



8th Annual Conference of Liver Transplantation Society of India

20th November 2025

Hotel Pullman, Aerocity, New Delhi

# Consensus on Immunosuppression in LT Recipients



#### **BACKGROUND:**

Liver transplantation achieves excellent short-term outcomes, but long-term survival is limited by complications of immunosuppression—chronic kidney disease, infection, malignancy, and metabolic disease—while under-immunosuppression risks rejection and graft loss. Current practice shows major international variation in induction use, CNI targets, steroid withdrawal timing, and biomarker-guided strategies. Evidence for minimization, desensitization, and pediatric protocols remains fragmented. A consensus process is needed to synthesize evidence, resolve controversies, define exposure targets and monitoring frameworks, and prioritize research. The goal is to standardize care, reduce toxicity, improve graft longevity, and create a roadmap for implementation and measurable impact across diverse transplant programs.



#### • AIM:

 Provide evidence-based recommendations on consensus for immunosuppression in liver transplantation

#### • METHODS:

- Multi-disciplinary collaboration of experts
- Delphi Model of Consensus



Consensus Chairs: Abhideep Chaudhary, Manav Wadhawan, Niteen Kumar						
Working group 1- Perioperative IMS	Working group 2- Immunosuppression Strategies in Rejection, and Renal dysfunction	Working group 3- Special Situations 1: ABO Incompatible, Metabolic liver disease, ALF/ACLF, AIH & AID, Elderly and Sarcopenic	Working group 4- Special Situations 2: Viral infections, Re-transplant, GVHD, Neurotoxicity, Pregnancy	Working group 5- Immunosuppression in Transplant Oncology, Perioperative Immunosuppression in non-liver surgery/ Immunosuppression in Pediatric recipients		
Group Coordinators-  Dinesh Jothimani, Prashant Bhangui	Group Coordinators-  Dharmesh Kapoor, Shaleen Agarwal	Group Coordinators- Sanjiv Saigal, Sudhindran S	Group Coordinators- Neeraj Saraf, Sonal Asthana	Group Coordinators- Naveen Ganjoo, Viniyendra Pamecha		
Group Experts - Ajitabh Srivastava, Amrish Sahney, Anand Khakhar, Anand Vijay, Ashok Choudhury, Ashwin Rammohan, Bhaskar Nandi, Chandan Kumar KN, Gaurav Pandey, Madhumita Premkumar, Mukul Rastogi, Ramdip Ray, Sachin Palnitkar, Sanjay K Yadav, Sarath Putta, Vinay Kumaran, Vishal Chaurasia	Group Experts - Akash Shukla, Ashish Goel, Basant Mahadevappa, Charles Panackel, Chetan Kalal, Giriraj Bora, Gomathy Narsimhan, Hitender Garg, Jayanth Reddy, Joy Varghese, Mettu Srinivas Reddy, Mithra Prasad, Mukul Vij, Narender Choudhary, Radhika Venugopal, Rahul Saxena, Rakhi Maiwall	Group Experts - Abhishek Mathur, Akash Roy, Amit Rastogi, Anand Kulkarni, Anil Arora, Anurag Shrimal, Dinesh Bala Krishnan, Imtiakum Jamir, Kausar Makki, Neerav Goel, Pranjal Modi, Rajesh Ramalingam, Sadhana Shankar, Shalimar, Shekhar S Jadaun, Shweta Mallik, Swapnil Dhampalwar	Group Experts -  Ameet Mandot, Amit Gupte, Arun  Valsan, Balachandran Menon, Chirag  Desai, Elan Kumaran Krishnan, Gaurav  Chaubal, Harikumar Nair, Murugan  Natarajan, Naimish Mehta, Praveen  Sharma, Rajesh Dey, Sanjay Govil,  Sunil Taneja, Vinit Shah	Group Experts - Anupam Sibbal, Ashish Kumar, Ch Madhusudan, Gaurav Sood, Mallikarjun Sakpal, Mathew Jacob, Naresh Sanmugam, Neelam Mohan, Pankaj Puri, Pavan Hanchanale, Ravi Bhardwaj, Ravi Mohanka, Ravichand Siddhachari, Seema Alam, Sumana Ramachandra, Uday Sanglodkar, Vikram Kumar, Vivek Vij		
Vanguard Representative  Hirak Pahari, Shashwat Sarin	Vanguard Representative  Dhiraj Agrawal, Gayatri  Balachandran, Kalyan Vijaykumar	Vanguard Representative  Aditya Nanavati, Rohit Mehtani	Vanguard Representative  Prithvi Raj, Sashidhar Reddy	Vanguard Representative  Anish Gupta, Arti Pawaria		

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#### **GRADE** Recommendations

Level of evidence**		Confidence in the evidence		
High	Information obtained from meta-analyses or systematic reviews, or from numerous randomized trials that have high quality data	It is improbable that additional research will significantly alter our level of confidence in the assessment of potential benefits and risks.		
Moderator	Information obtained from either a singular randomized controlled trial (RCT) or various non-randomized studies	Additional research, if conducted, may potentially alter our estimation of the benefit and risk and have an impact on our level of confidence in the estimate		
Low	Studies of limited sample size, observational studies conducted retrospectively, and registreis	There is a degree of uncertainty associated with any estimate of the effect.		
Recommendations- Grade***		Wording associated with the grade of recommendation		
Strong	The strength of the recommendation was influenced by several factors, such as the quality of the evidence, the preseumed outcomes that are important for the patient, and the cost implications.	"must", "should", or "we recommend"		
Weak	The recommendation may be made with less certainty and may result in higher costs or resource consumption due to variability in preferences and values, or increased uncertainty	"can", "may", or "we suggest"		

<sup>\*</sup>To make the GRADE system more objective, the type of studies from which the evidences are derived have been mentioned in the Level of Evidence section.

<sup>\*\*</sup>Level was graded down if there was a poor quality, strong bias or inconsistence between studies; level was graded up if there was a large effect size.

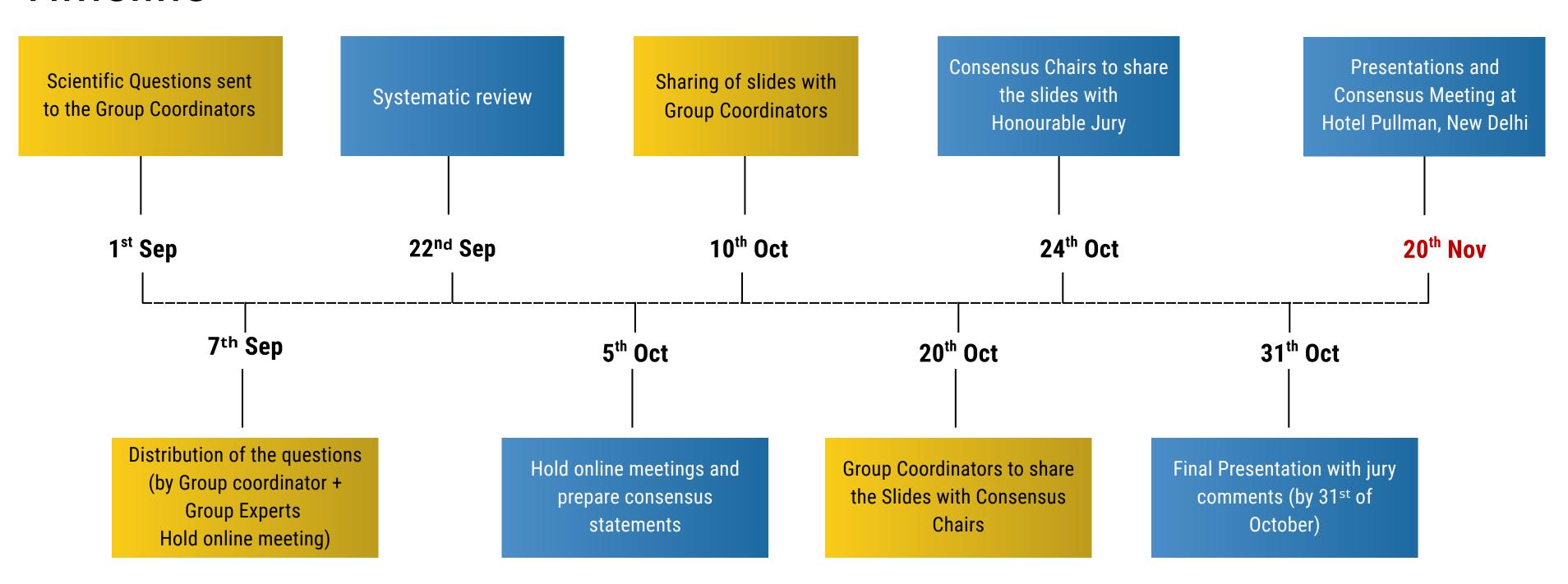
<sup>\*\*\*</sup>Recommendations reached by consessus of the members and included the quality of evidence, presumed patient-important outcomes and costs.

# Scientific Questions sent to the Group Coordinators (by 1st Sept) Distribution of the questions (by Group Coordinator + Group Experts Hold online meeting by 7<sup>th</sup> of September) Systematic review (15 days, by 22<sup>nd</sup> of September) Hold online meetings and prepare consensus statements (by 5<sup>th</sup> of October) Sharing of slides with Group Coordinators (by 10<sup>th</sup> of October) Group Coordinators to share the Slides with Consensus Chairs (by 20<sup>th</sup> of October) Consensus Chairs to share the slides with Honourable Jury (by 24th October) Final Presentation with Jury comments (by 31st of October) Final Presentations and Consensus Meeting on 20<sup>th</sup> November at Hotel Pullman, New Delhi

TIMELINE & WORKFLOW



# Timeline





# Suggested format for the consensus

- All experts are requested to stick to the timelines suggested in the previous slide
- The format of the presentation on the day of consensus is detailed in the subsequent slides
- There are total of 5 working groups, each group will get approximately **75 mins (60 mins for presentation, 15 mins for discussion)**
- The tentative questions to be covered are being attached with the session details. You are requested to include these in addition to any others you might think necessary.



# Title question: Standard induction strategy, choice & timing in peri operative period.

- Evidence (studies)
- Should be listed in a file format. Sample format is listed below

Author	Study type	N	Results	Findings



## Question 1:

#### Scenarios where induction antibodies are needed?

- 1. Currently available induction antibodies & how to choose?
- 2. What are the comparative efficacy and safety profiles of these agents in different transplant settings (liver, multi-organ)?
- 3. Which patient factors (e.g., sensitization status, infection risk, malignancy risk) should guide the choice of induction antibody?



# Question 1. Should induction antibody be used (specific scenario)?

**Recommendation:** 

Level of evidence:

**Strength of recommendation** 



#### **Conference Secretariat**

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