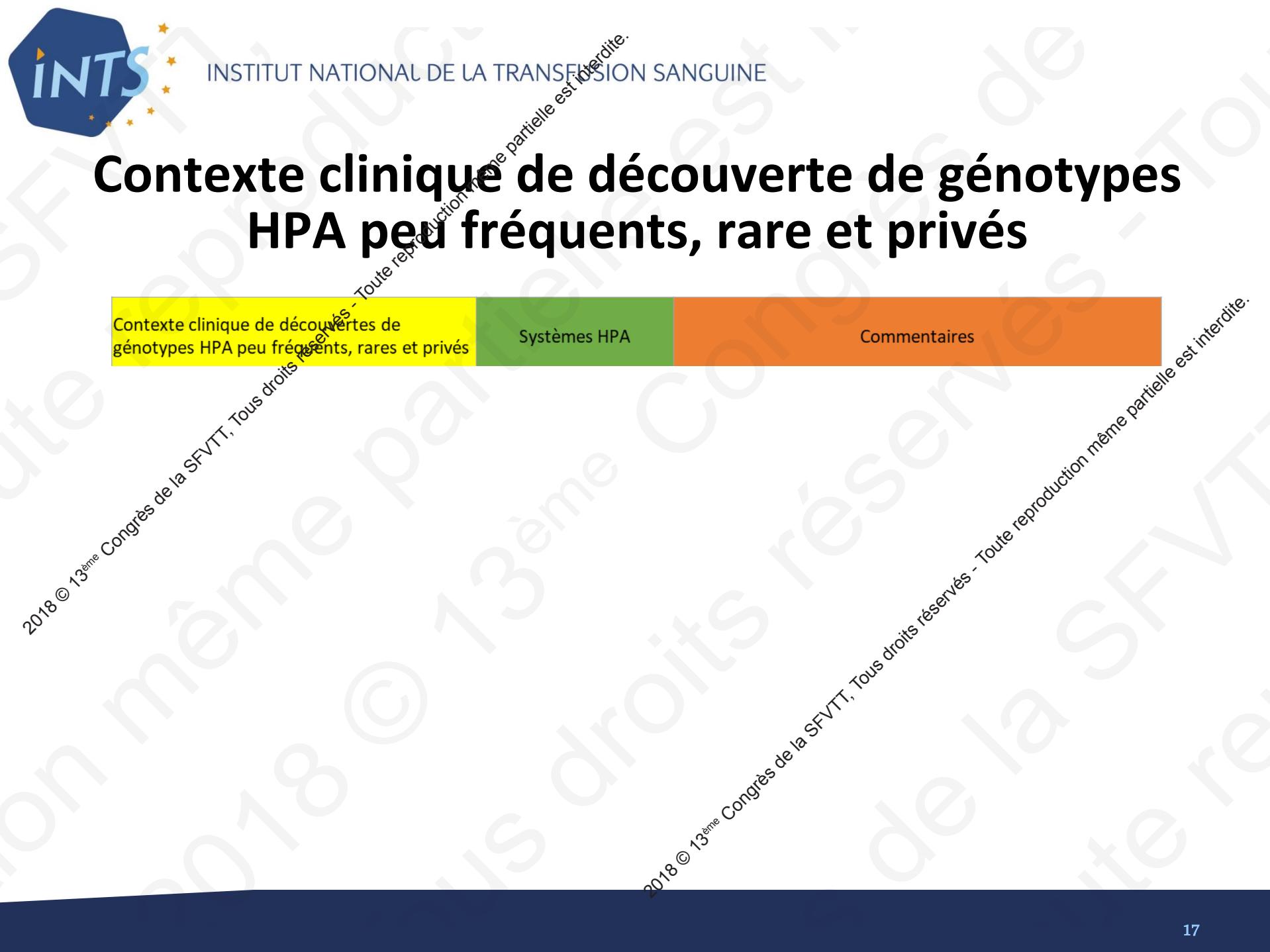
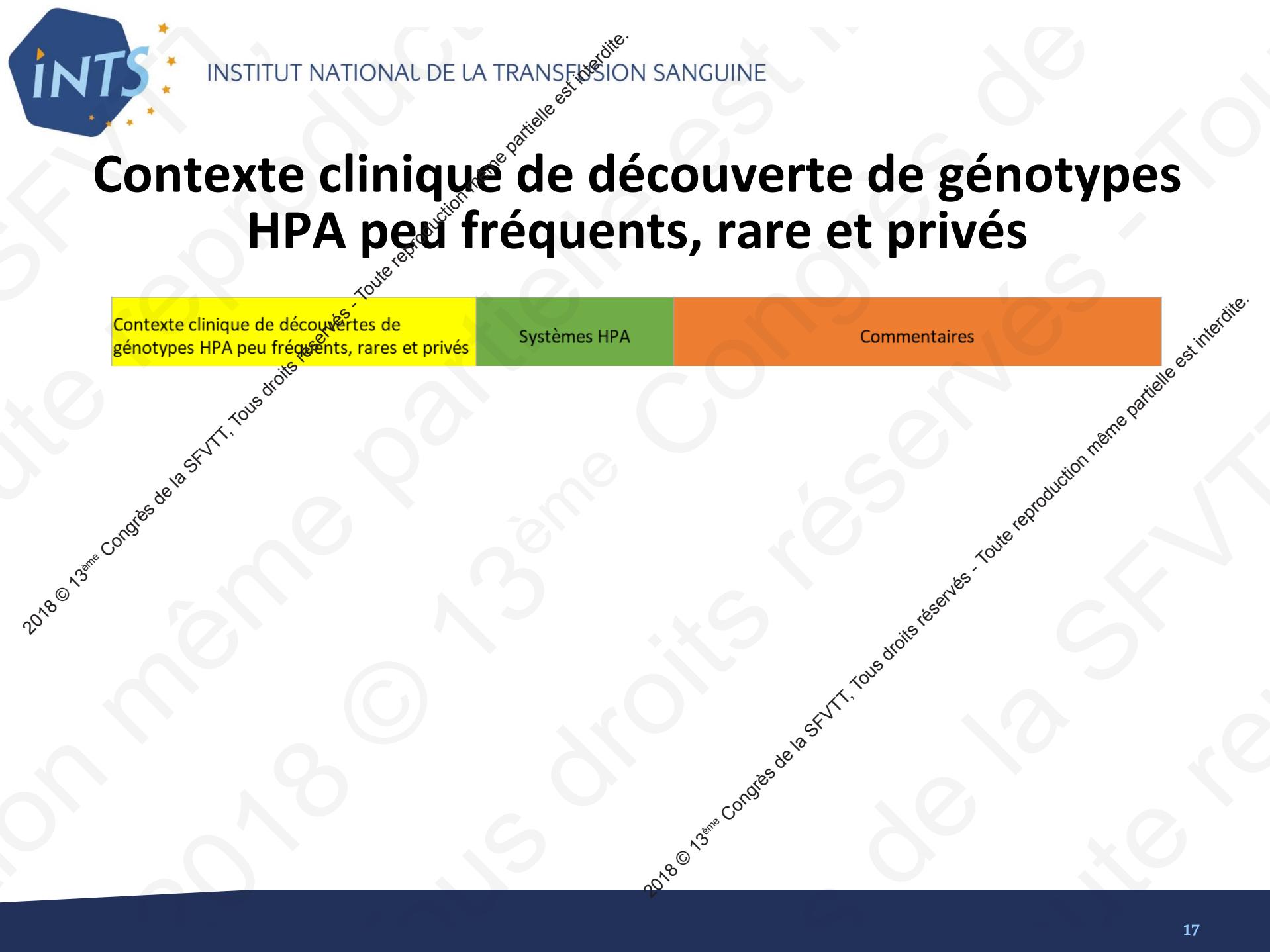
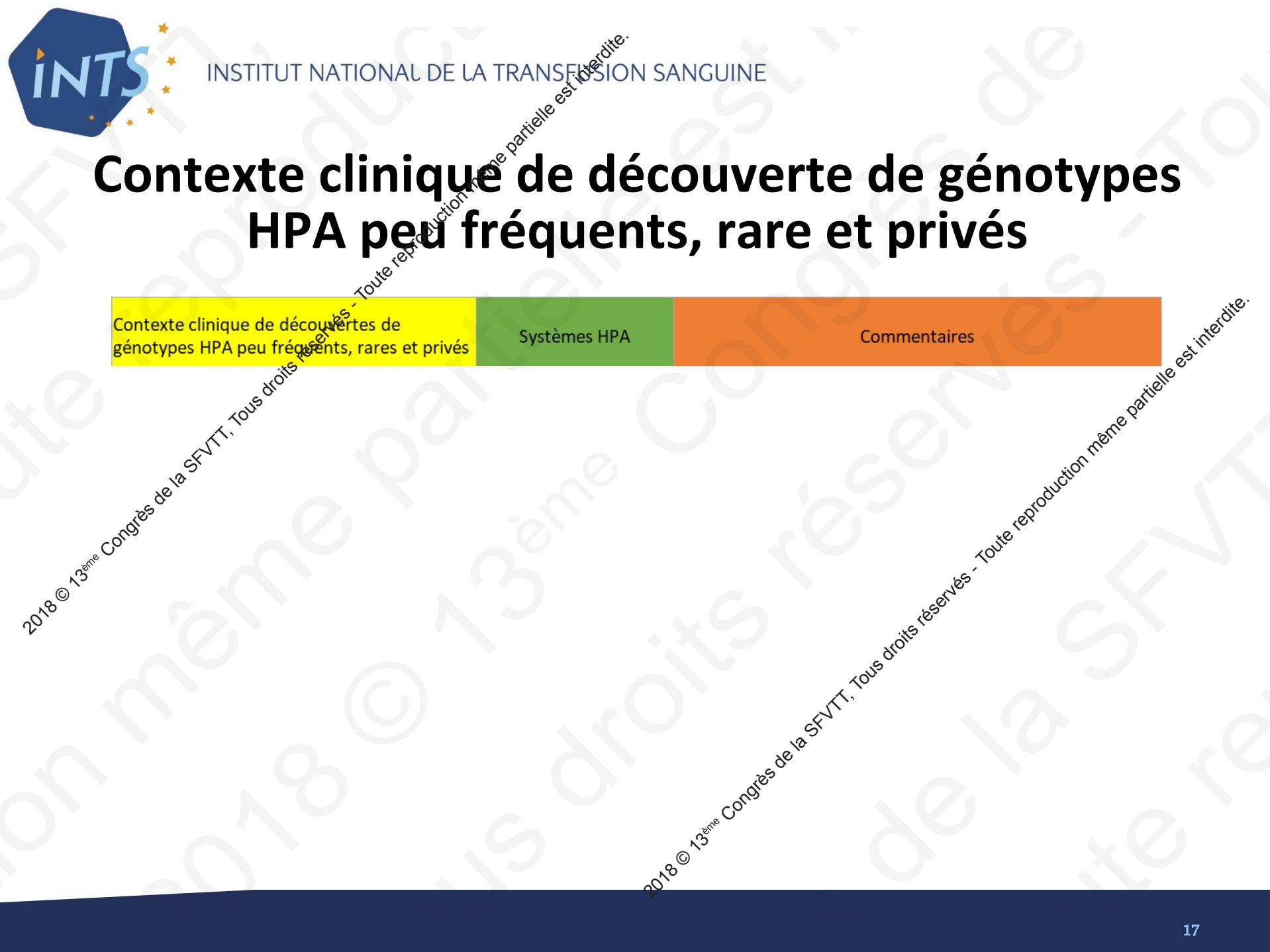
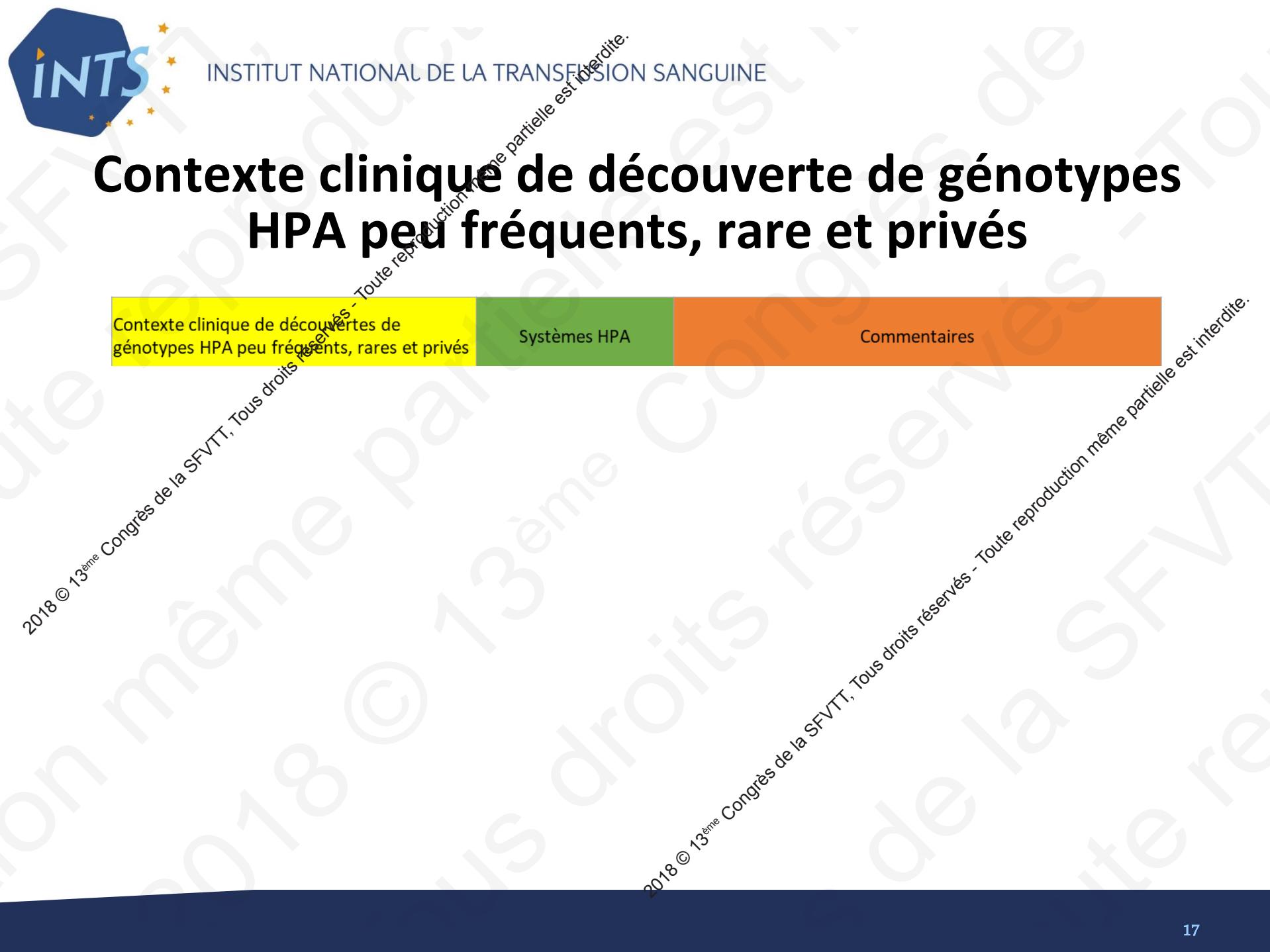
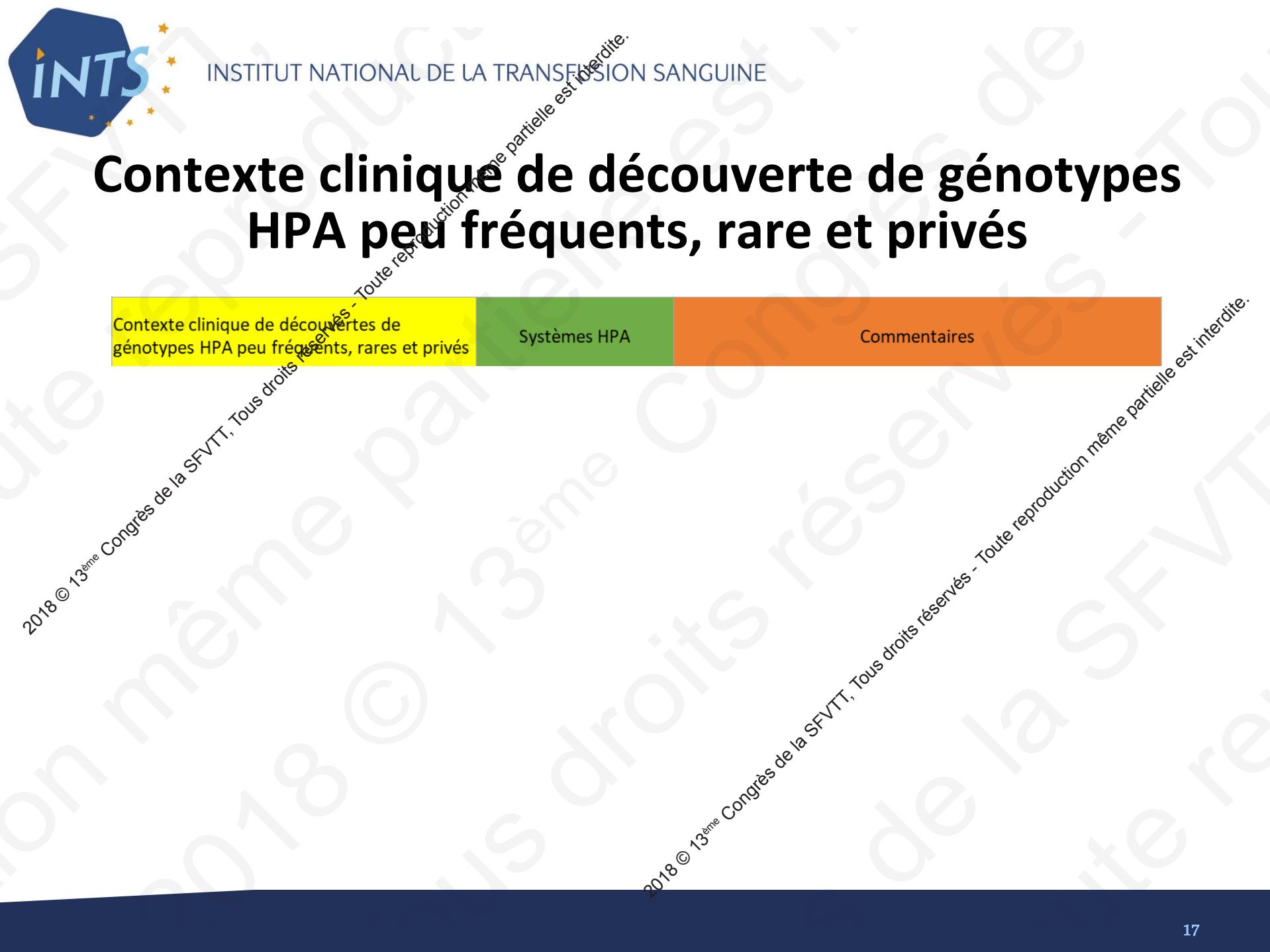
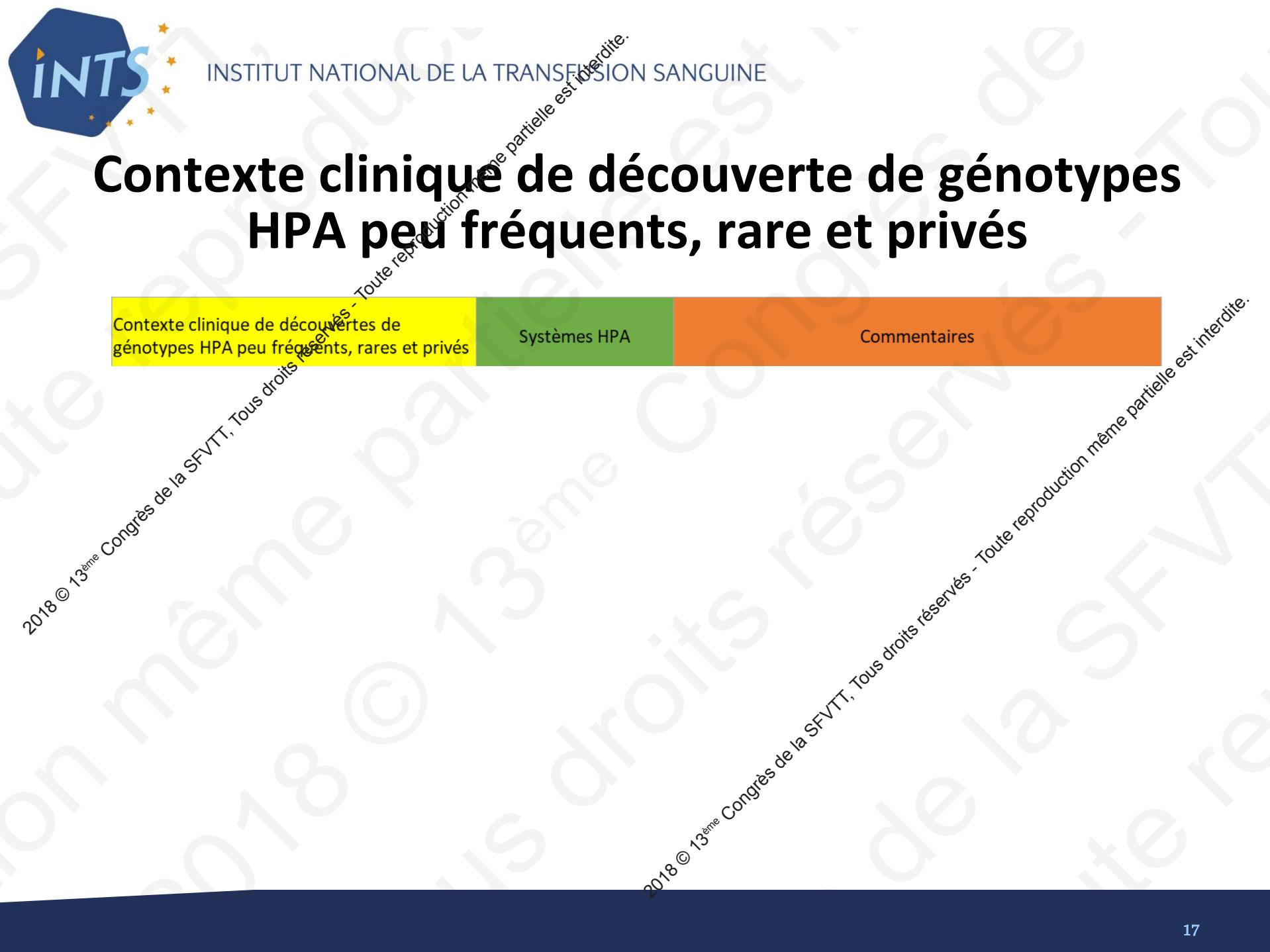
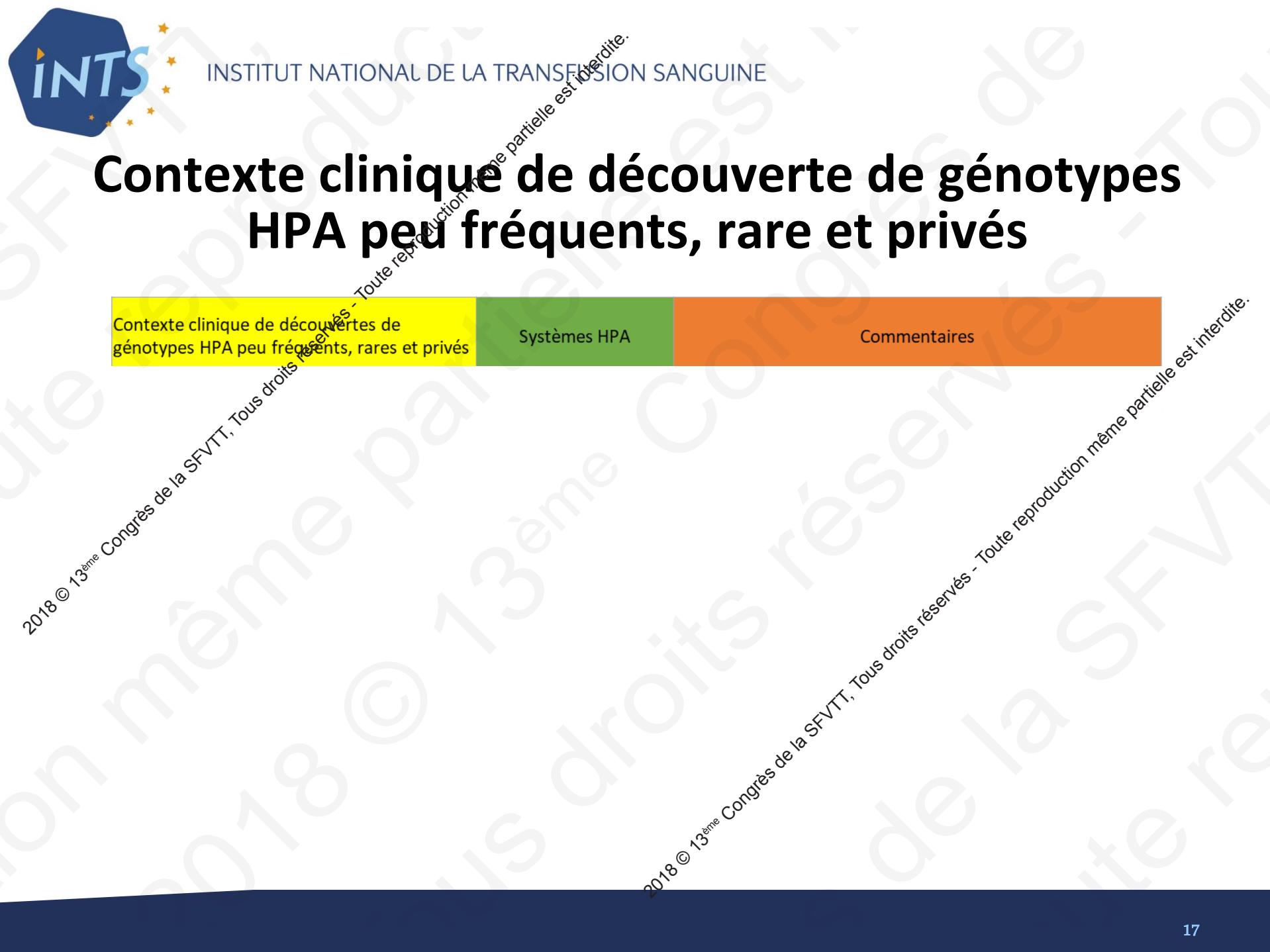
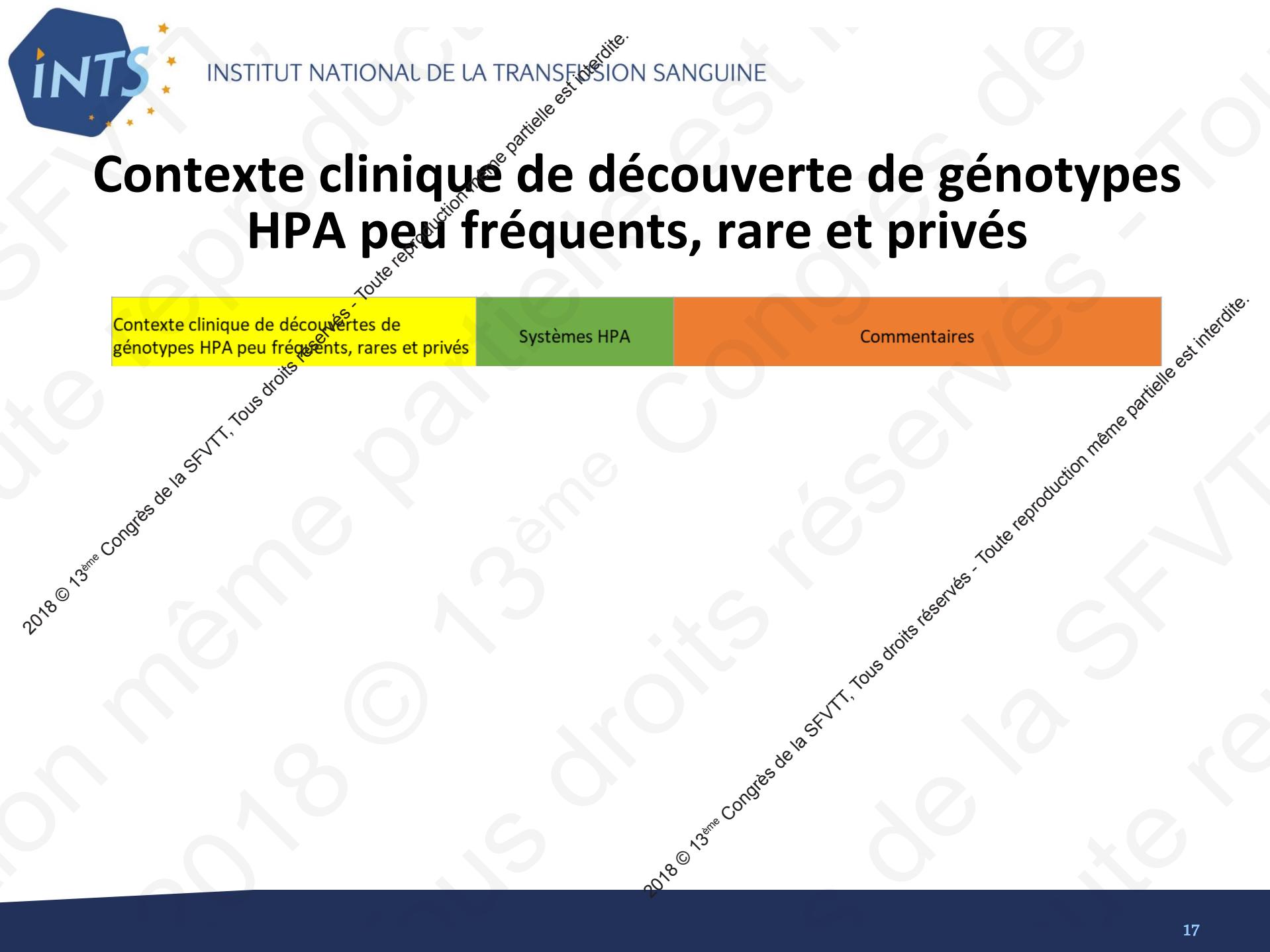
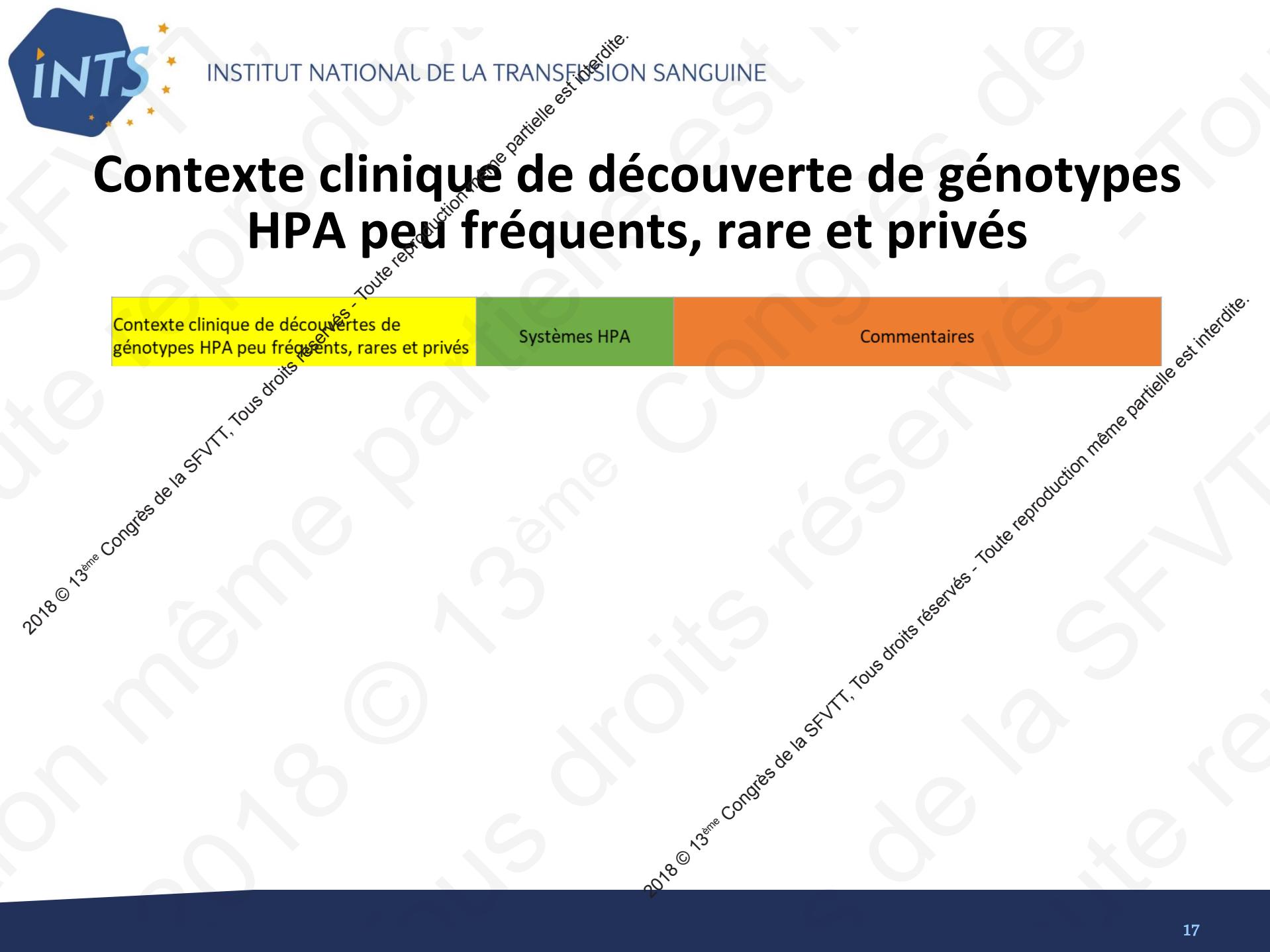
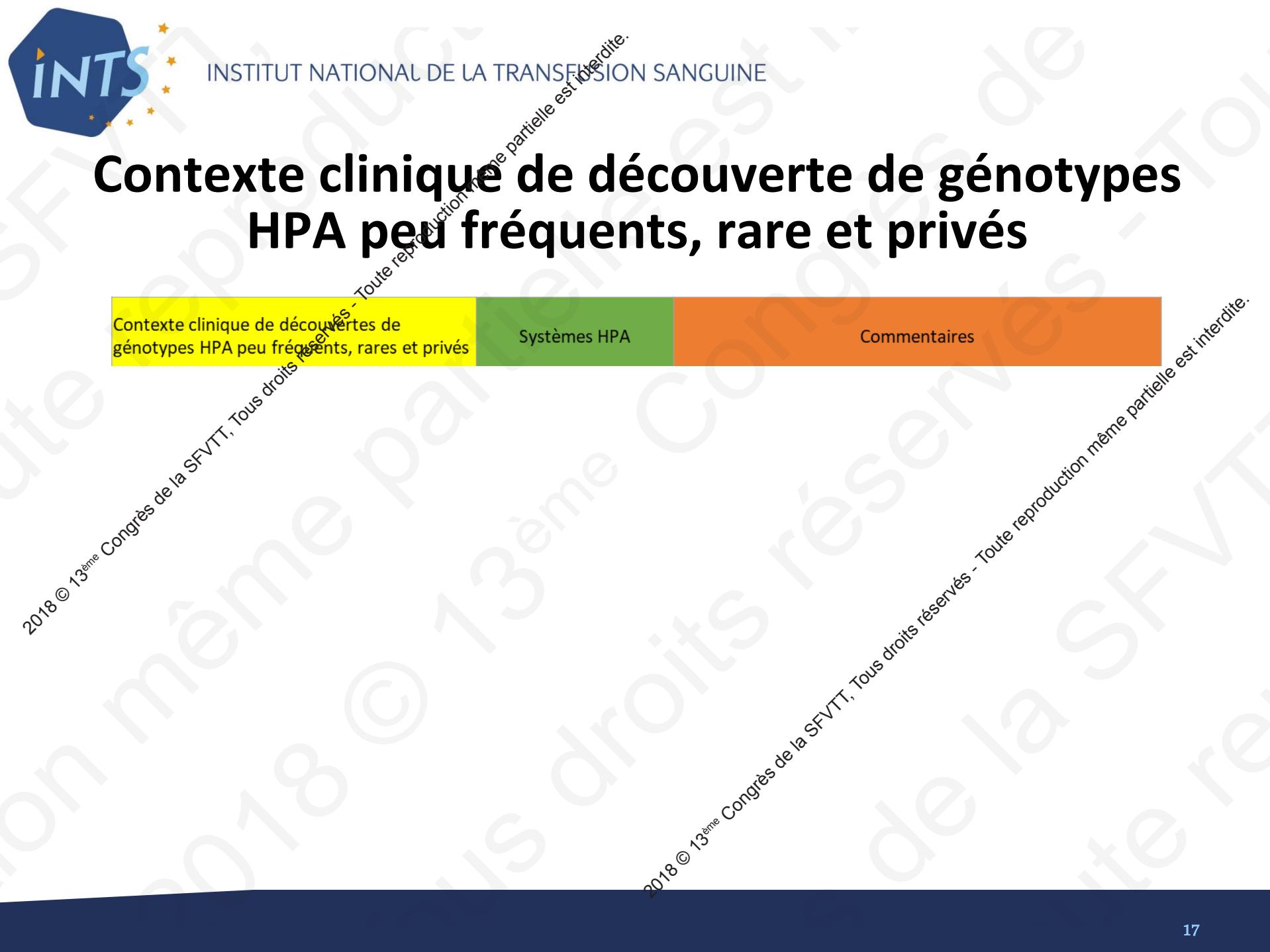
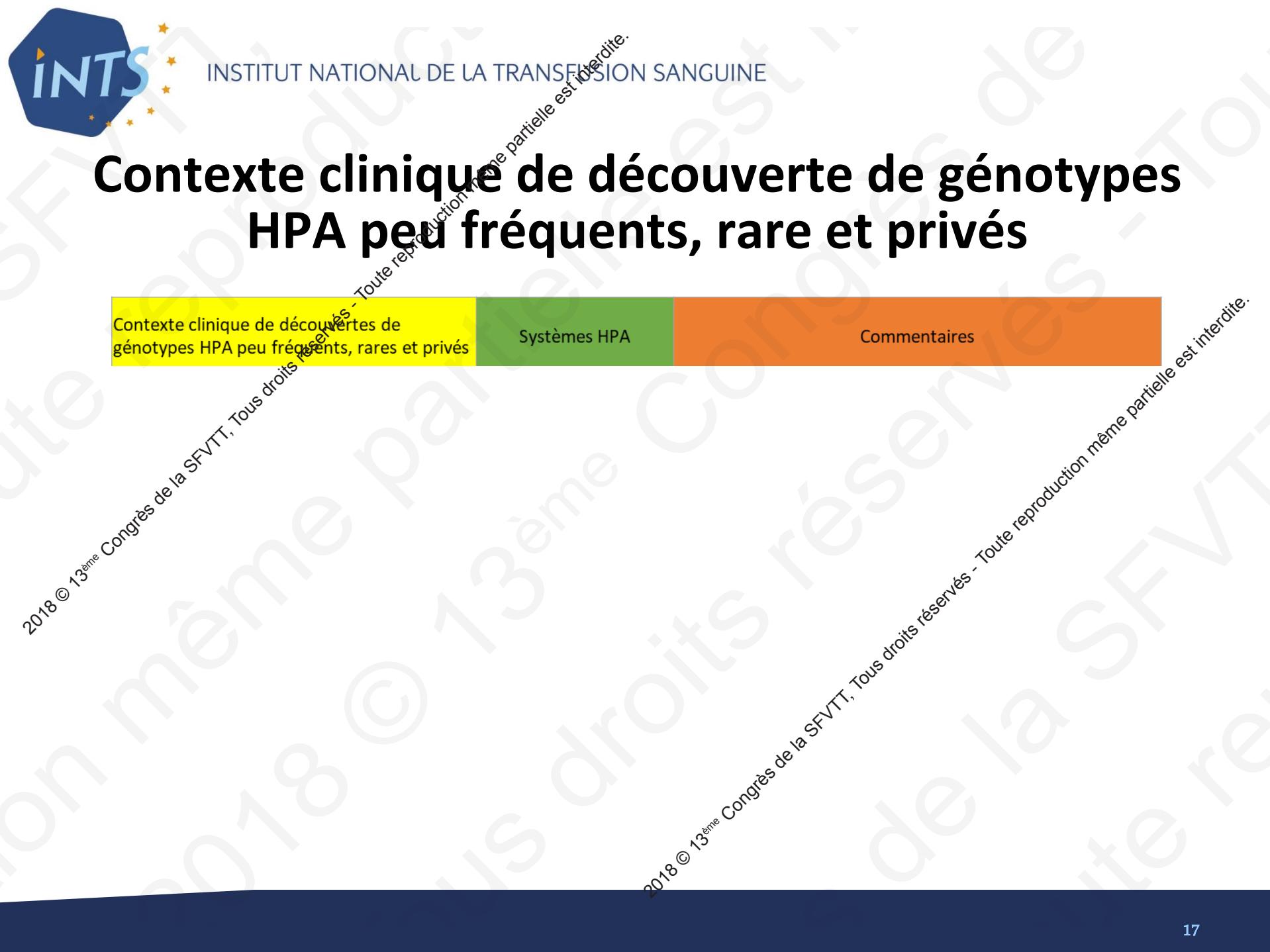
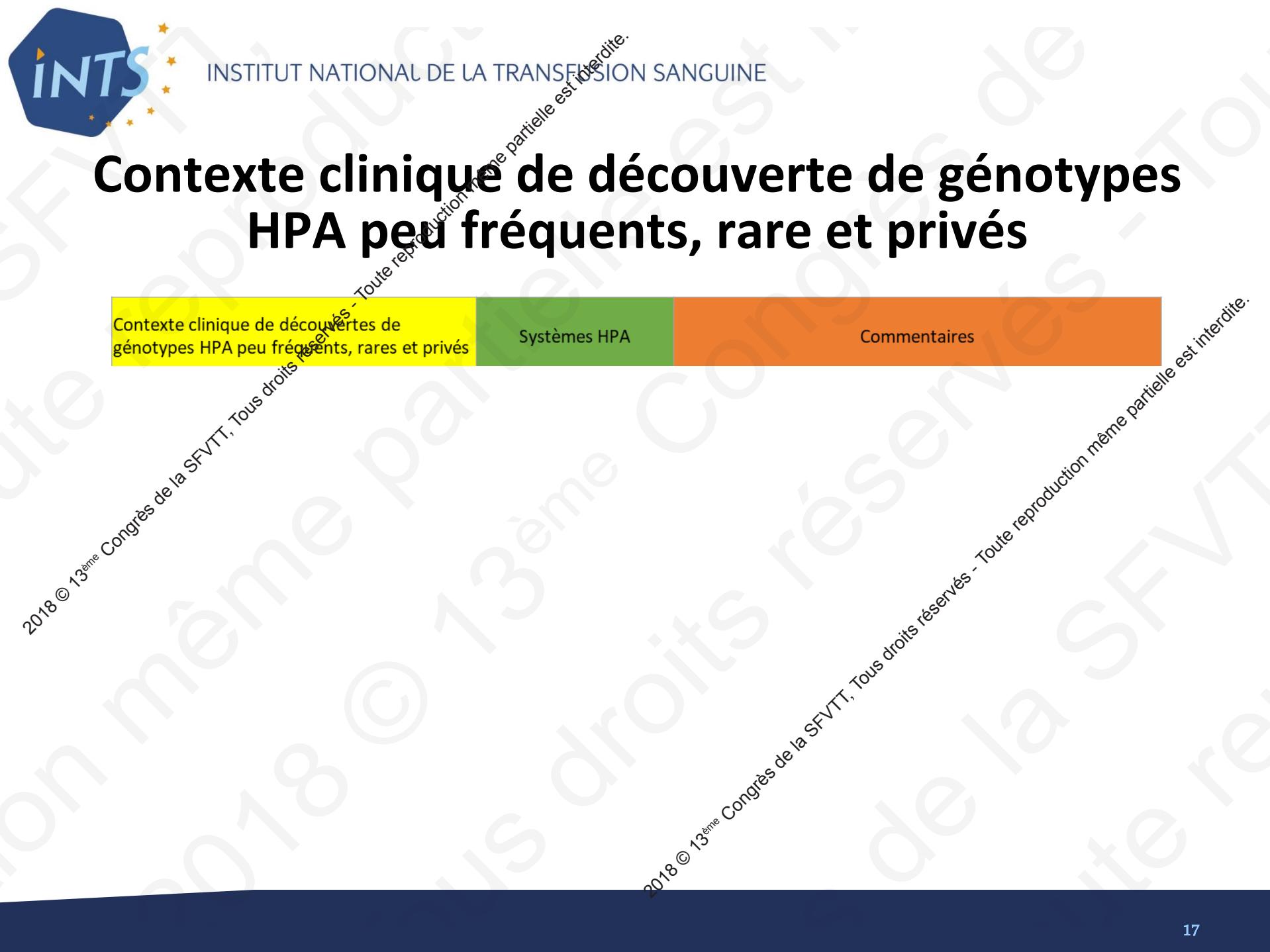
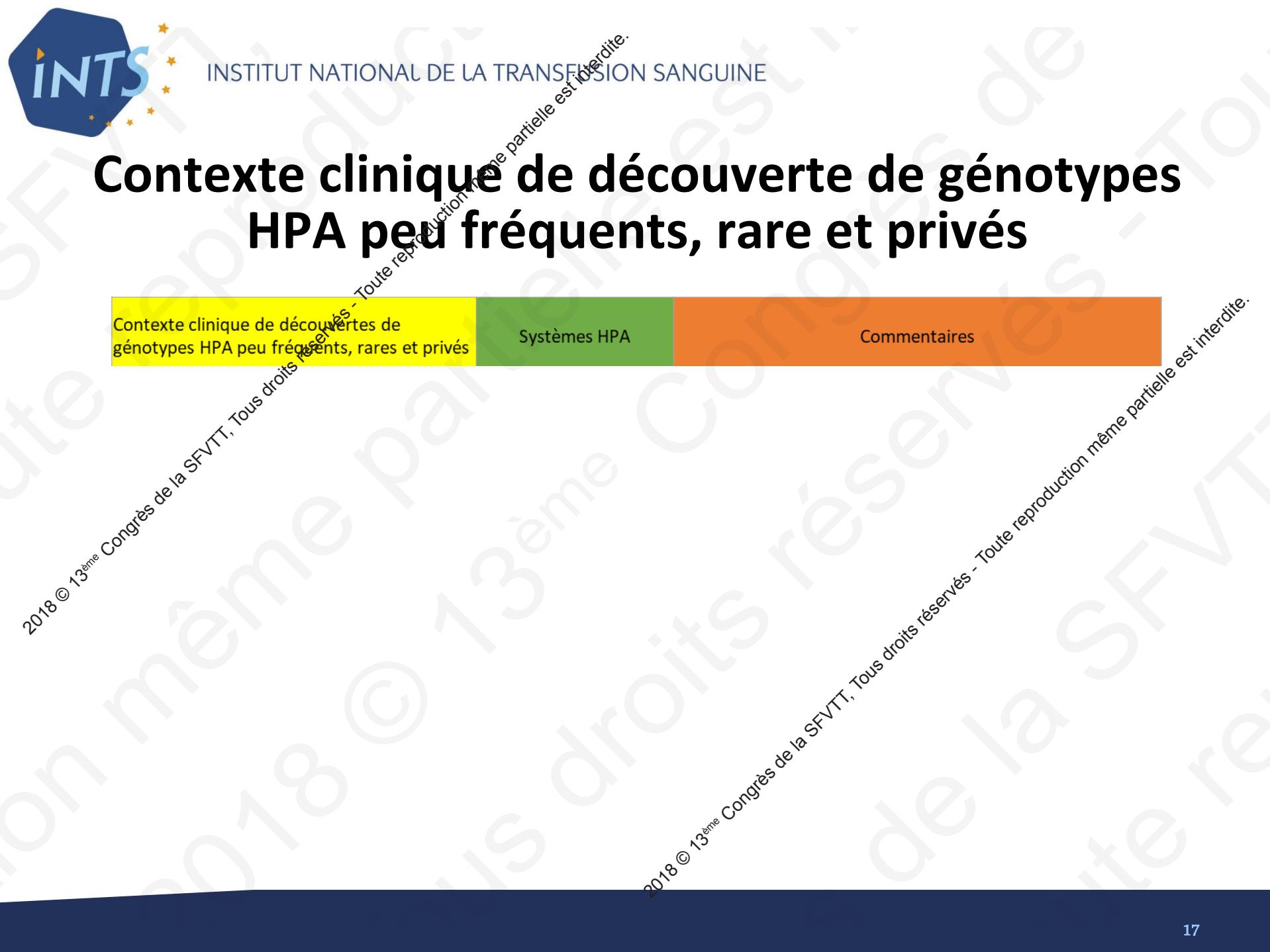
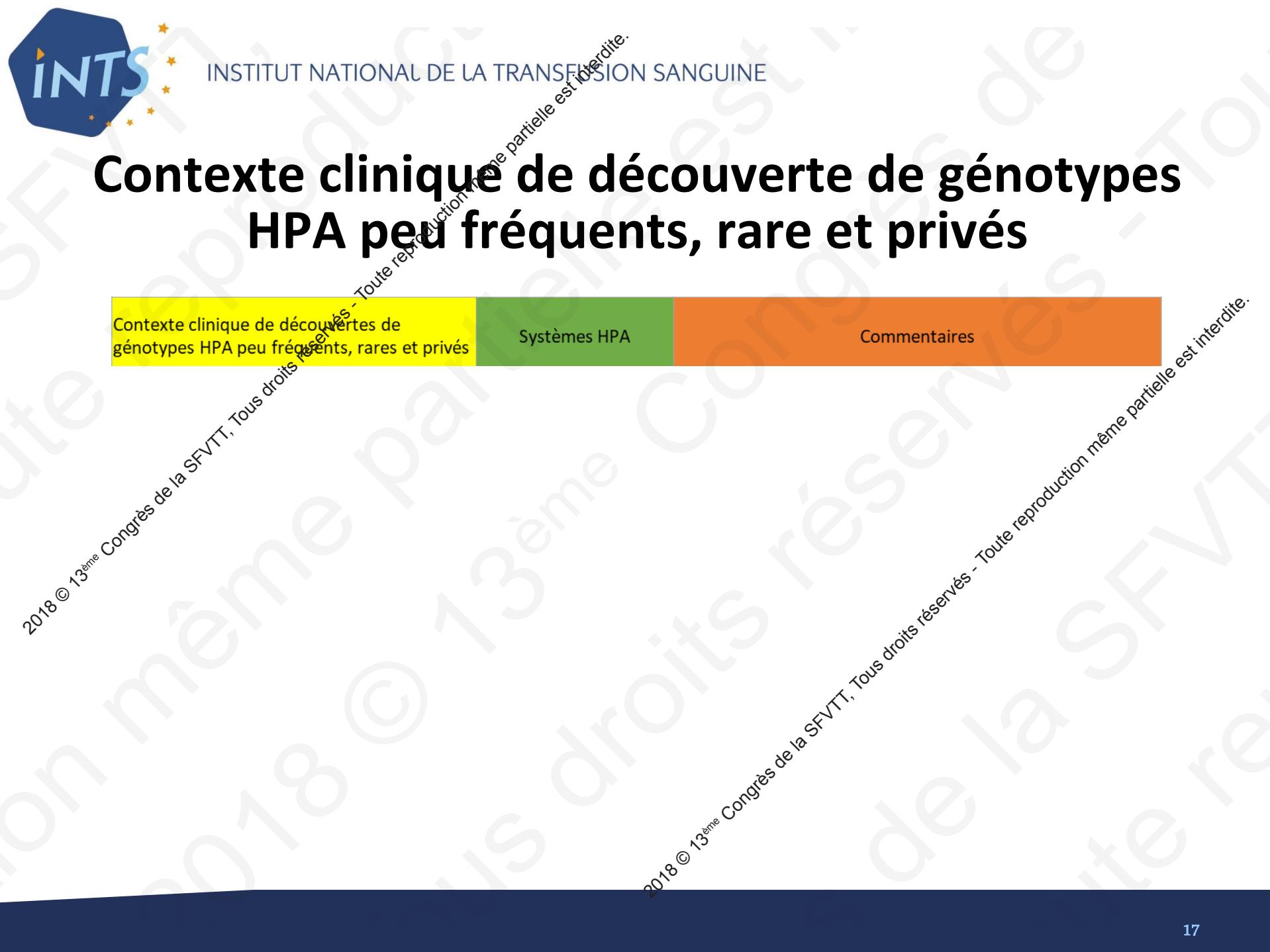
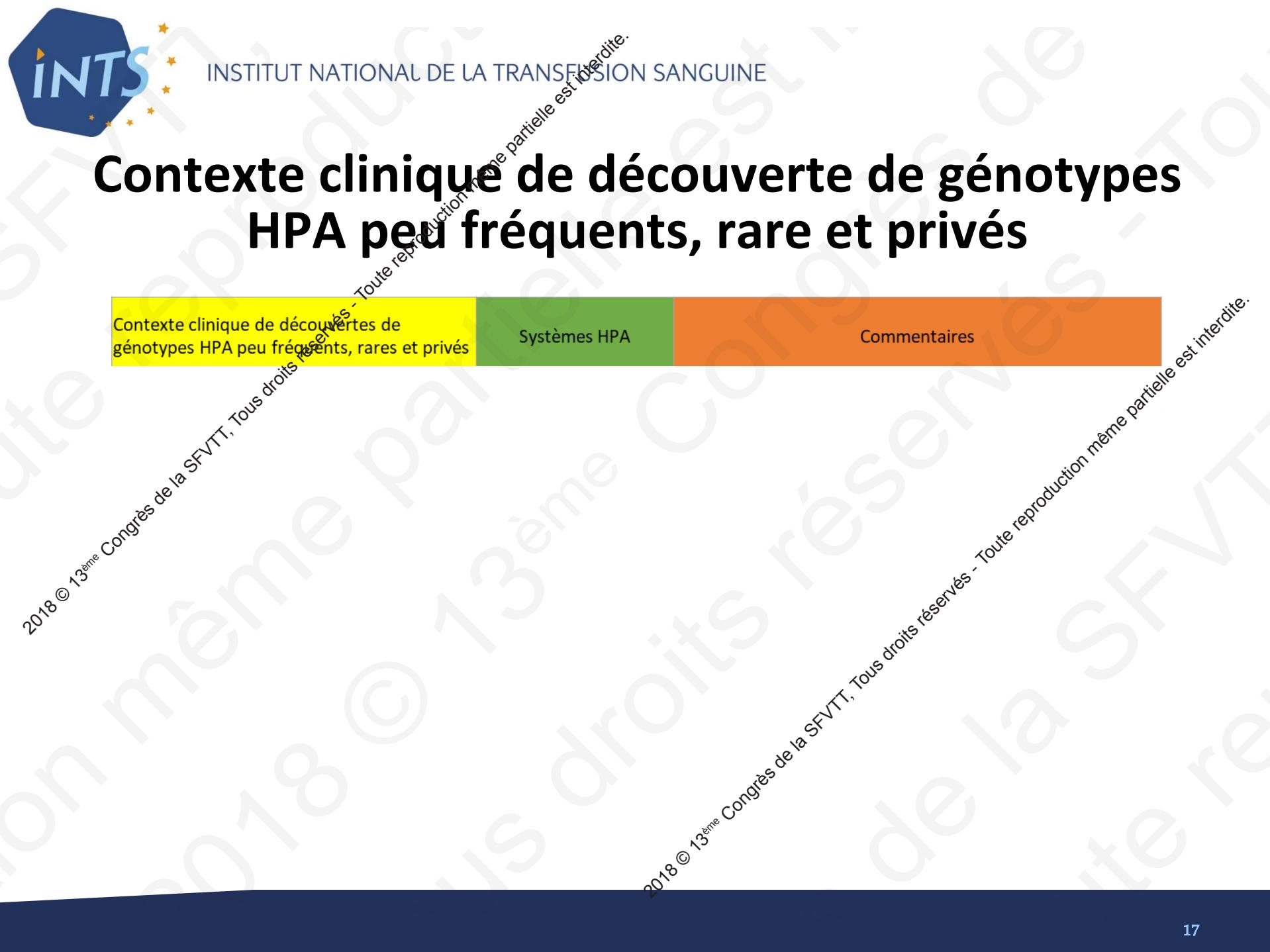
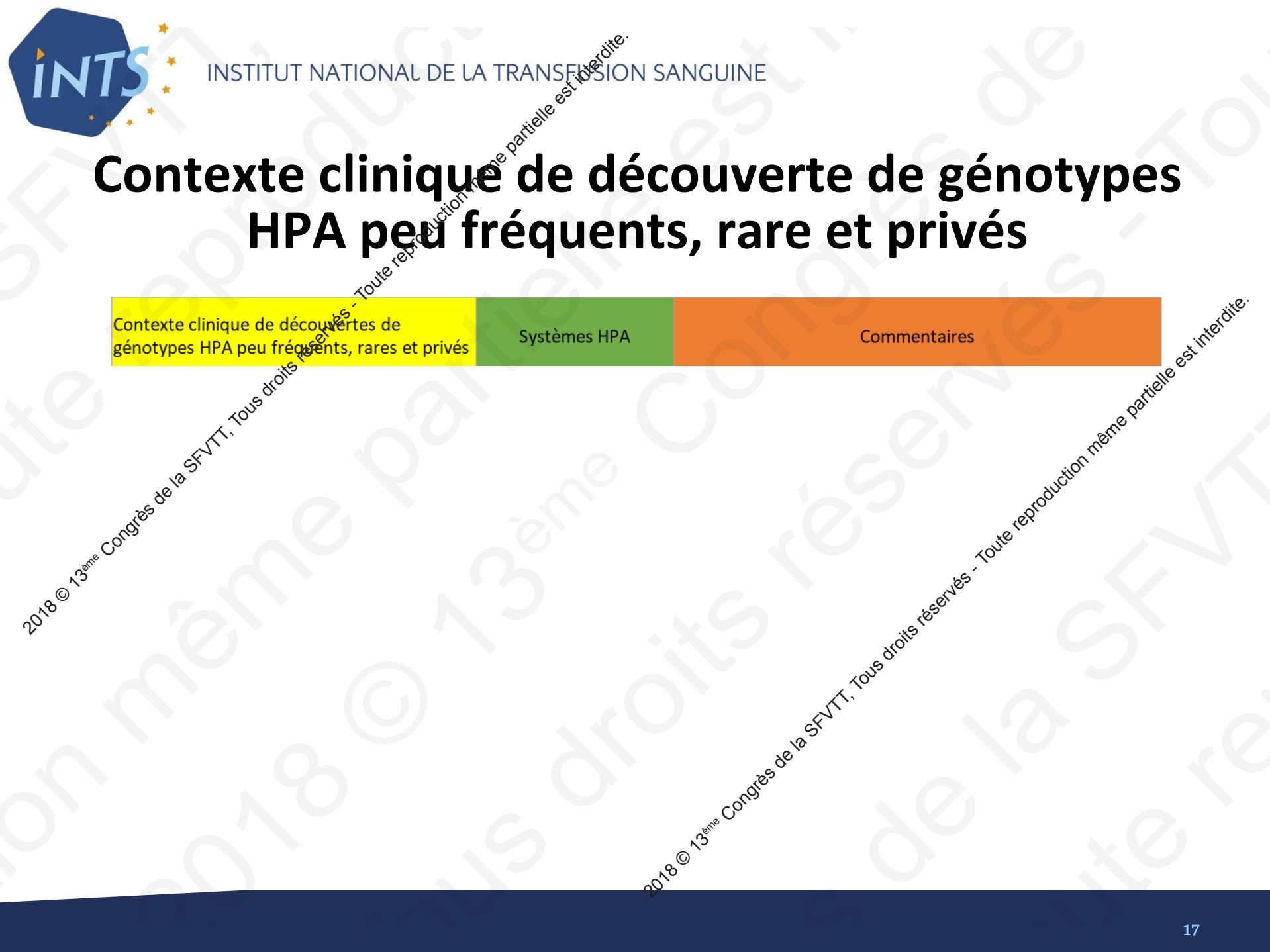
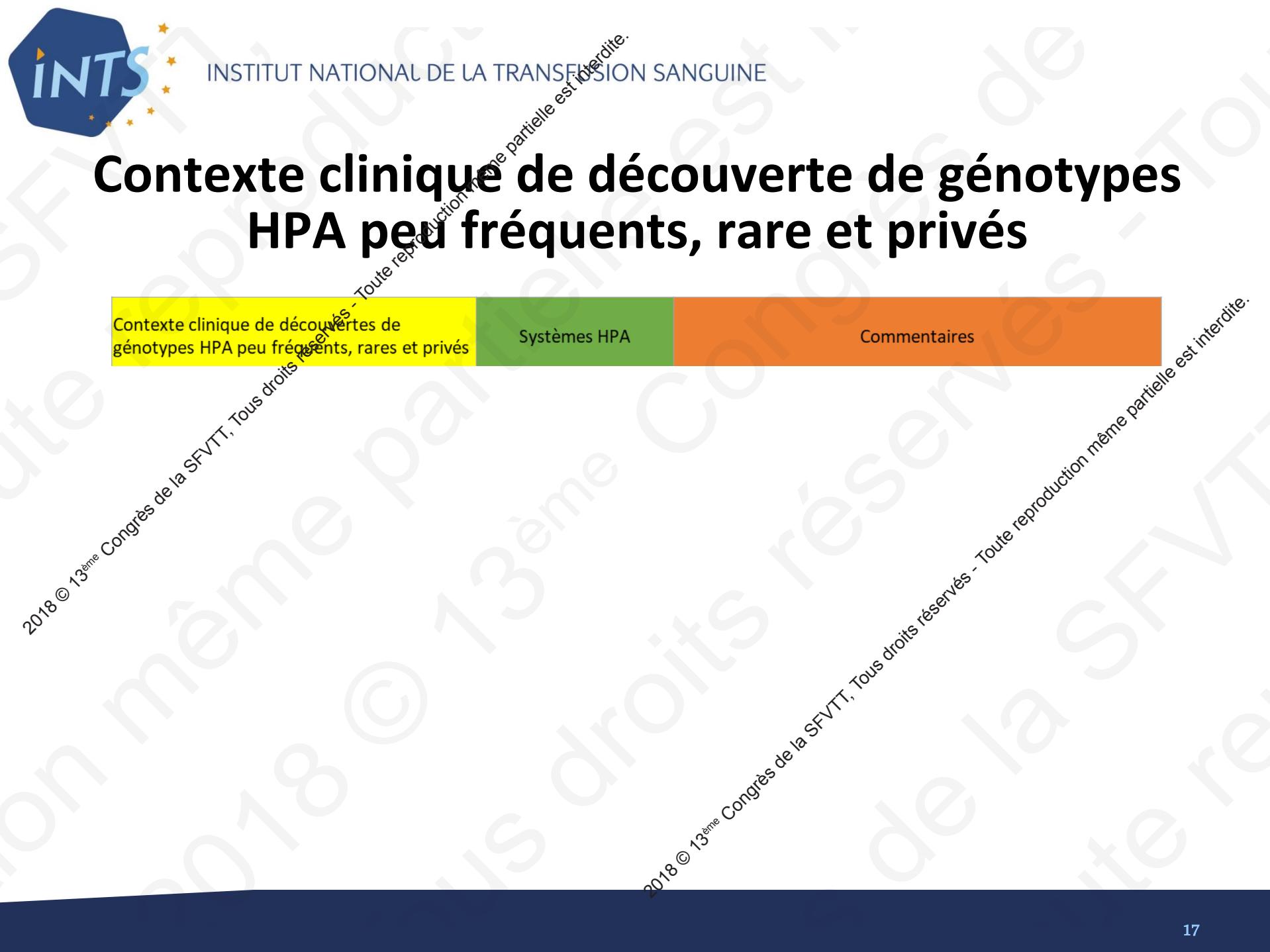
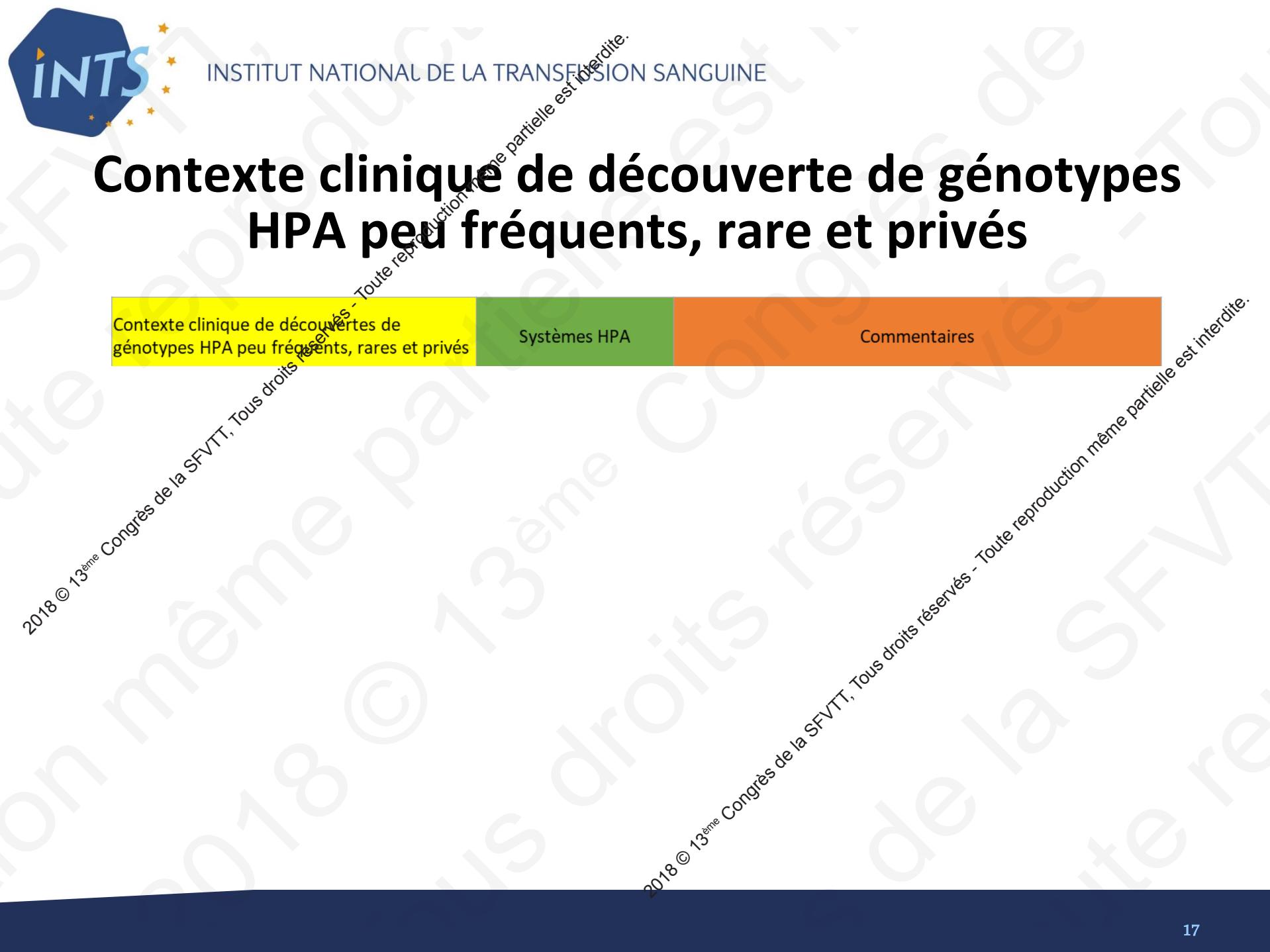
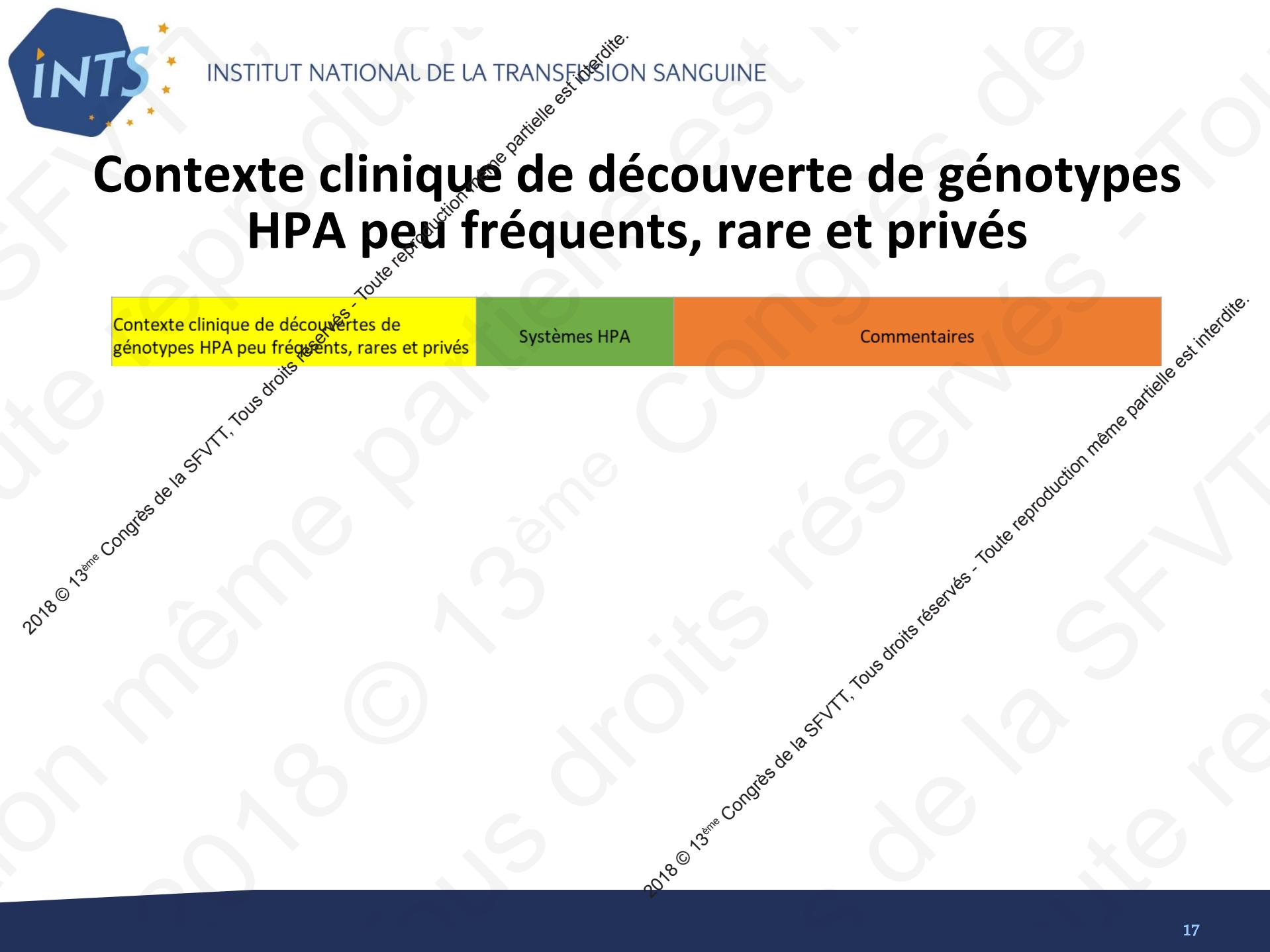
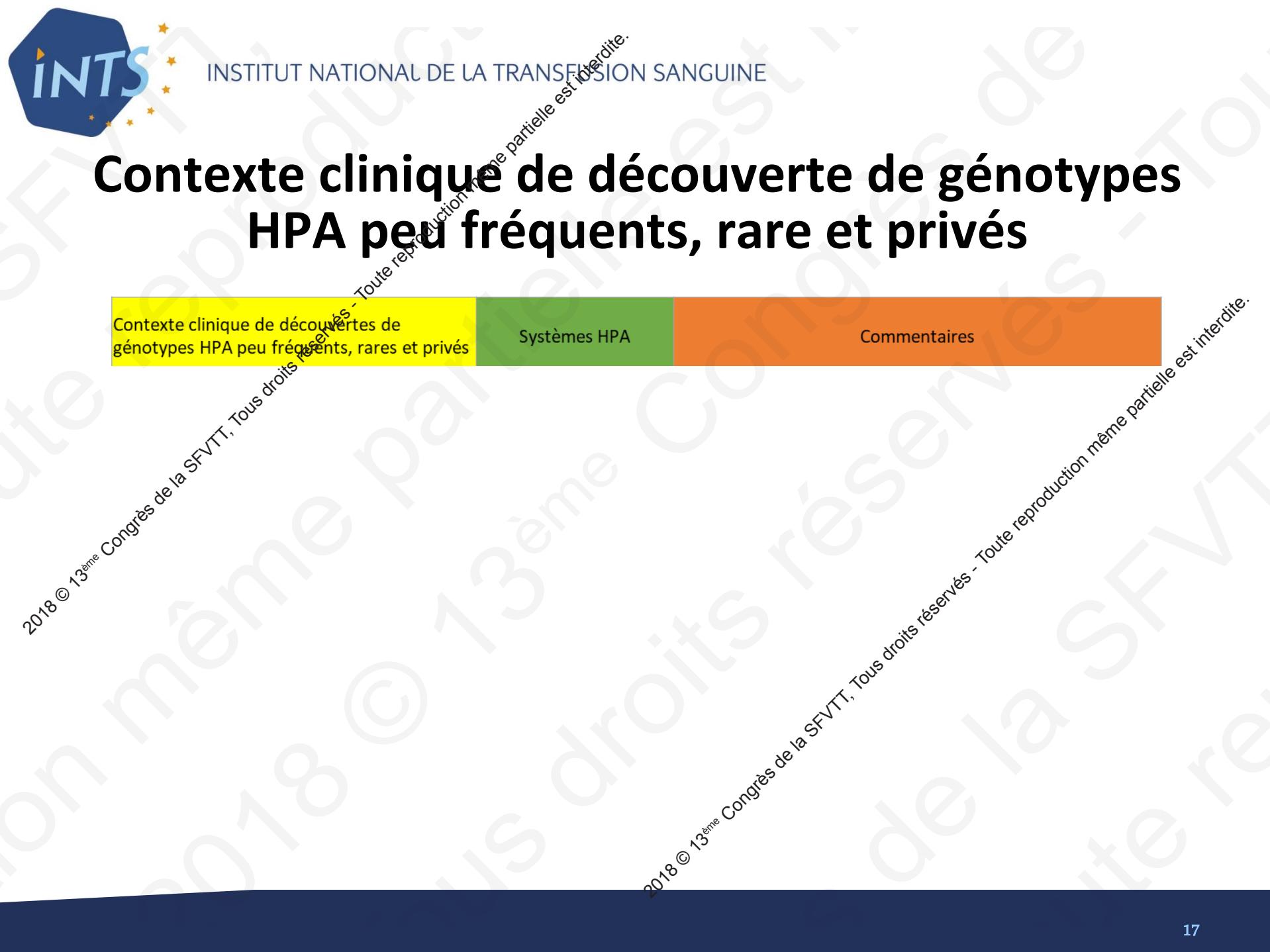
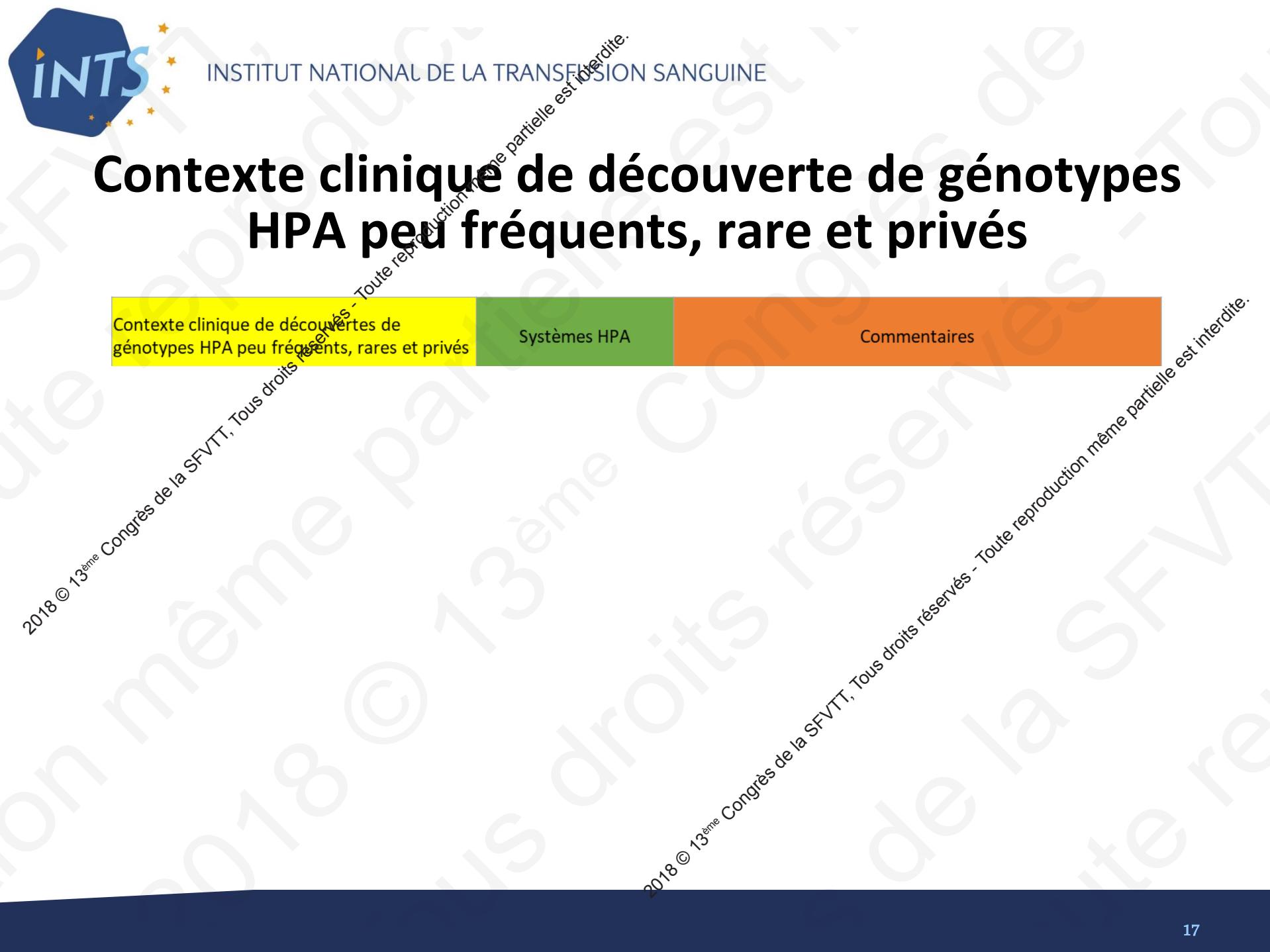
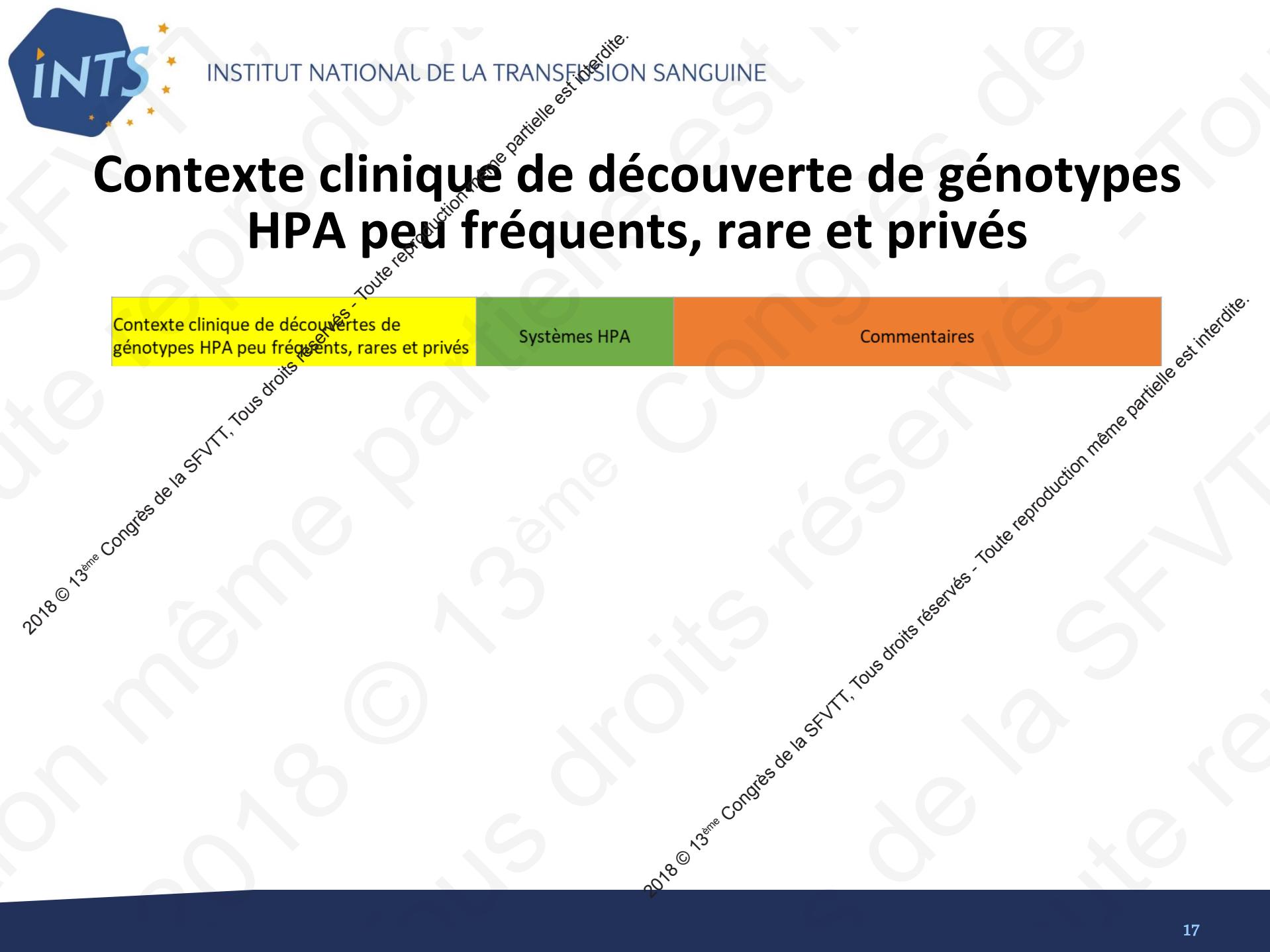
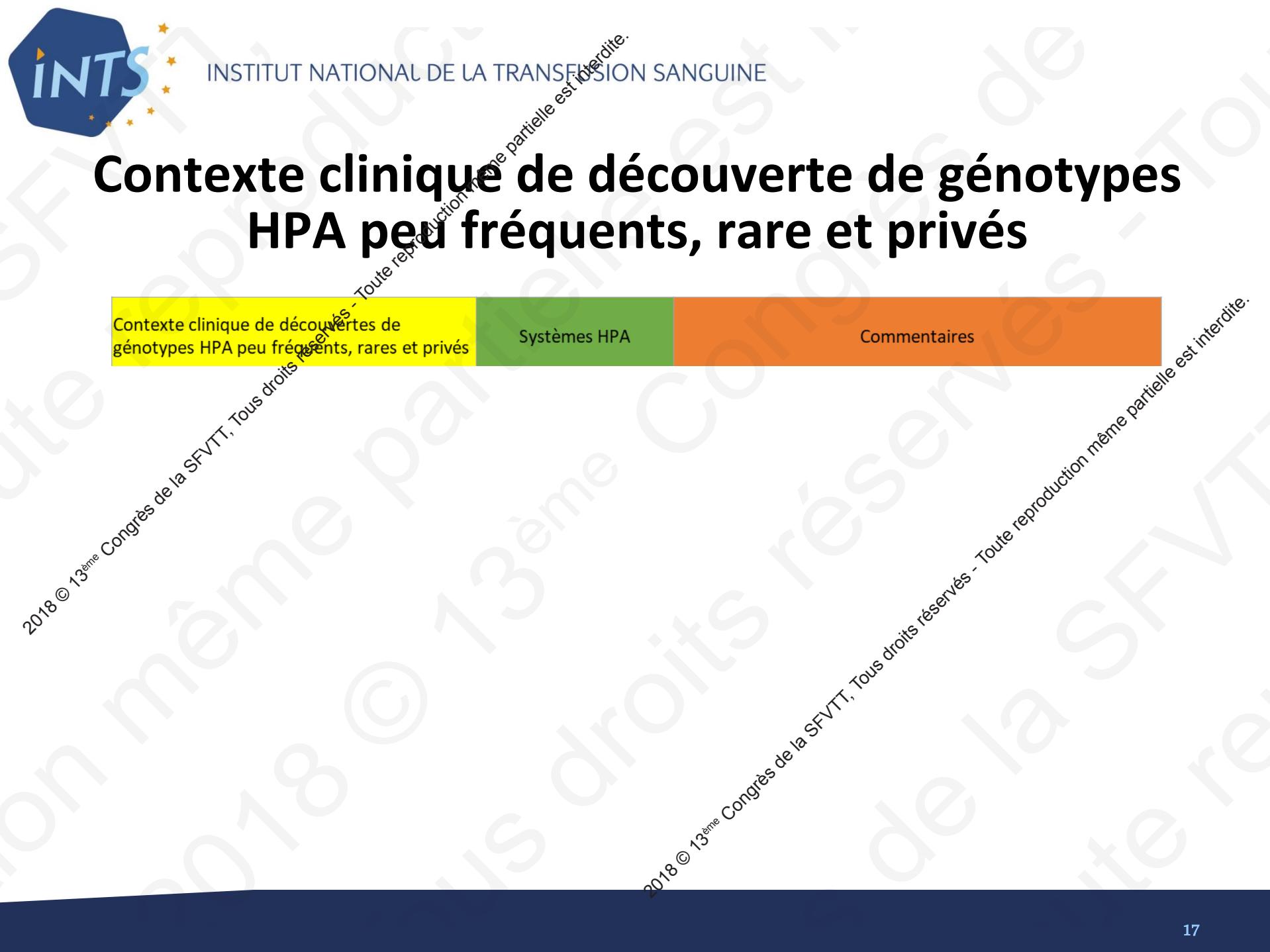
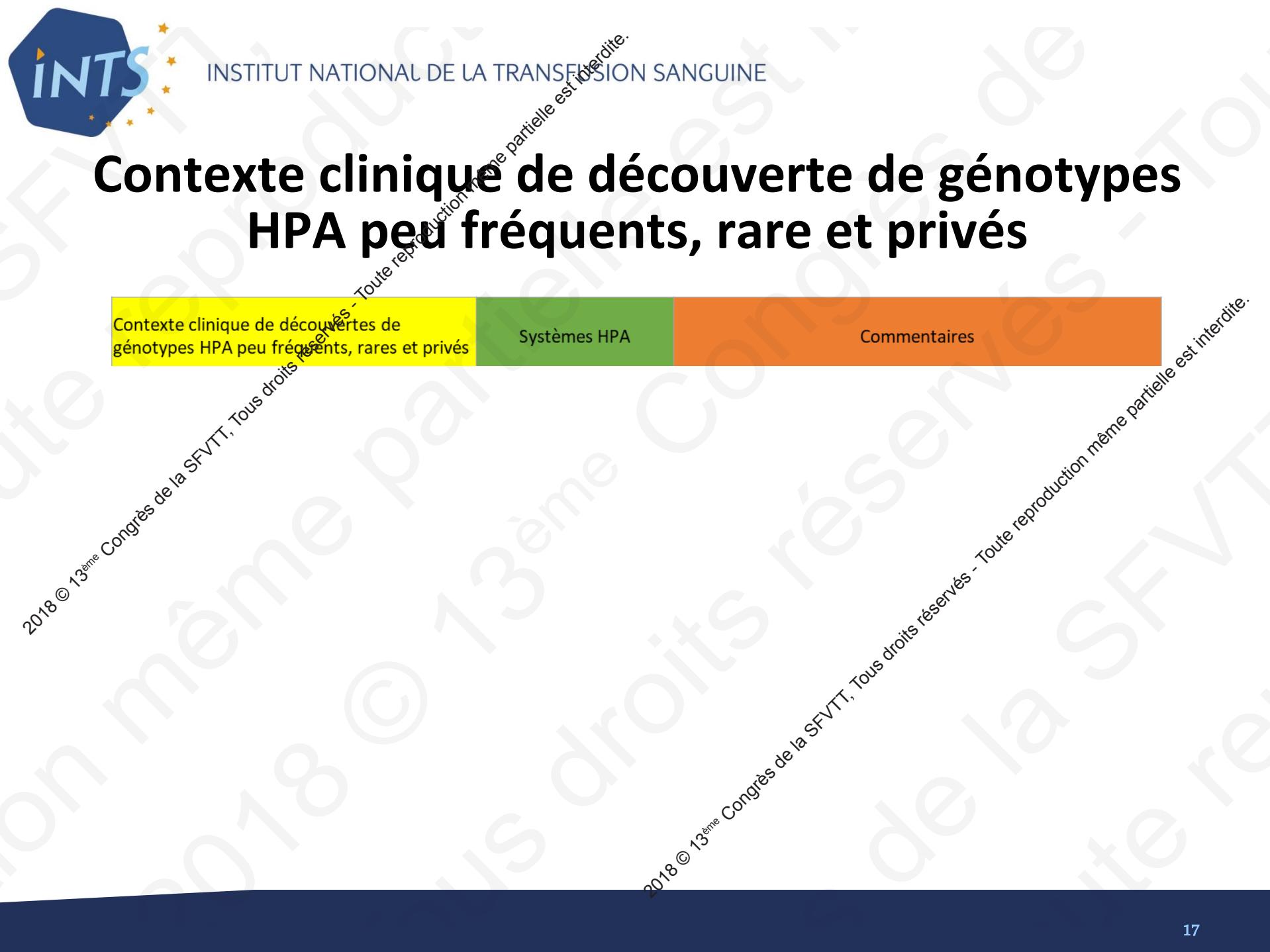
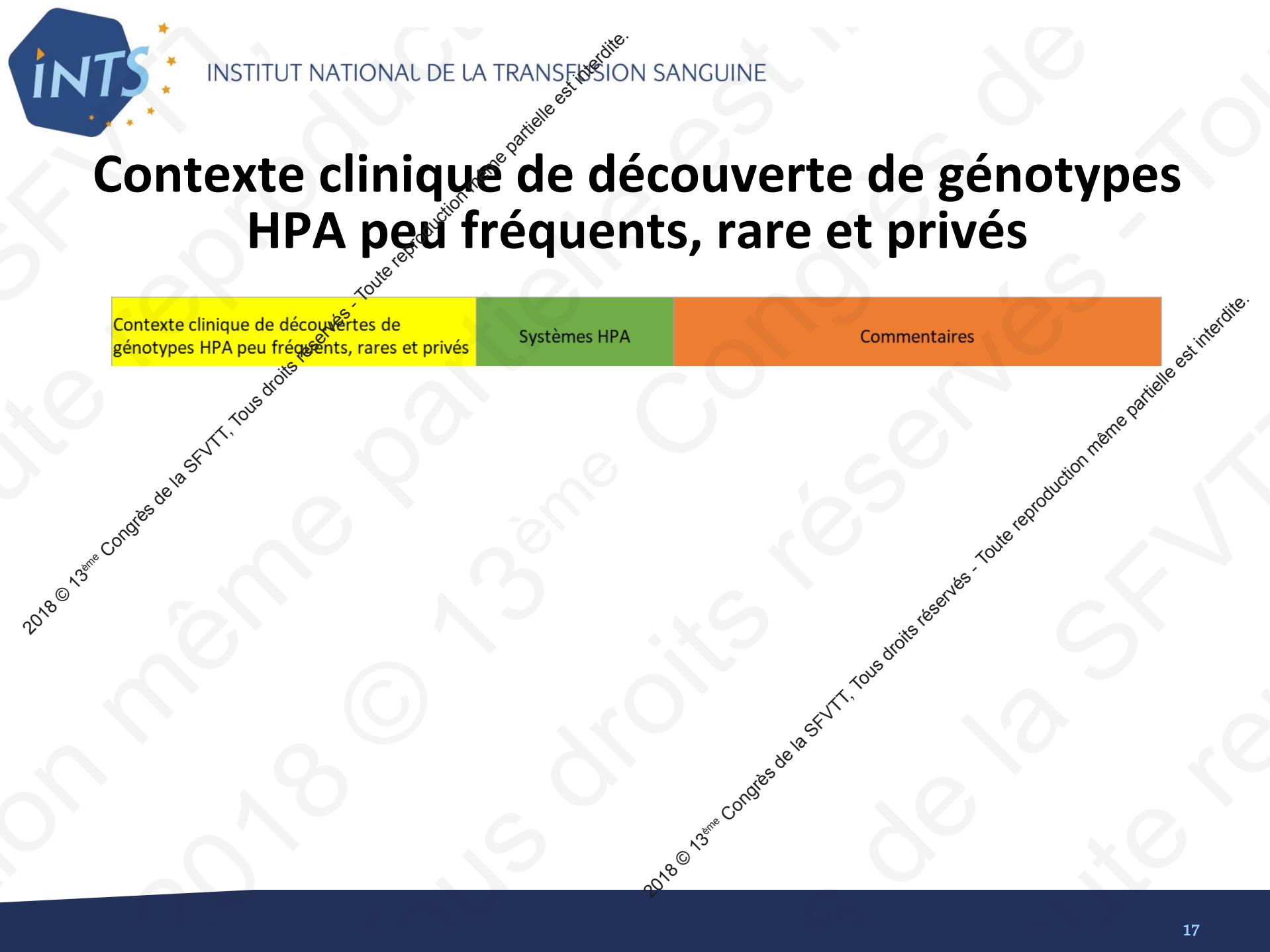
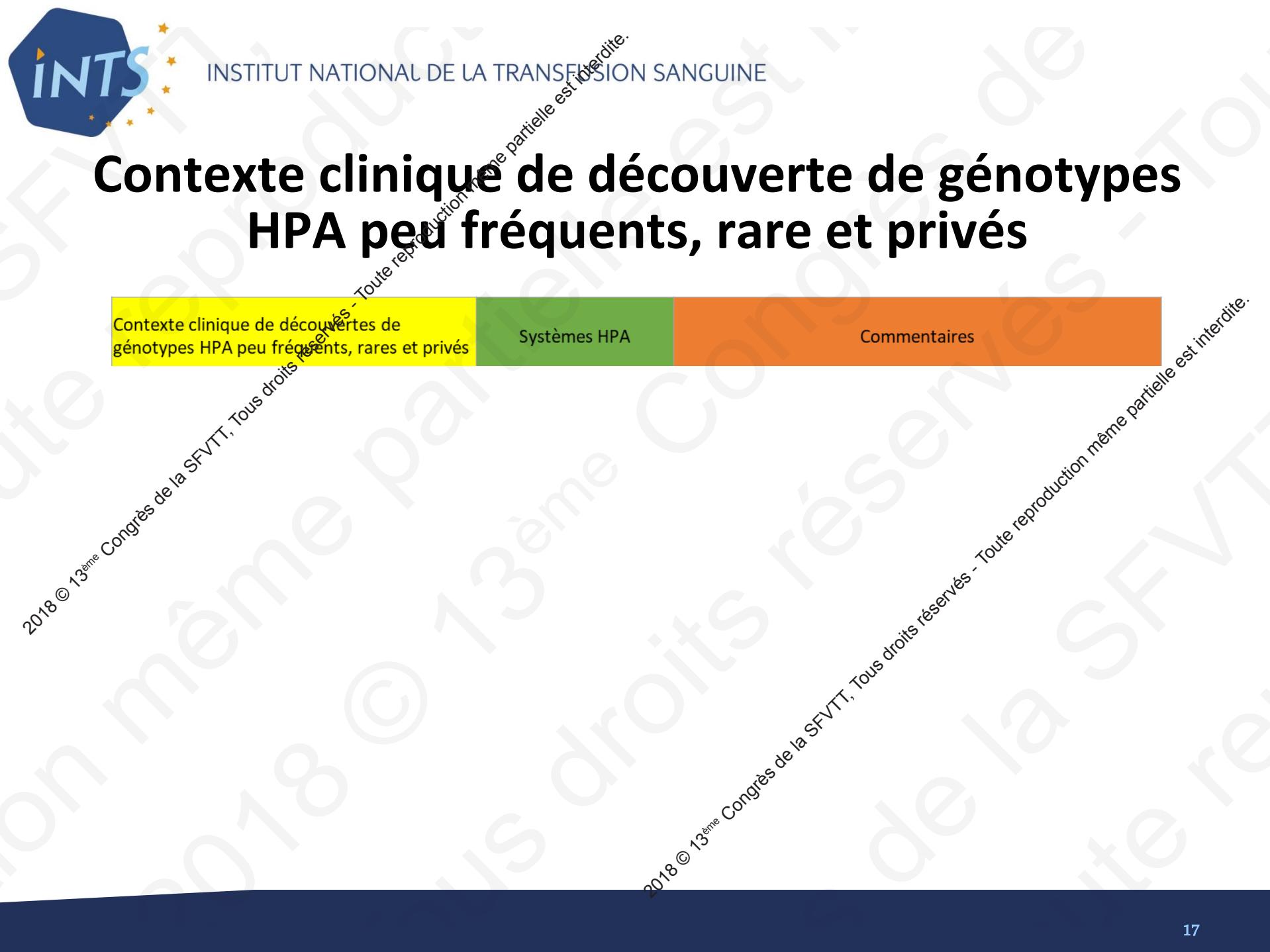
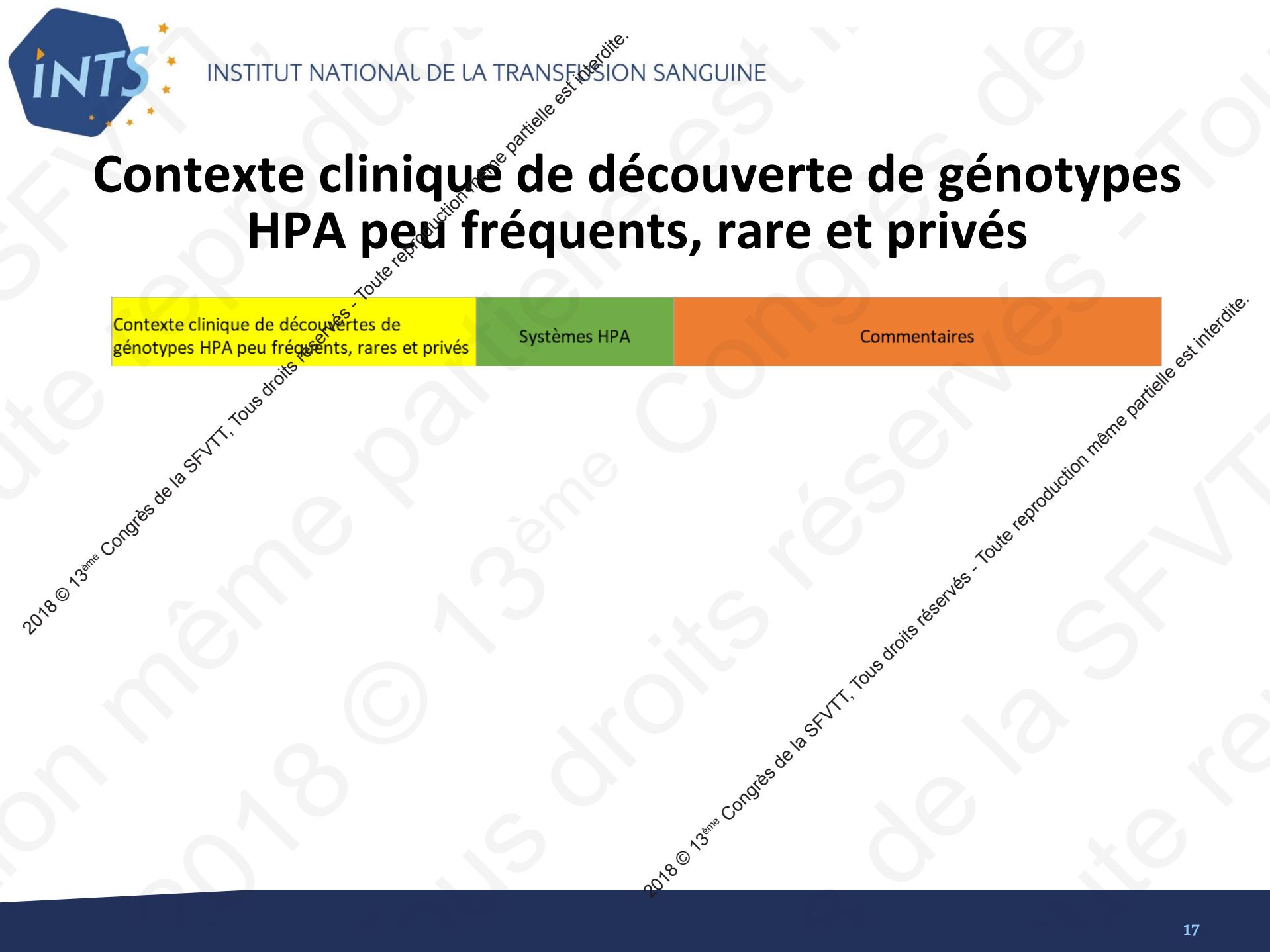
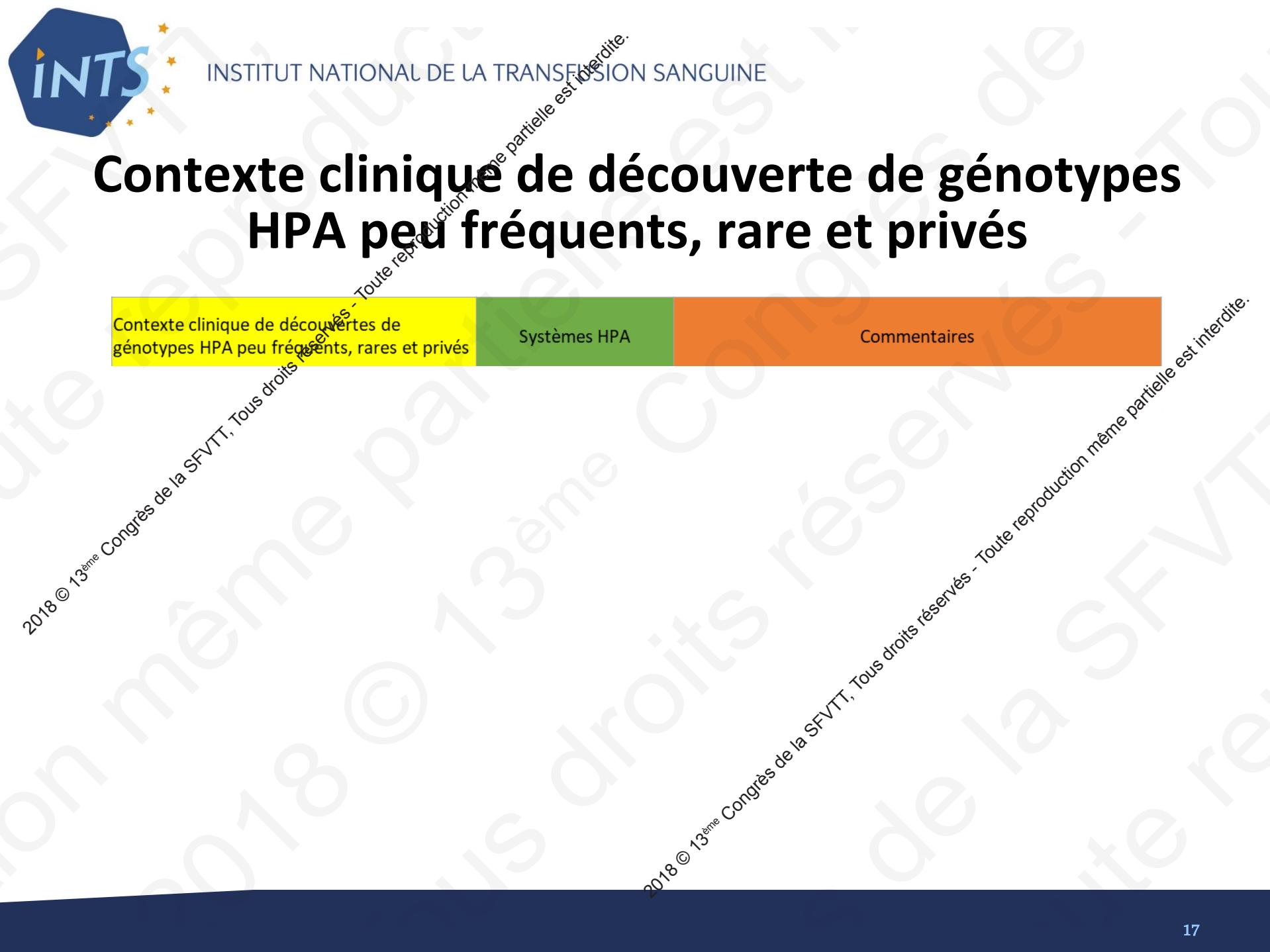
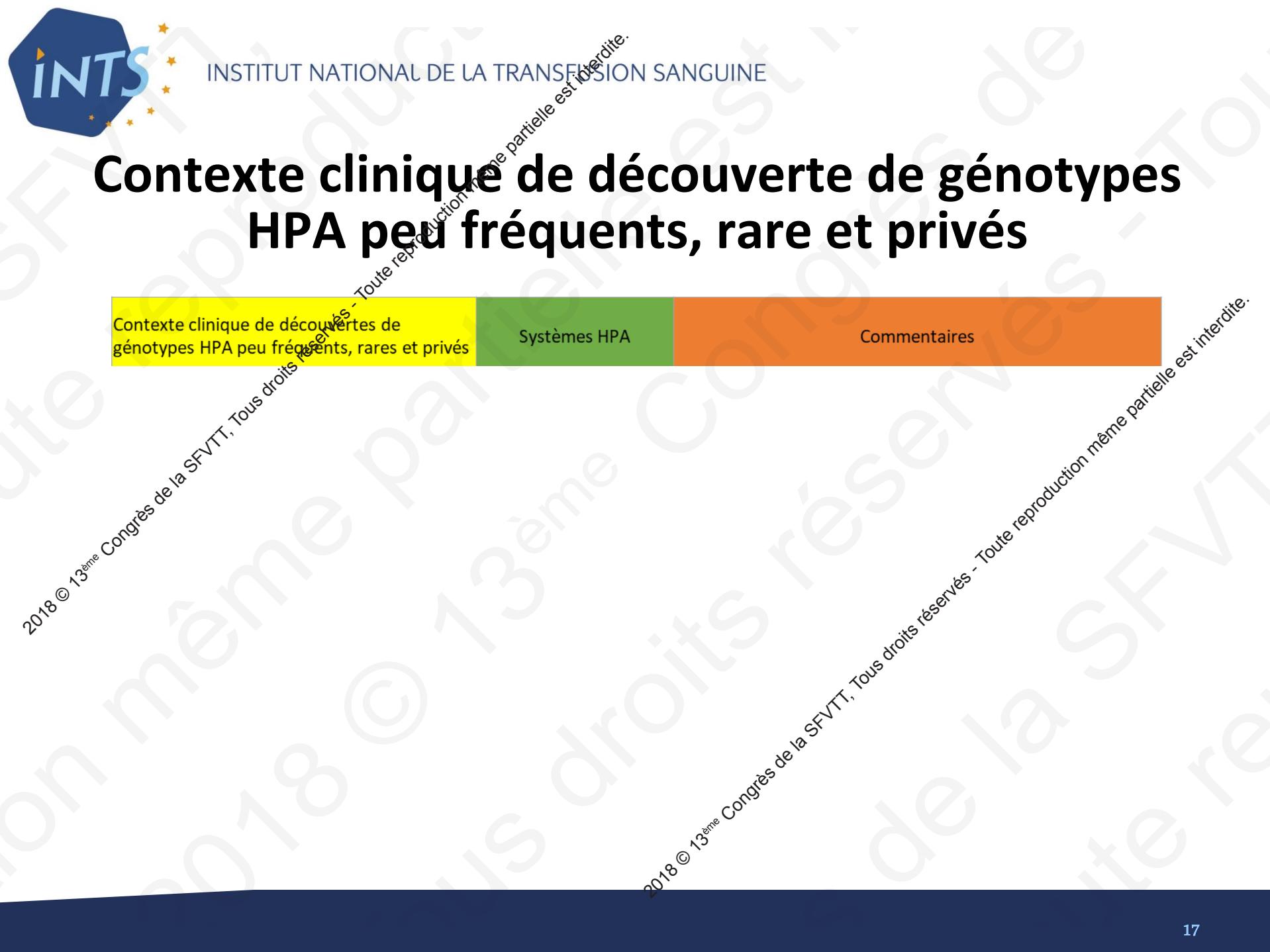
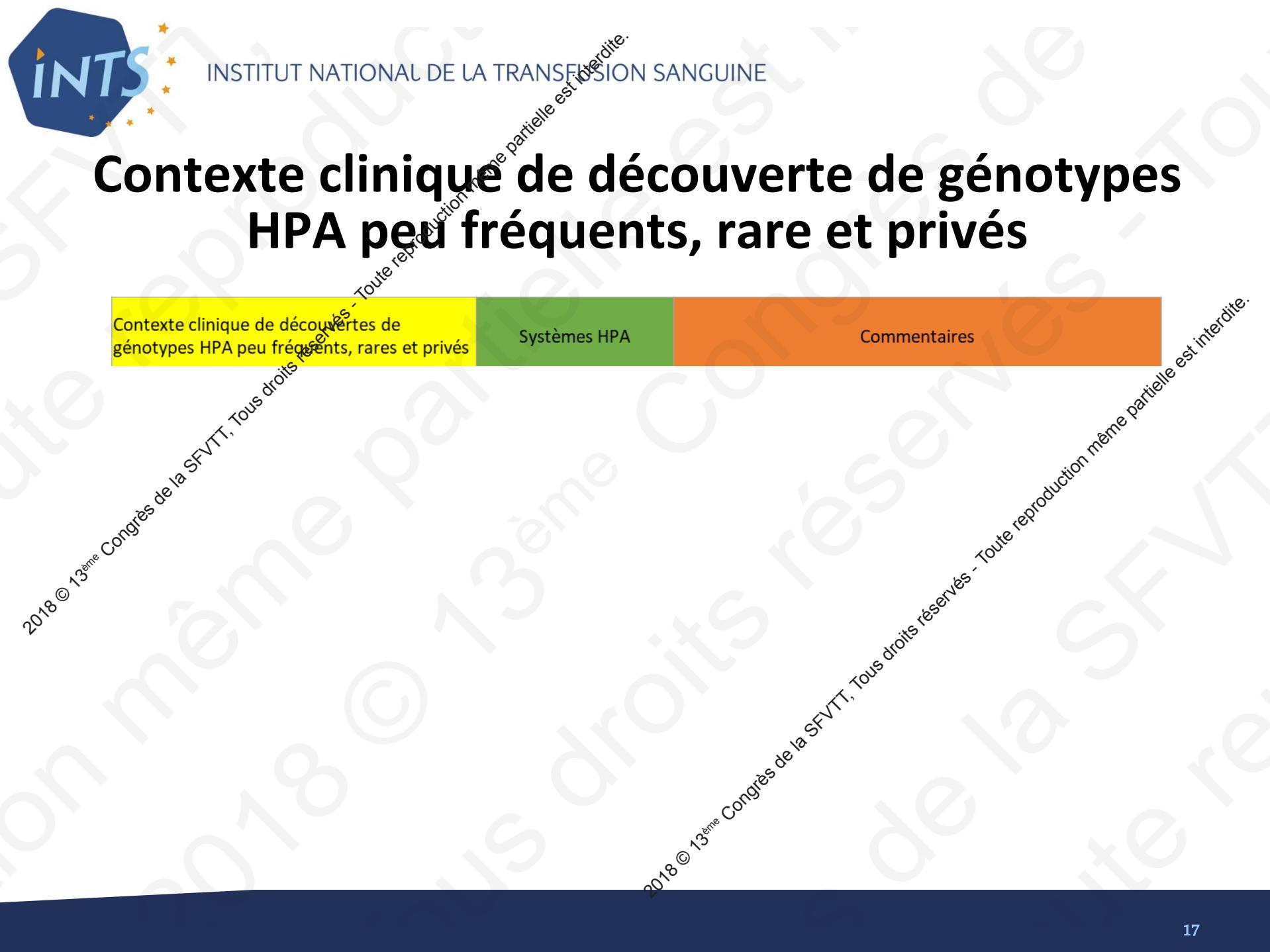
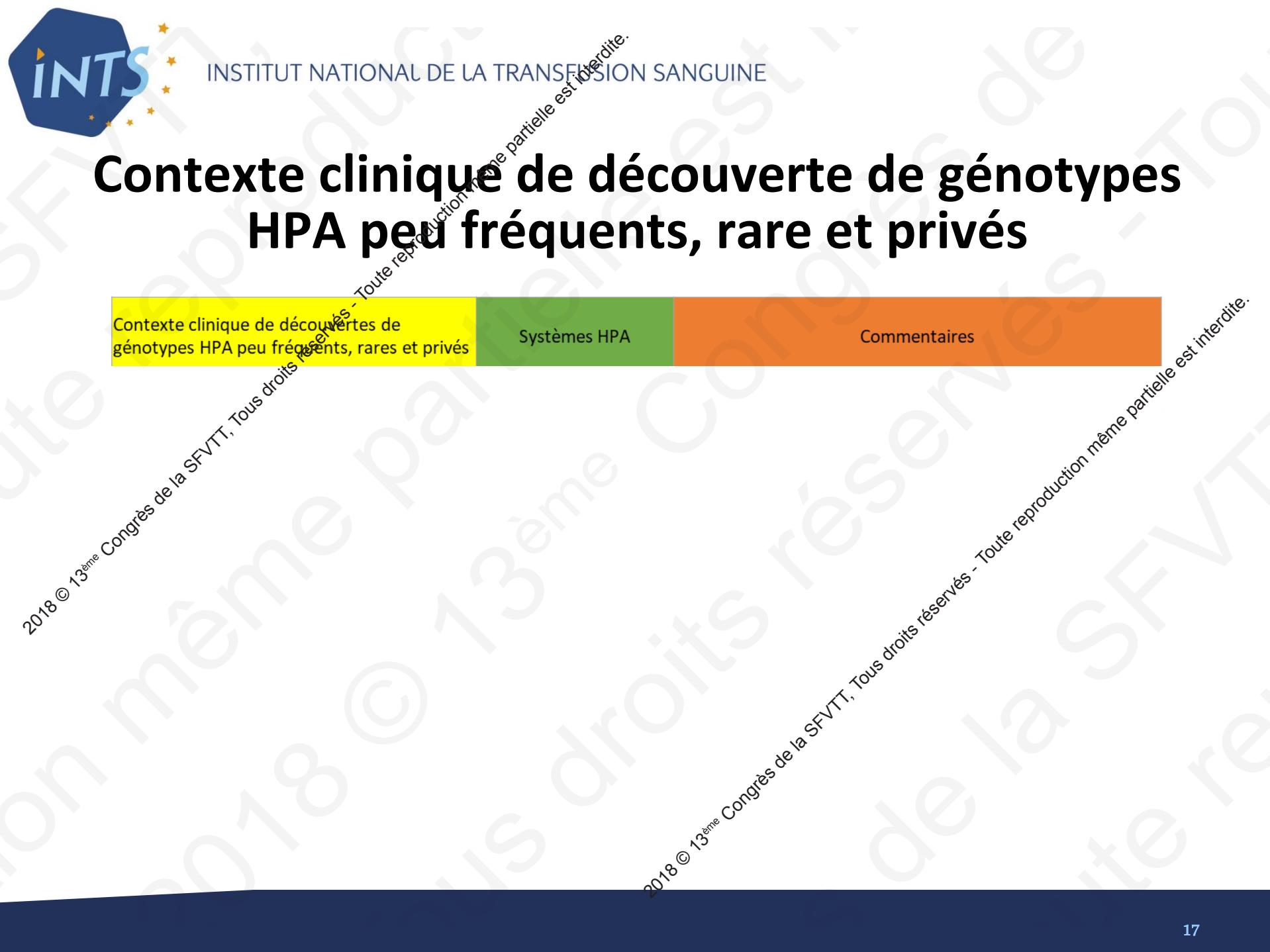
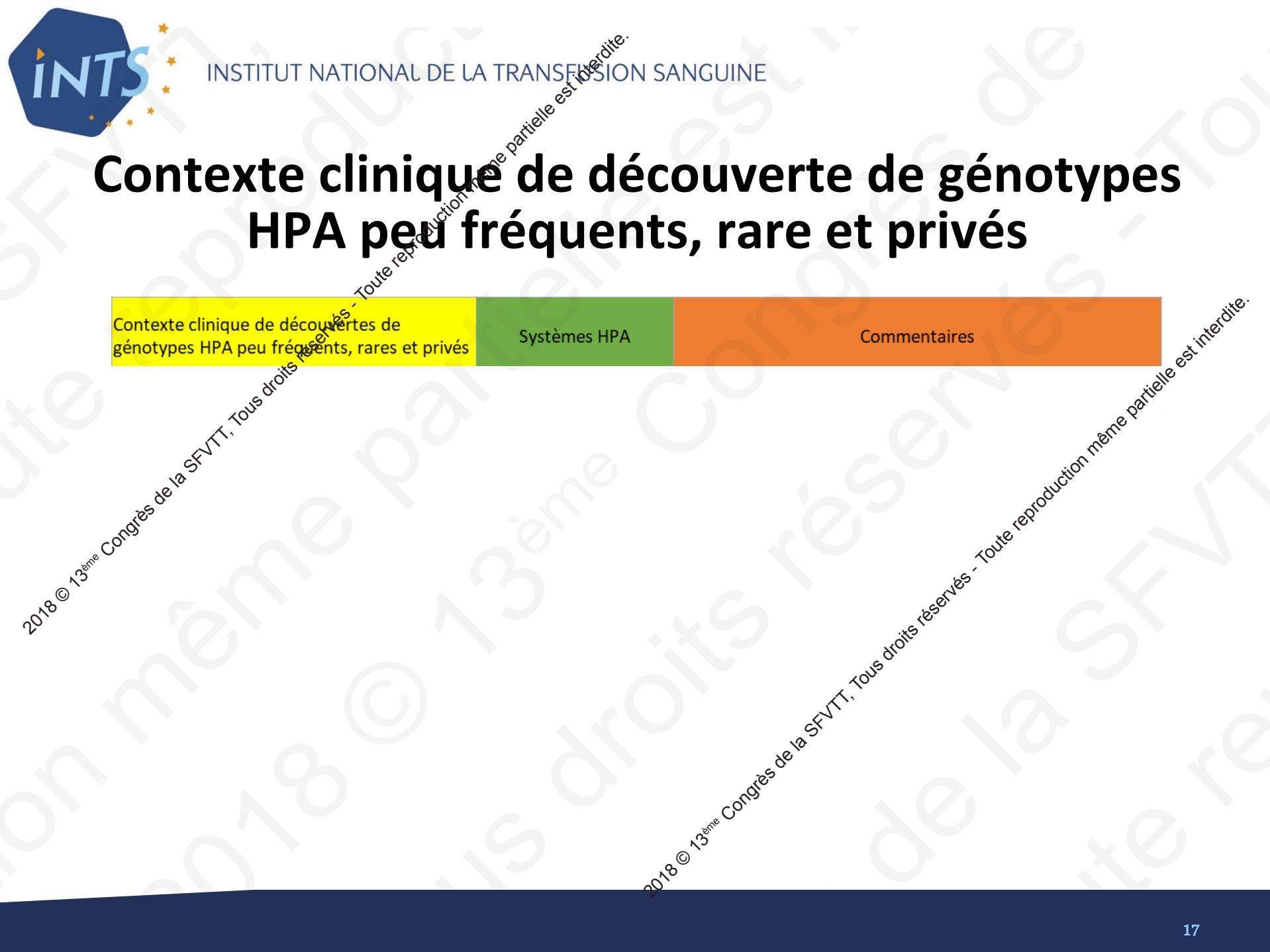
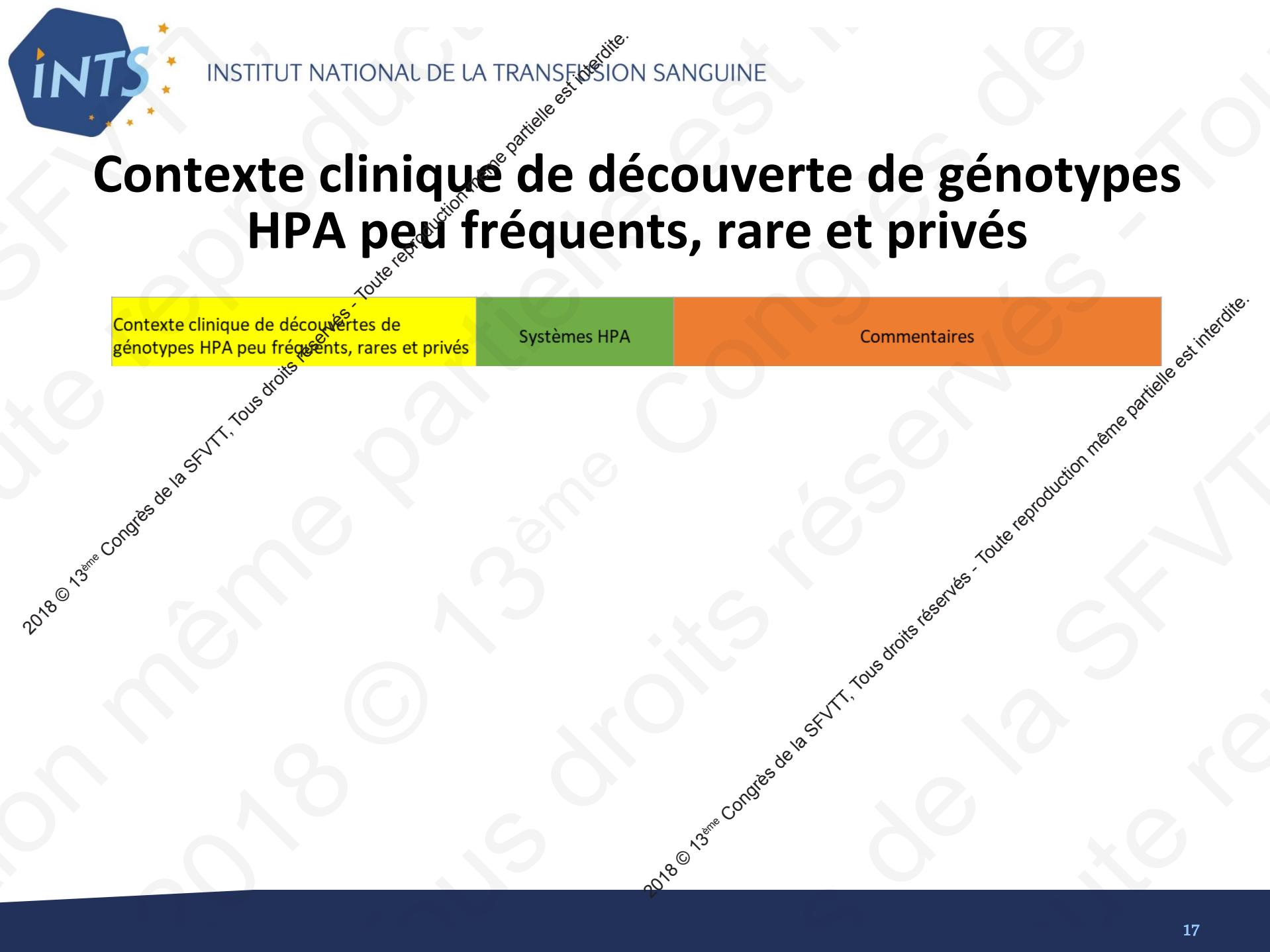
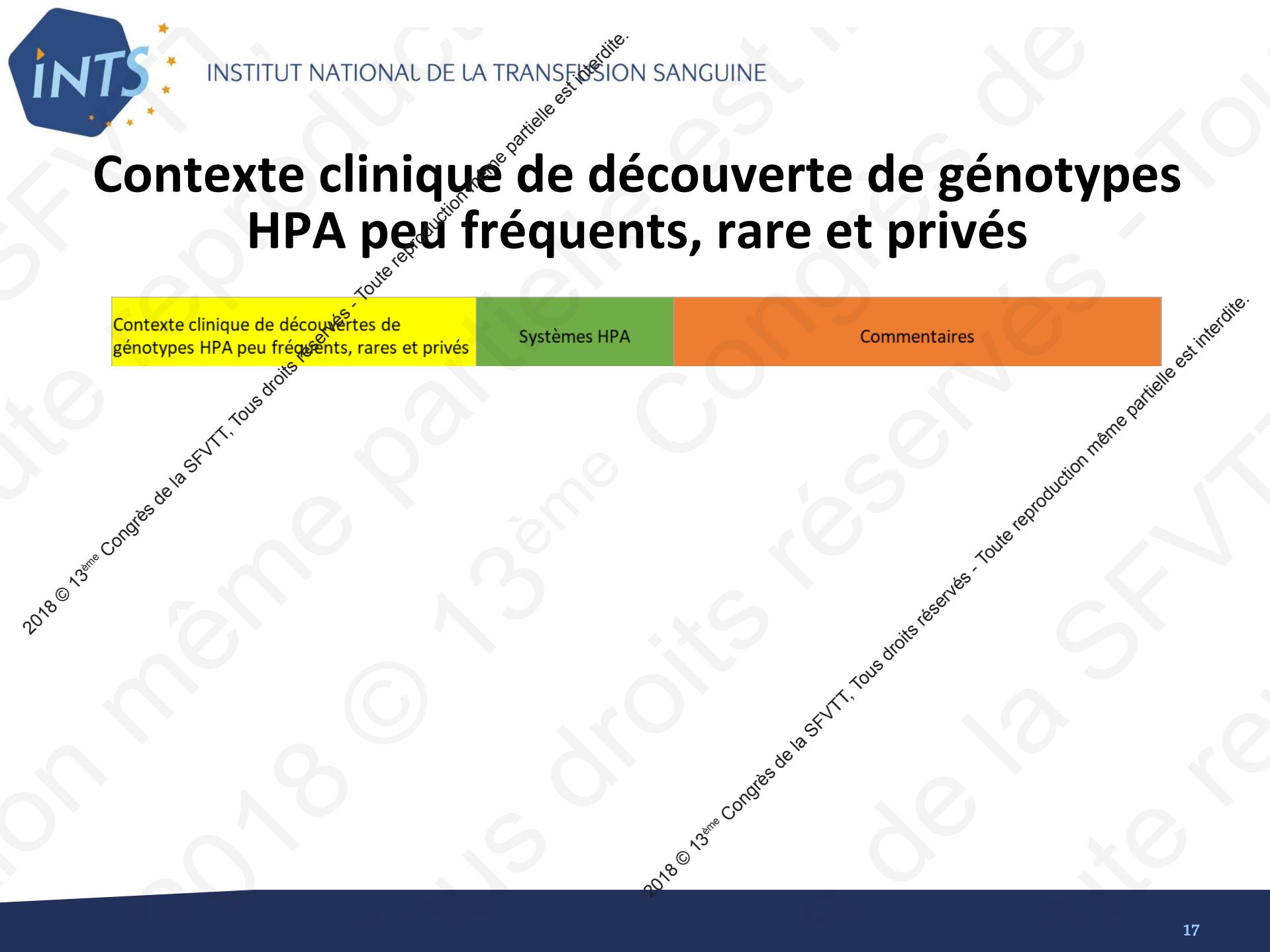












CONCLUSION

→ Dans le contexte de FNAIT ou de NAIT, l'utilisation d'un large panel d'antigènes incluant des systèmes HPA peu fréquents, rares ou privés a du sens au regard de la mixité ethnique et en particulier dans le cas où aucune incompatibilité HPA courante n'a été mise en évidence en dépit d'un contexte clinique évocateur.



CONCLUSION

- Selon nos résultats, nous avons identifié des antigènes plaquettaires peu fréquents et rares dans 1%.
- Cette stratégie augmente la possibilité d'identifier des incompatibilités HPA (FNAIT) et permet de guider les explorations sérologiques pour identifier un allo anticorps potentiel.

RECOMMENDATIONS AND GUIDELINES

Investigations for fetal and neonatal alloimmune thrombocytopenia: communication from the SSC of the ISTH

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D.M. ARNOLD††††§§§ FOR THE SUBCOMMITTEE ON PLATELET IMMUNOLOGY

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Recommendation 3: The mother and father should be tested for a panel of HPA alleles that reflects local genetic diversity.

The panel of antigens should include HPA-1, -2, -3, -4, -5, -6, **-9** and -15 alleles and may vary depending on the antigen frequency of the geographical region or the population served by the laboratory. Reference laboratories represented by the panel use the following validated PCR techniques for genotyping: restriction fragment length polymorphism (RFLP), sequence-specific primer (SSP), real-time (RT), next-generation sequencing (**NGS**) or bead-chip techniques. Non-invasive prenatal diagnosis could be performed by NGS, RT PCR or droplet **Digital PCR** [13–15]. Molecular genotyping has mostly replaced platelet phenotyping; however, phenotyping may be required to resolve discrepant or weak results on genotyping.

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- Sébastien Philippe
- Jeannine Quesne
- Nathalie Seidner



