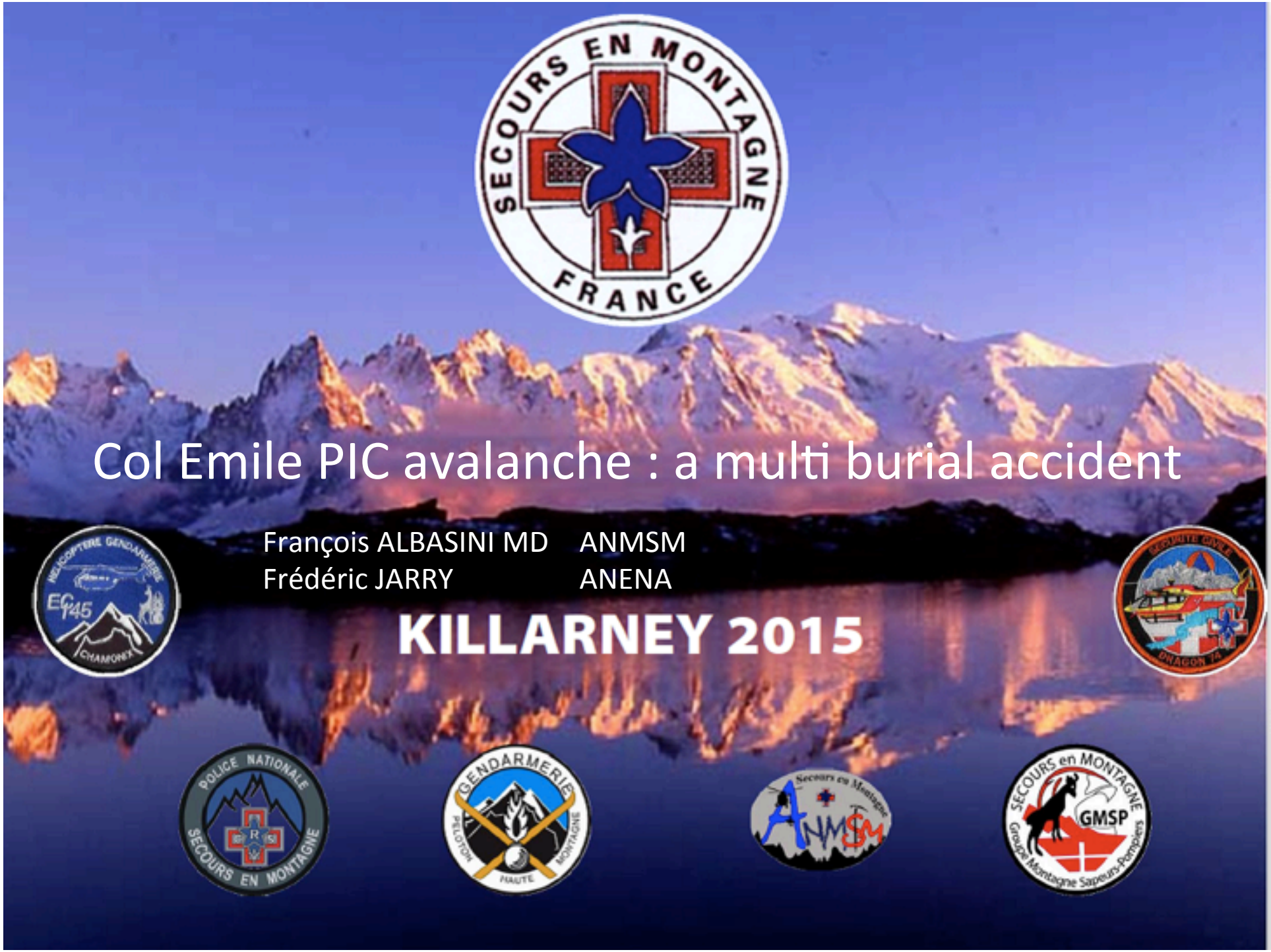


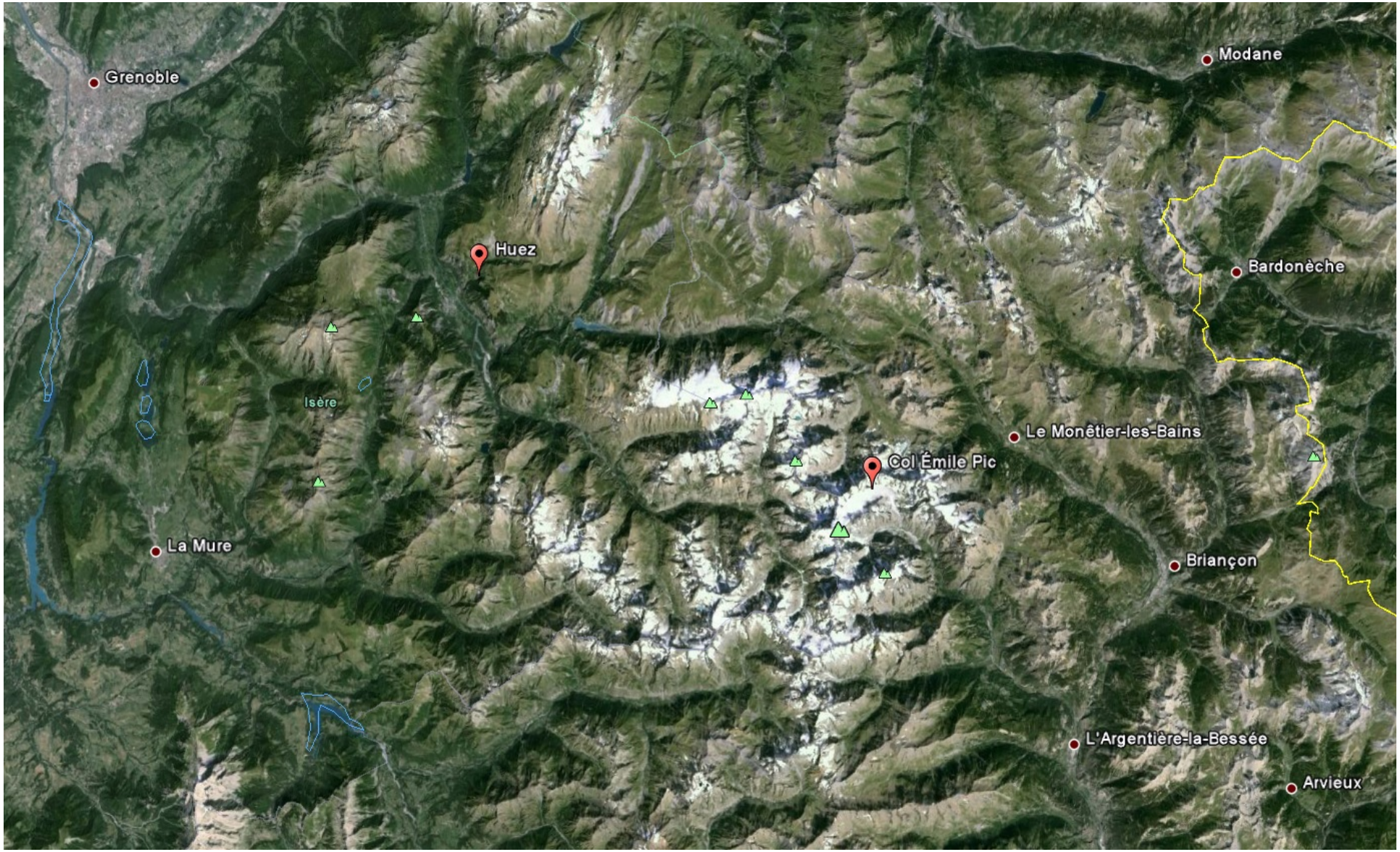
Col Emile PIC avalanche : a multi burial accident

François ALBASINI MD ANMSM
Frédéric JARRY ANENA

KILLARNEY 2015

Avalanche accident at col Emile Pic (Ecrins massif) – April 1st, 2015.

⇒ 12 skitourers caught by the avalanche
⇒ 3 fatalities / 1 injured



Avalanche accident at col Emile Pic (Ecrins massif) – April 1st, 2015.

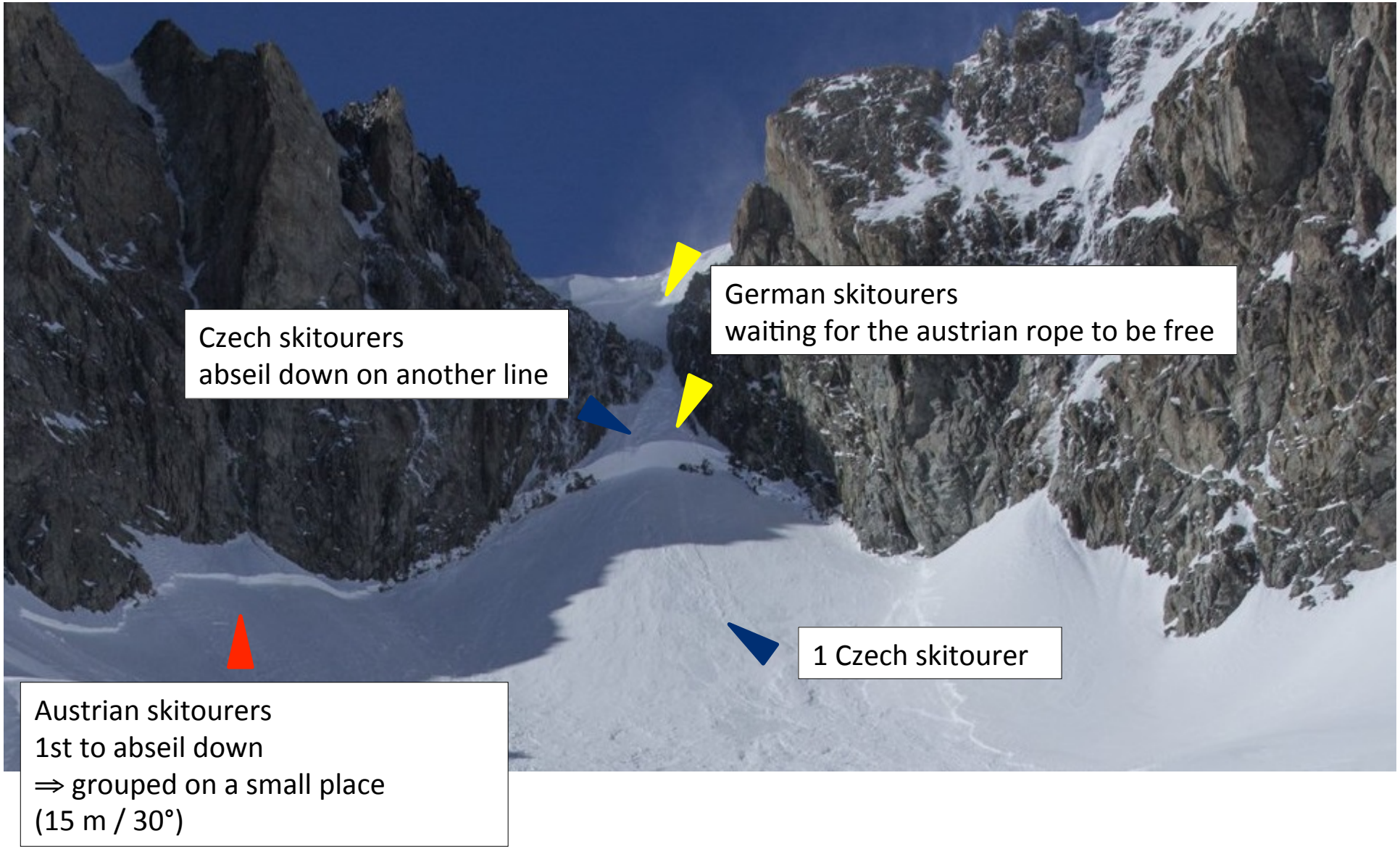
Circumstances :

- Col Emile Pic 3483 m asl.
- approx. 2.15/2.30 pm
- 11 skitourers from OAV (2 MG)
- 3 Czech skitourers
- 4 German skitourers

⇒Ecrins Refuge

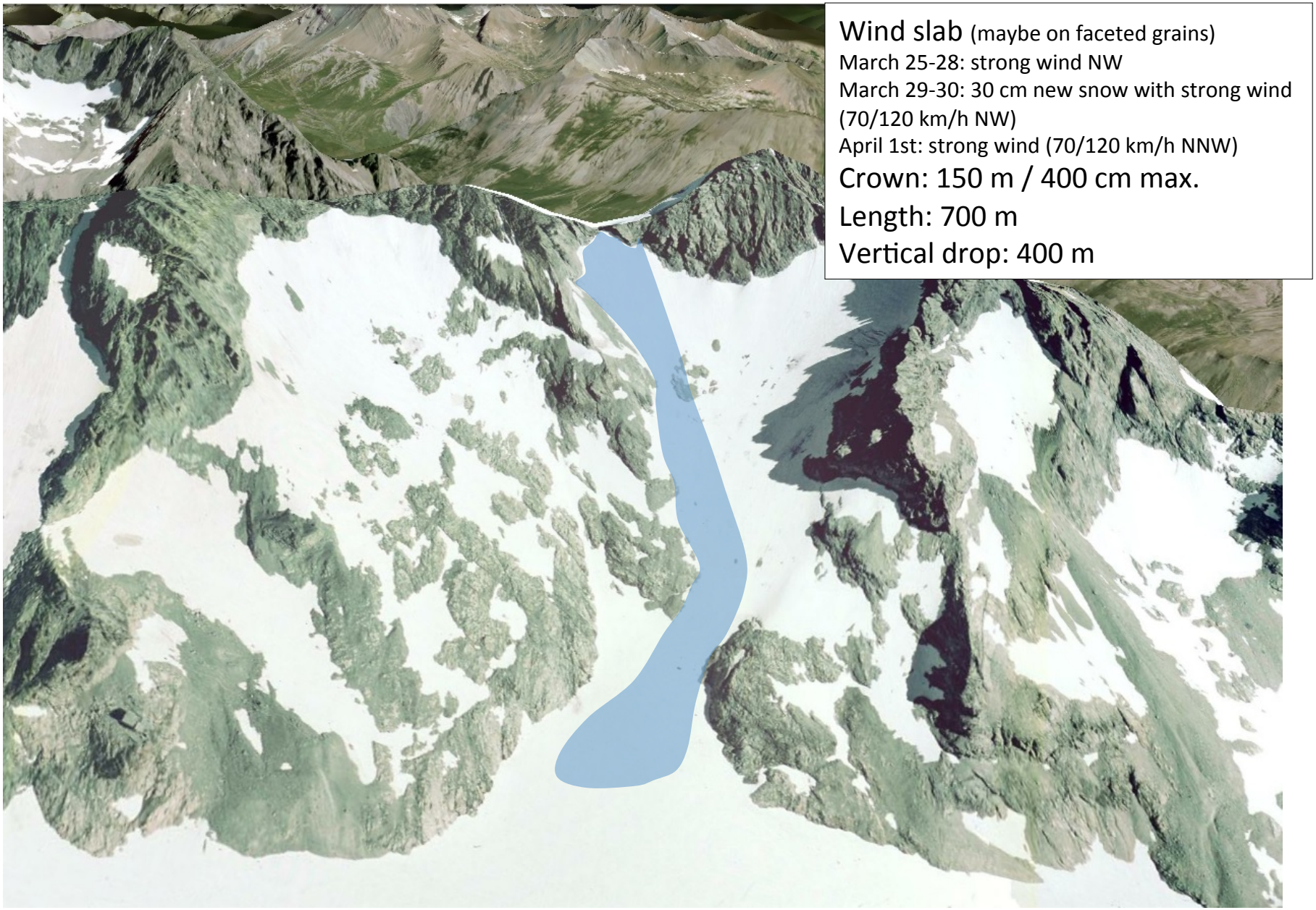
Avalanche accident at col Emile Pic (Ecrins massif) – April 1st, 2015.

Avalanche: 2.45 pm



Avalanche accident at col Emile Pic (Ecrins massif) – April 1st, 2015.

Avalanche:

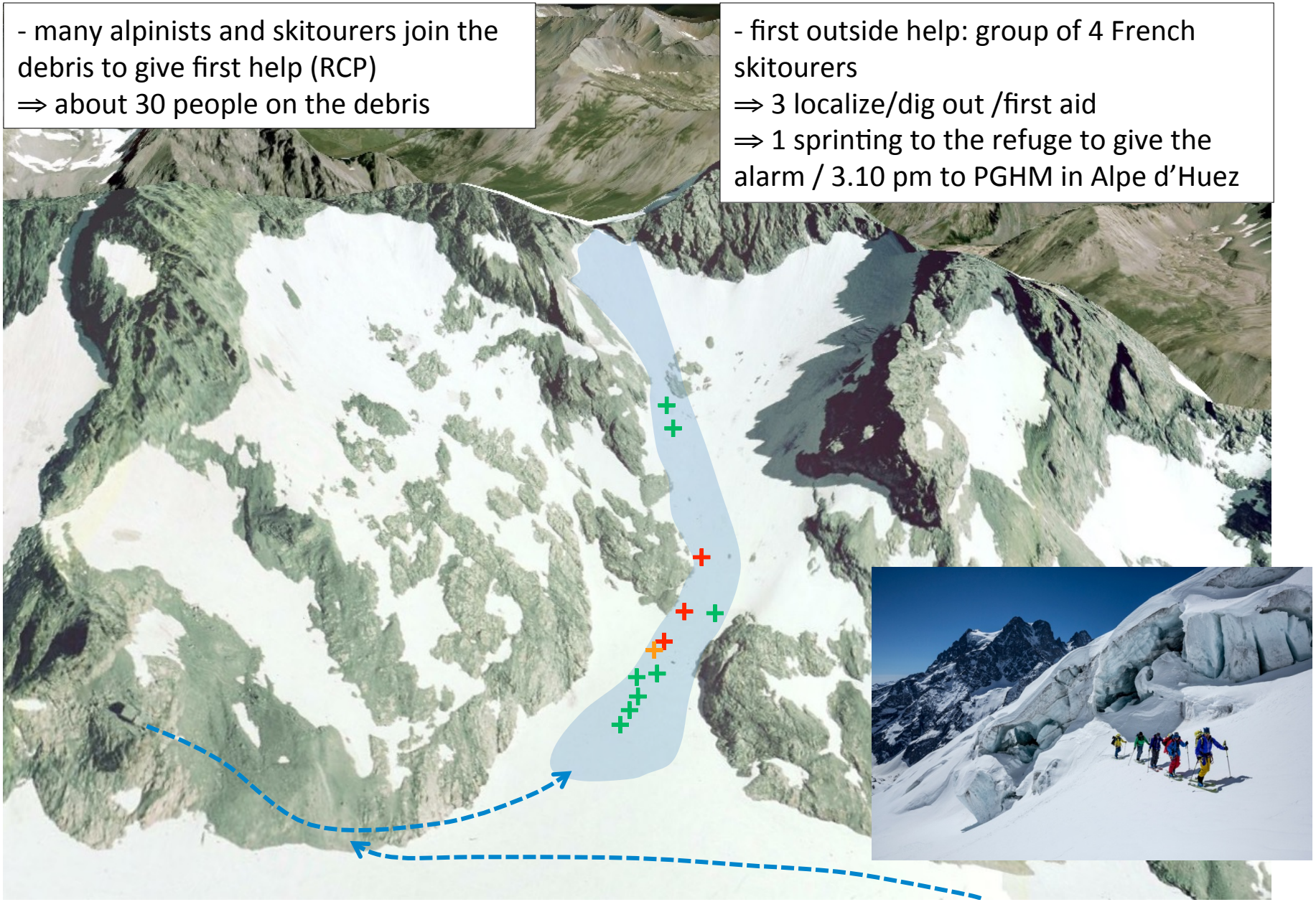


Avalanche accident at col Emile Pic (Ecrins massif) – April 1st, 2015.

First aid:

- many alpinists and skitourers join the debris to give first help (RCP)
⇒ about 30 people on the debris

- first outside help: group of 4 French skitourers
⇒ 3 localize/dig out /first aid
⇒ 1 sprinting to the refuge to give the alarm / 3.10 pm to PGHM in Alpe d'Huez

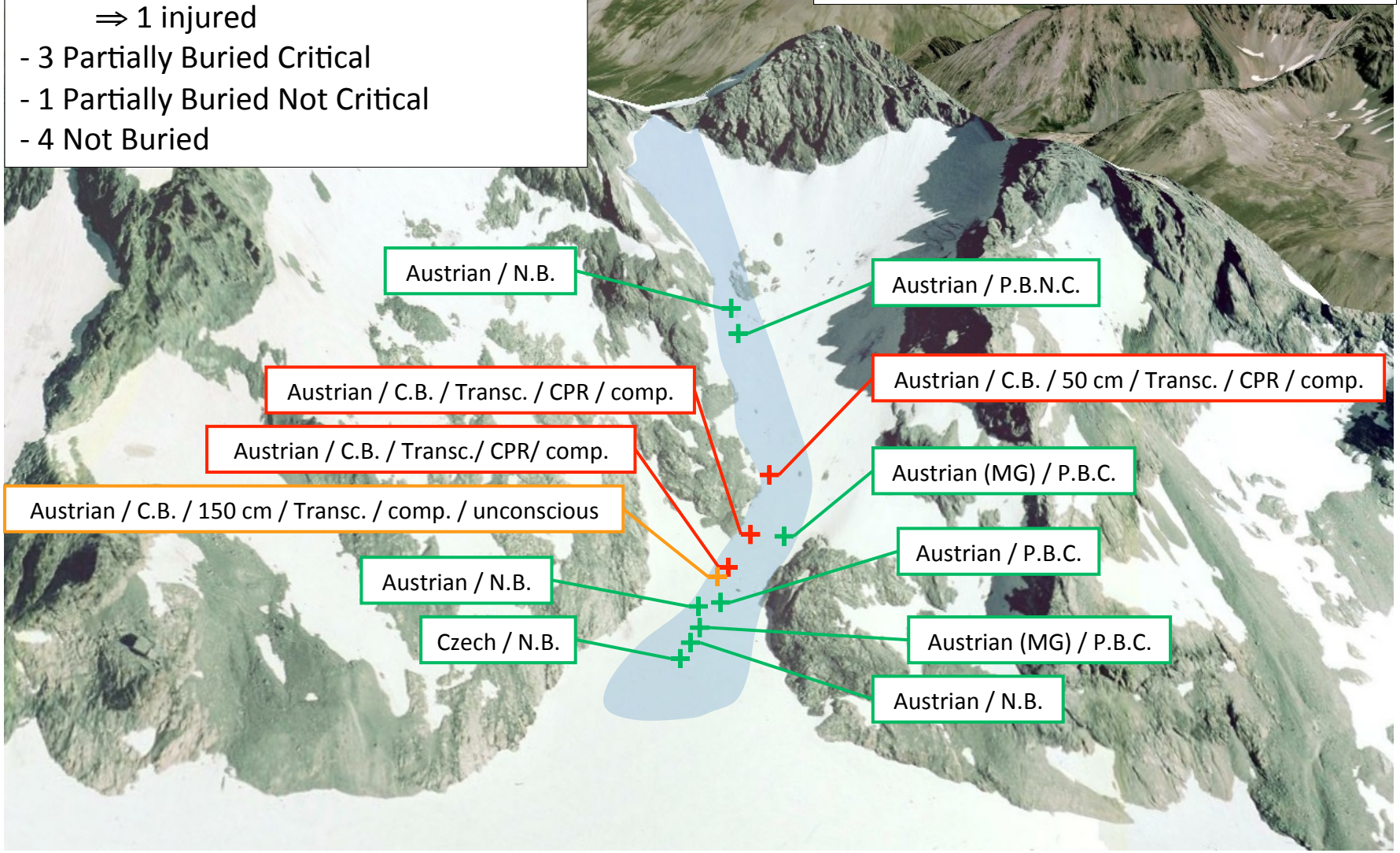


Avalanche accident at col Emile Pic (Ecrins massif) – April 1st, 2015.

Avalanche:

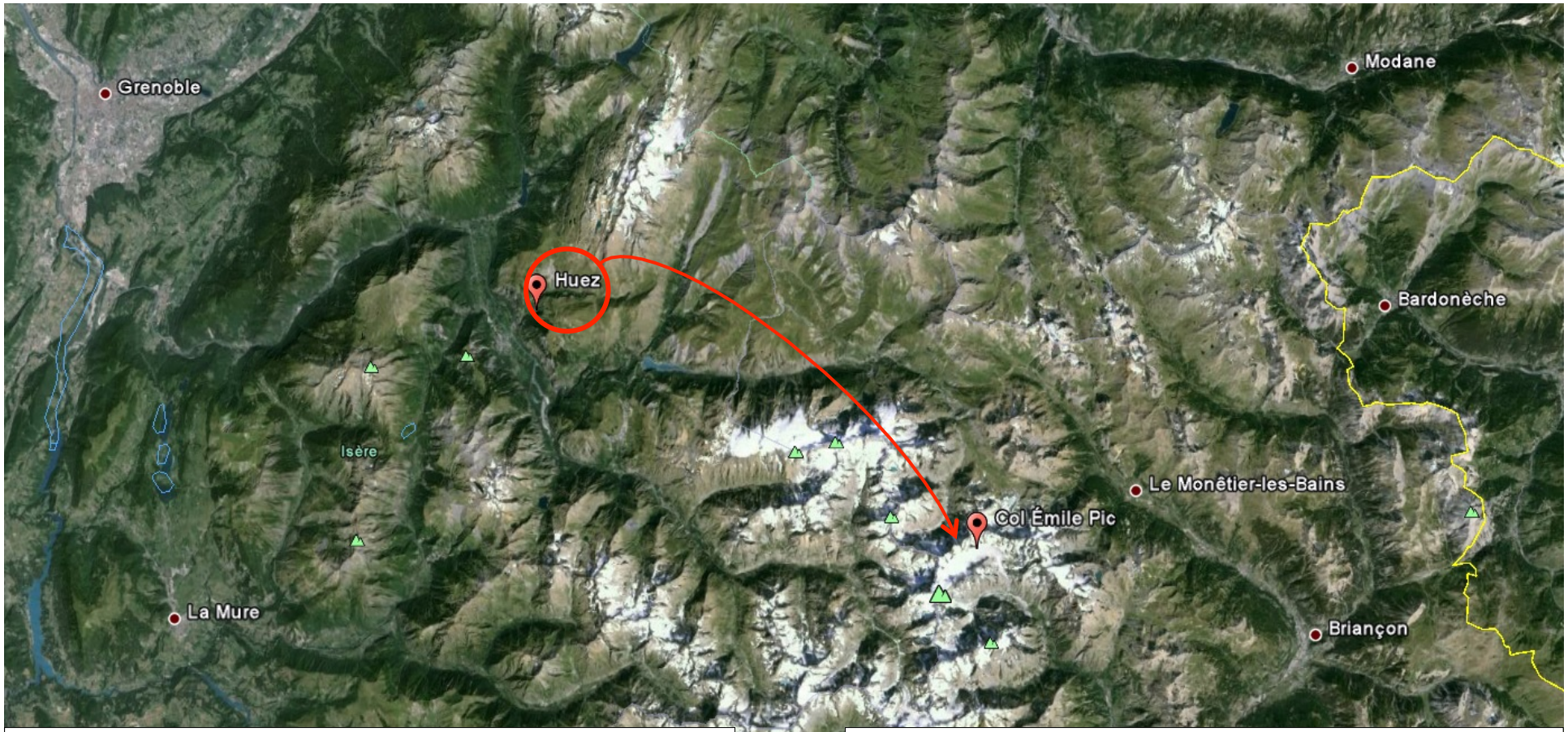
12 skitourers involved in the avalanche:
- 4 Completely Buried
  - ⇒ 3 killed
  - ⇒ 1 injured
- 3 Partially Buried Critical
- 1 Partially Buried Not Critical
- 4 Not Buried

Every fully or partially buried victim is found and excavated by bystanders before any outside help arrive



Avalanche accident at col Emile Pic (Ecrins massif) – April 1st, 2015.

Professional Rescue Operation:

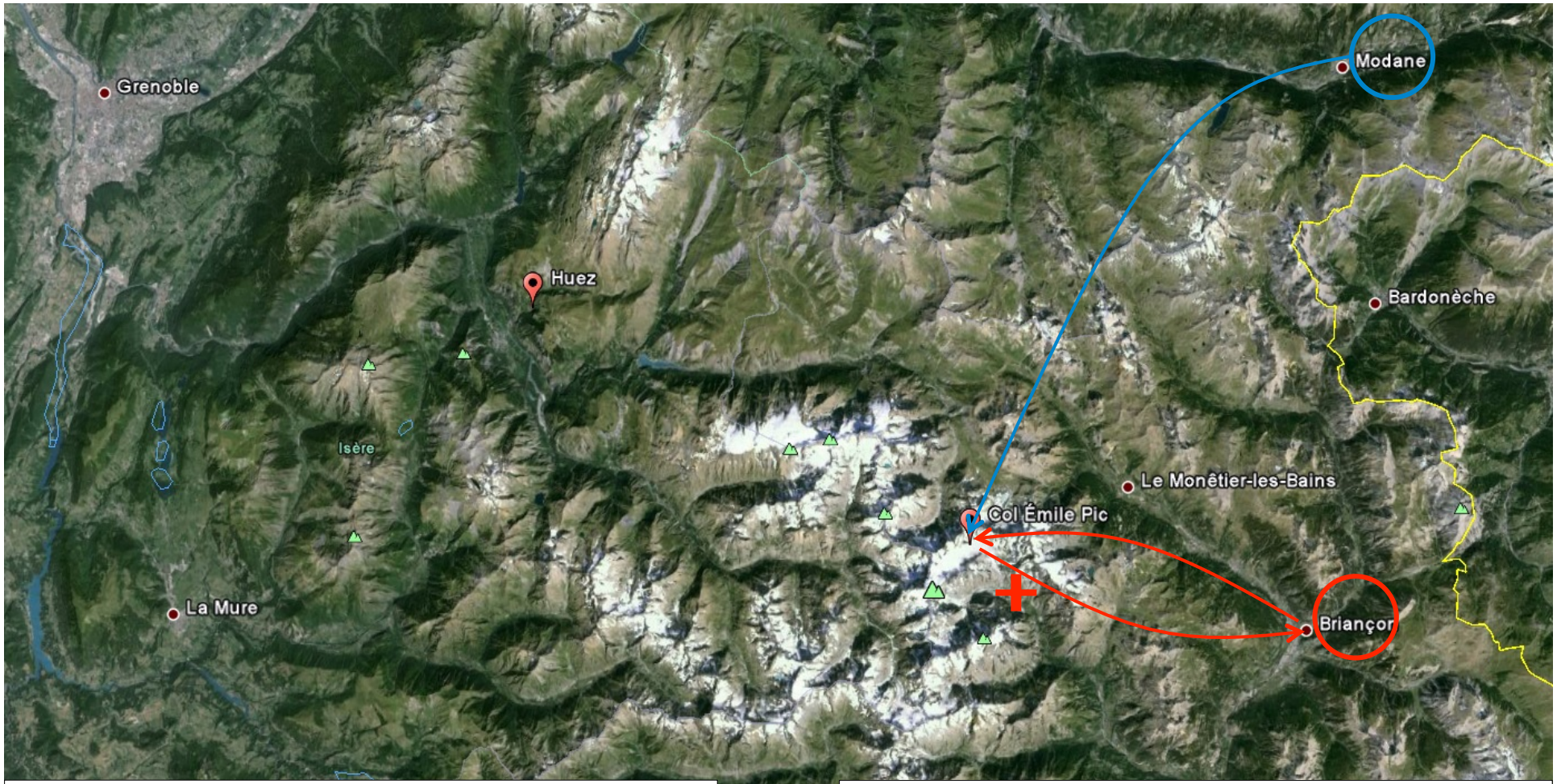


3.10 pm: alert to PGHM at Huez
3.15 pm: helico take off (4 rescuers + 1 doctor + 1 dog)
3.35 pm: strong wind = 2 rescuers + 1 doc at 2800 m
3.40 pm: 1 Resc. Op. Chief + 1 dog resc. on site (3200 m)

- companions maintain CPR
- dog search
- 3.45 pm: ask for 3 more doctors/ 2 dogs / pro rescuers
- transceiver search (15 min. / everybody « off »)
- 2 rescuers + 1 doctor 2800m => 3200 m

Avalanche accident at col Emile Pic (Ecrins massif) – April 1st, 2015.

Professional Rescue Operation:



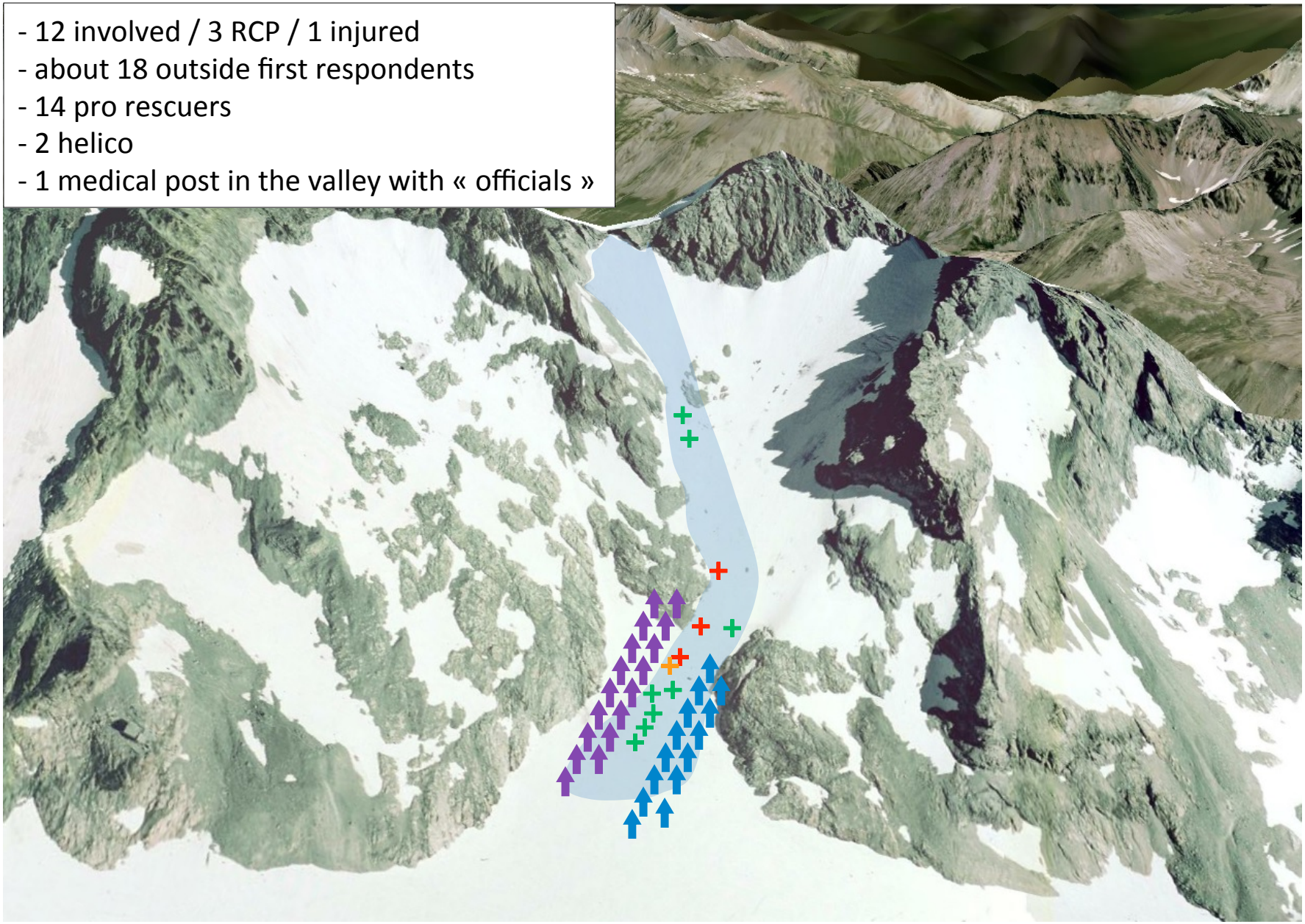
- helico from PGHM Modane: 3 resc. + 1 dog + 1 doctor
- 1st helico: 4 resc. + 1 dog + 1 doctor PGHM Briançon
=> about 45 people on site at 3200 m
- medical post at Pré Carle (Resc. Op. Commandant)

- doctors take victims in charge
- 3 dog search
- transc. search
- companions + others = refuge

Avalanche accident at col Emile Pic (Ecrins massif) – April 1st, 2015.

A multi victims accident:

- 12 involved / 3 RCP / 1 injured
- about 18 outside first respondents
- 14 pro rescuers
- 2 helico
- 1 medical post in the valley with « officials »



Main Goals in disaster medicine

Saving as many lives as possible

Focusing on organization instead of medical care

Changing spirit: from emergency medicine to disaster medicine

General concept

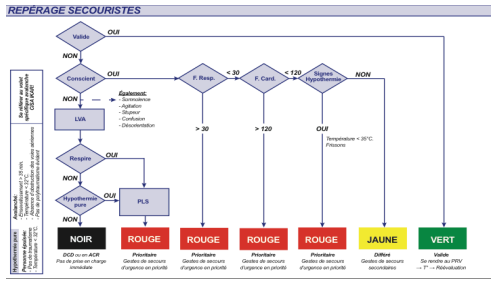
Setting up an efficient Rescue Chain

- ***Searching (location)***
- ***Rescuing (first aid)***
- ***Grouping***
- ***Providing ID***
- ***Sorting (triage)***
- ***Treating***
- ***Evacuating***

First Step	Setting up rescue chain	**Collecting information / Fast analysis / First decisions**	First medical staff + rescuer on site
Second Step	Setting up commanding chain	**Coordination / Direction**	Medical Coordinator + **Operational Commander**
Third Step	Setting up communication system.	**Collecting and transmitting accurate information**	
Fourth Step	Strengthening process	**Organising additional Human and logistical resource**	Dispatching Med Coordinator + **Main Commander**
Fifth Step	Inform authorities, Media communication strategy	**Evacuating people to adapted medical facility**	

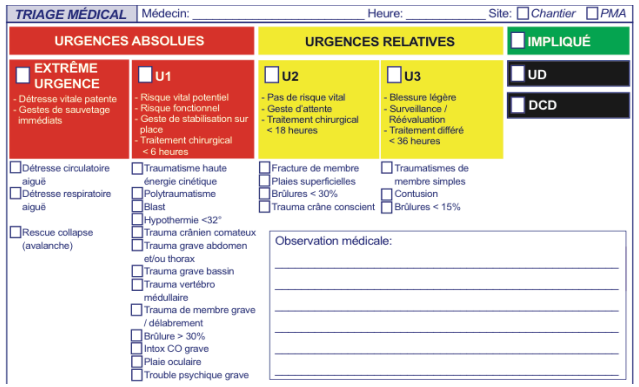
Search and Rescue

- Define order priority to transfer to AMP
- Survival Basic Life Support:
  - free airway,
  - Haemorrhage control,
  - Cold protection

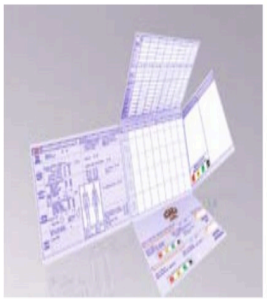


Medical Triage

- Assessing medical condition
- Difining priority of patient treatment and evacuation (immediate care, urgent treatment, possible delay, out of ressources)

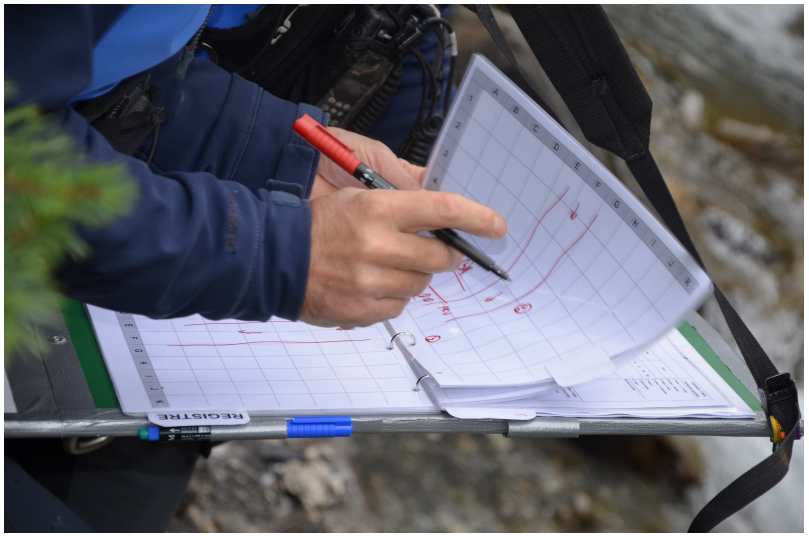


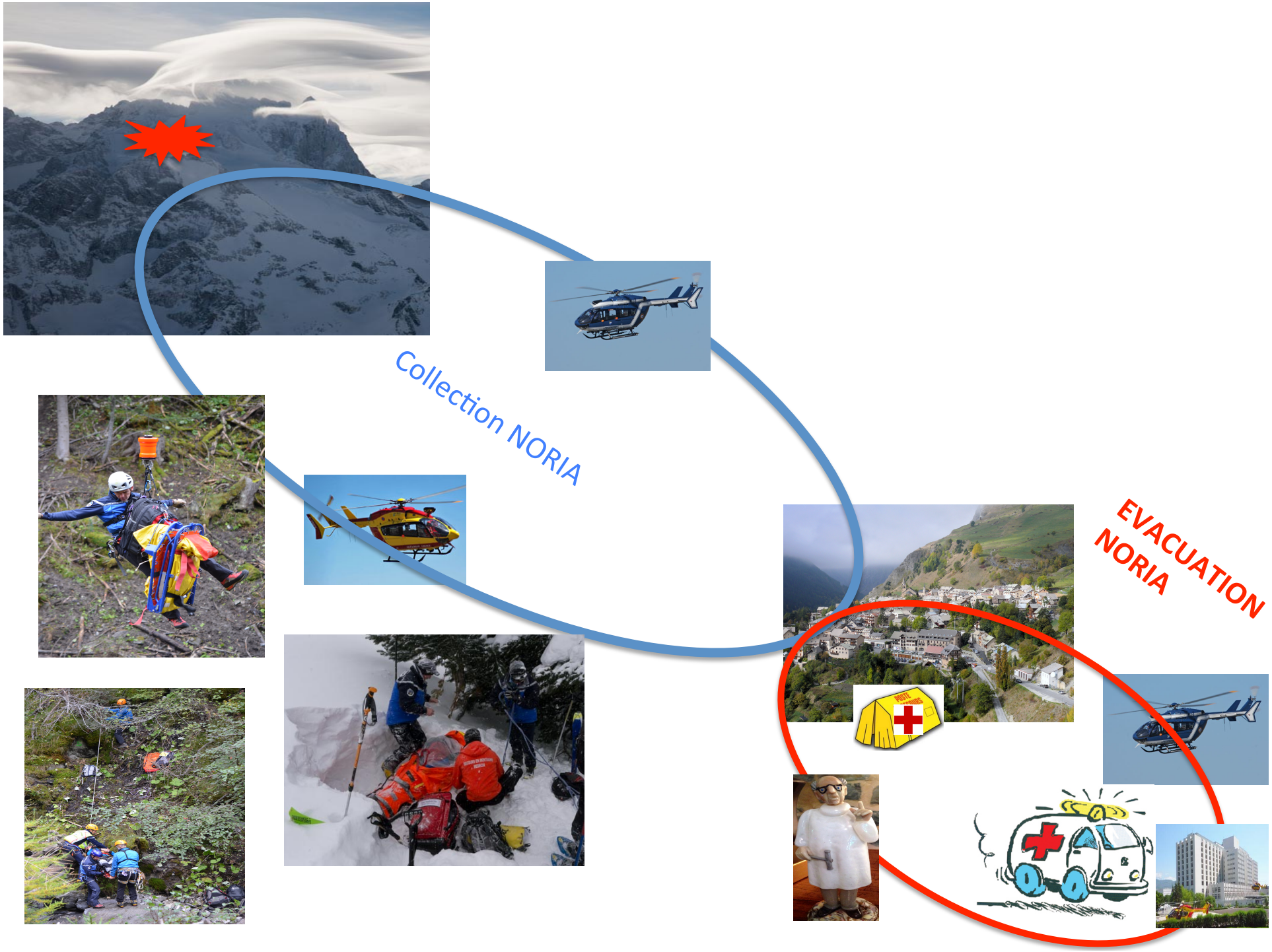
Tools



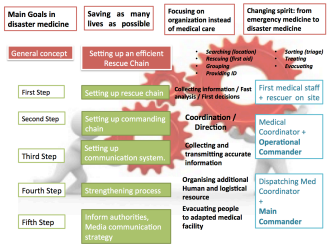
	PMA		
N°fiche de l'avant	horaire triage couleur	bilan	médicalisation
3408		fracture poignet	attelle/ morphine PO
3424	12H20	TRAUMA PSY	CUMP
3421	12H20	TRAUMA PSY	CUMP
3406	12H22	TRAUMA PSY	CUMP
3429		douleur respiratoire sans détresse	morphine PO
F730509	12H25	MUTISME	CUMP
F730507	12H30	TRAUMA PSY	CUMP
3412	14H30	THORAX DYSPNEE	O2
3444		ACR	
3420			
3411	14H10	TC GCS 15 NON FOC	
3407	14H00	TRAUMA MEDULAIRE	
3437			
3414	14H40	TRAUMA RACHIS NON NEURO	
3436	14H40	SCALP SUTURE	
3427		ABDOMEN AIGU INSTABLE	REMPLISSAGE
3441	13H50	COMA NON FOCALISE INTUBE	
3430	14H20	FRACTURE JAMBE	IMMOBILISATION VVP MORPHINE SUFENTA
3440	14H05	LUXATION EPAULE	REDUCTION
3428	13H15	BASSIN HYPOTENDU	IMMOBILISATIONS/ REMPLISSAGE/SUFENTA
3418		TC CGS 14	IMMOBILISATION
3405			
3417	14H15	FRACTURE BIMALLEOLAIRE	IMMOBILISATION ANALGESIE

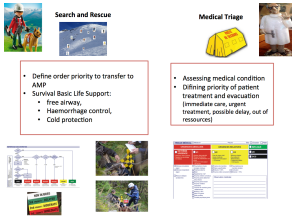
N° Ordre	Secouriste	Équipe / Fonction	Heure d'entrée	Heure de sortie	Destination	DVA / Matériel	Divers

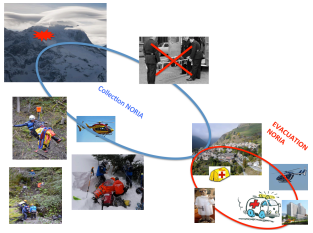



Collection NORIA
EVACUATION NORIA

Was the principle of MCI adapted, usefull and efficient ?
What is the lack of the method ?







MCI toolbox concept : did the chief commander of the field use tools for crisis managment ?

Fiche actions Directeur des Secours médicaux "Montagne"

Je ne fais aucun soin !!!

Avant d'arriver sur les lieux :
1/ je note toutes les informations et prends l'identité et les numéros de téléphone de mes interlocuteurs
2/ je préviens mon hôpital d'origine que je suis engagé sur une opération d'ampleur et fait prévenir la direction, la CME, le chef de pôle, le chef de service, les urgentistes de service
3/ je sors la frontale du sac et la garde dans ma poche, j'ai prévu un chargeur de téléphone et des batteries de radios 150 Mhz supplémentaires, un poste radio Antares, à boire et à manger

0/ J'annonce au SAMU mon arrivée sur les lieux
1/ je prends attache avec le COS et ne le quitte plus; nous organisons un PC de l'avant; un secrétaire consigne mes décisions dans une main courante; je me renseigne sur la présence de risques objectifs et de contraintes environnementales (météo/ froid/ vent/ heures de jour restant) et les possibilités de transmissions
2/ avec le COS j'effectue une reconnaissance pour

A/ <u>estimer le nombre, la gravité des victimes, la typologie des blessures</u>

B/ <u>évaluer la problématique du ramassage des victimes</u> :
Dispersion des victimes / vitesse de dégagement/ délai deconditionnement des victimes/débit de noria de ramassage /moyens de brancardage/ besoins en treuillage/ disponibilité moyens aériens

C/ <u>estimer la problématique de médicalisation</u> : renforts envisageables/ délais d'acheminement des médecins sur le site/ temps de médicalisation/ nécessité de médicalisation de l'avant

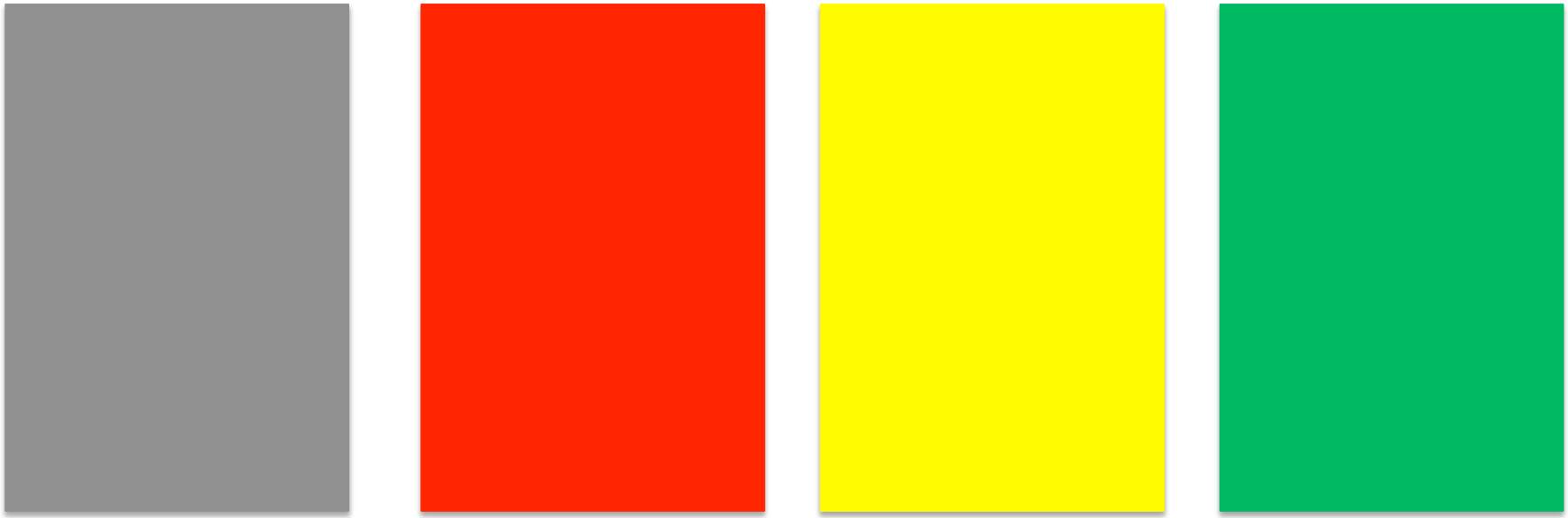
3/ Nous décidons d'organisation la chaine de secours de l'avant :
doctrine de repérage–triage/ attribution FMA-bracelets / ramassage / regroupement des victimes / chaine de soins médicaux/ ouverture des registres victimes

4/ avec le COS nous choisissons le lieu d'implantion du PRV/PMA
5/ avec le COS nous discutons de prévoir des évacuations directes (ECMO)
6/ je rends compte au SAMU et transmets mes demandes spécifiques
7/ j'attribue les rôles médicaux (avant/PMA/EVAC)
8/ j'organise la chaine de transmision entre le PMA/EVAC et le SAMU

12/ j'organise l'appui logistique : je vois avec le PMA pour anticiper les renforts pharmacie
13/ je répercute régulièrement des infos au SAMU/PCO
14 / je veille à pouvoir exercer mon rôle de commandement en permanence : cad a/ je suis au contact du COS b/ je peux communiquer avec l'avant et l'arrière c/ je suis à l'abri (météo/ sollicitations injustifiées) ; mon positionnement peut évoluer (à proximité du chantier/ à l'arrière)

From improvised rescue to organised rescue !

Triage



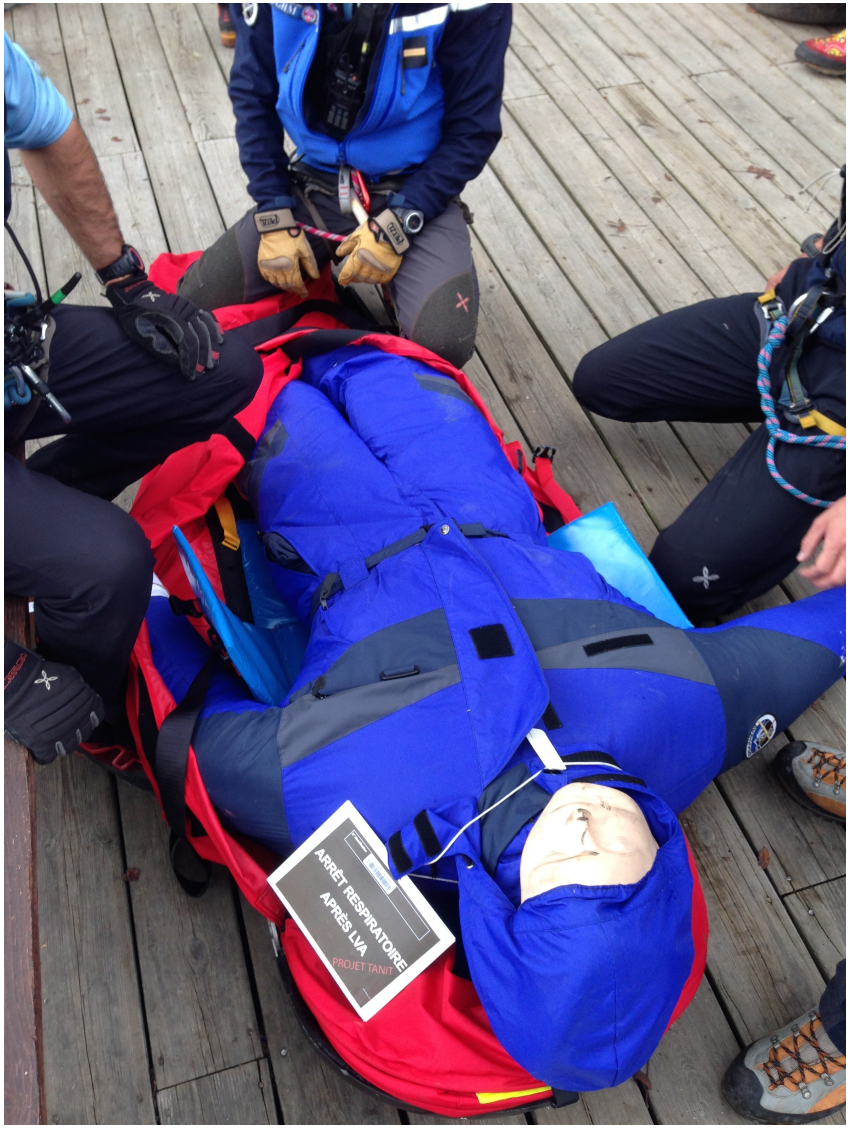
DEAD EXPECTANT

IMMEDIATE

MODERATE

DELAYED

Triage : expectants !

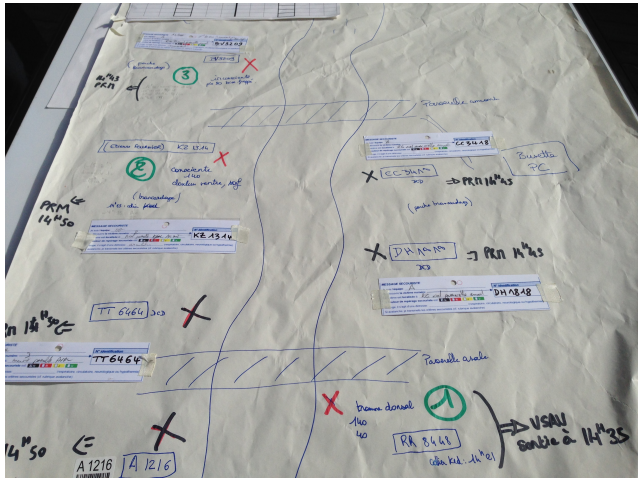


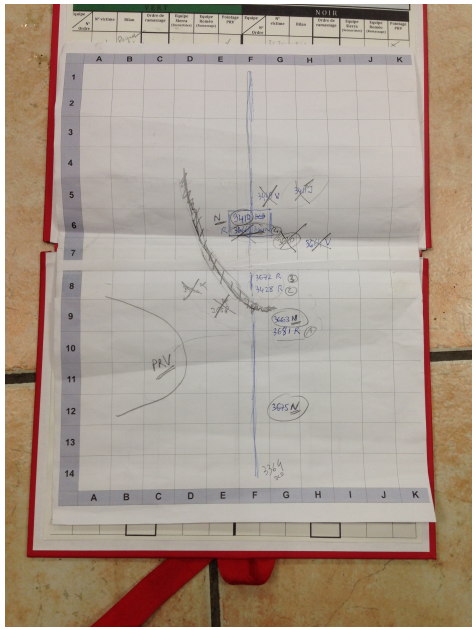
From emergency medicine to disaster medicine

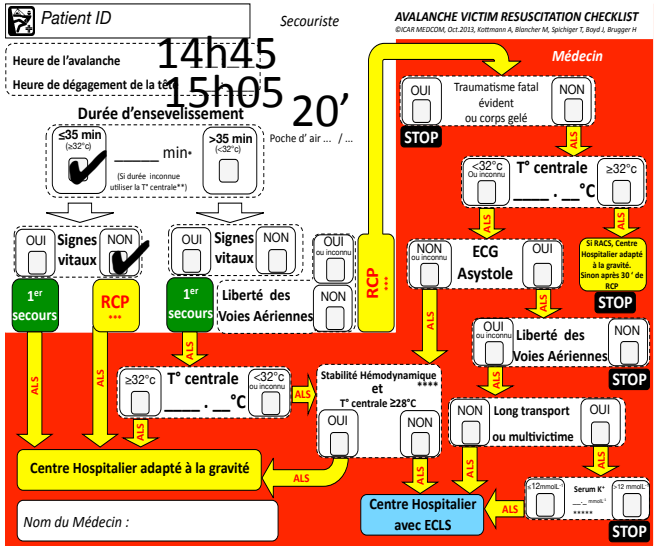
Medical considerations about Severely injured patient

Was Oro-tracheal intubation for lung protection and brain protection a good idea?

Using tools is crucial for decision making help







First physician on site : Medical coordinator

Three importants things …

Human factors

Luck

Lack of certainly