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Dr Shrikant Yatnale

(1971 - 2026)

In Loving Memory of Dr. Shrikant Yatnale

A Pioneer, Mentor, and Beacon of Hope in Clinical Embryology

It is with profound grief and a heavy heart that the medical and reproductive healthcare community mourns the immense loss of Dr. Shrikant Yatnale.

A legendary figure in clinical embryology, Dr. Yatnale dedicated over two decades of his life to bringing the gift of parenthood to thousands of families. With thousands of successful IVF/ICSI cycles, mastery over advanced reproductive techniques, and an unwavering commitment to excellence, his contributions transformed countless lives and elevated standards across the field.

Beyond his extraordinary skill inside the laboratory, Dr. Yatnale was a revered educator, mentor, and leader. As an active leader in professional organizations like the Academy of Clinical Embryologists (ACE) and a guiding voice across national forums, he shaped the careers of scores of young embryologists, leaving an indelible mark on future generations.

"The lives he touched, the dreams he helped fulfill, and the students he empowered will forever keep his spirit alive."

Message from the Founder Dr. Ved Prakash

A smiling face, a brilliant scientist and a wonderful human being. Deeply saddened by the untimely passing of my dear friend Shrikant Yatnale, who educated, inspired and mentored many across the country. Beyond his scientific contributions, his warmth, humility and ever-smiling personality will always be remembered. Heartfelt condolences to his family, friends, students and colleagues. May his soul rest in peace.

Message from the Co-founder Dr. Sanjay Shukla

He was a true "Ajatshatru" -a person who had only friends and no enemies.

It is difficult to accept that he is no longer with us. To see a man of such immense physical and mental strength taken by destiny so soon is deeply painful.

May God give strength to his bereaved family to bear the loss.

Message from the Co-founder Dr Charudutt Joshi

Some of the persons in life are unforgettable, Shrikant was one of them. He used to smile in any condition and motivated people like me to take everything positively. I remember him as one of founder supporters to bring Idea of ACE on ground. He will always be remembered as a good friend. A big loss to embryology and community. No more words.

With profound sadness, we bid farewell to Shrikant Yatnale Sir, a senior embryologist whose life and work touched countless hearts and helped bring happiness to so many families.

Sir was a mentor to many, a teacher who generously shared his knowledge, a friend and a deeply cherished presence to those closest to him. His humility, warmth, wisdom, and dedication to embryology will continue to live on through the many lives he influenced.

The IHERA family, together with the entire embryology fraternity and all those who had the privilege of knowing him, mourns this irreplaceable loss.

May his gentle soul rest in eternal peace.

Ved Prakash
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TOPIC OF DISCUSSION

"Embryo Grading in Clinical IVF Laboratories: Current Practices, Challenges, and Inter-observer Variability"

CHAT DISCUSSIONS COMPILED BY



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INTRODUCTION

Embryo grading is one of the more consequential calls made inside an IVF lab. It decides which embryo gets transferred first, which gets frozen, and it shapes a good part of how a patient is counselled about her chances. Systems like the Gardner and Schoolcraft blastocyst classification [1], and the Istanbul Consensus for cleavage-stage embryos [2], have given the field a shared vocabulary for describing quality. But behind that shared language is still a person at a microscope, making a judgment call about expansion, the inner cell mass, and the trophectoderm.

That judgment call is where inter-observer variability creeps in. Two experienced embryologists can look at the same embryo and land on slightly different grades, especially near the borderline [3]. It matters more now than it used to, because most labs aren't simply deciding pass or fail anymore; they're ranking several embryos against each other, and a one-grade difference can change which one goes in first. Time-lapse systems [4] and AI-assisted scoring [5,6] have both been floated as ways to tighten this up, though neither has fully taken the decision out of the embryologist's hands.

This issue's discussion started as a poll on when labs check their embryos, and gradually turned into a longer conversation about how those embryos actually get graded once observed, which features carry the most weight on Day 5, how labs catch and correct disagreement between graders, and how ready AI really is for everyday use. As always, the aim wasn't to crown one "right" protocol, but to lay out where the group agreed, where it didn't, and why.

SUMMARY OF SURVEY RESULTS

Embryo Monitoring Protocol Preferences (n = 176)

Monitoring Protocol	Votes	Percentage (%)
D1, D3, and D5/D6 checks	131	74.4
D1 and D5/D6 only (Minimal disruption)	29	16.5
Daily check	8	4.5
Continuous (Time-lapse monitoring)	6	3.4
It varies by patient case	1	0.6
If it is ICSI for all, then D5 check only	1	0.6
Total	176	100

Discussion

The conversation opened with a poll on embryo monitoring schedules, since what a lab observes on a given day shapes what there is to grade later. Close to three-quarters of respondents still follow the standard D1-D3-D5/D6 schedule: fertilisation checked on Day 1, cleavage on Day 3, blastocyst morphology on Day 5 or 6. A smaller group, roughly one in six, skips the Day 3 look altogether to keep incubator handling to a minimum. The rest were split across daily checks, continuous time-lapse monitoring, and a few case-by-case approaches.

Most participants agreed that the popularity of the three-checkpoint schedule isn't proof it's biologically superior. It's more that it strikes a workable balance between gathering useful information and not opening the incubator more than necessary. That balance, and what actually gets lost or gained by skipping a checkpoint, turned out to be the heart of everything that followed.

DISCUSSION SUMMARY

1. Does Day 3 Still Earn Its Place?

Not everyone agreed that the Day 3 check becomes optional once blastocyst-stage grading is available. Some labs, particularly ones running ICSI for every patient, skip straight to a Day 5 look. Others felt that works fine for a single embryo but gets riskier with a full cohort, where a Day 3 look gives the flexibility to pivot to a cleavage-stage transfer or an early freeze if a cycle isn't tracking well, rather than risking the whole batch. A broader point ran underneath this: embryo selection has quietly shifted from pass/fail morphology to ranking several embryos against each other, and ranking works better with more data points, not fewer.

Even embryologists who don't use Day 3 morphology to pick the final embryo said it still earns its keep for quality assurance, and for understanding how a lab's own embryos are trending over time. A trickier question came up more than once: should a genuinely stunning Day 5 blastocyst be marked down for a rough Day 3 history, heavy fragmentation, slow cleavage, or does the final morphology simply override whatever happened earlier? The group leaned toward the latter for actual transfer decisions, treating the Day 3 record more as a safety net and an audit trail than something that changes the grade itself.

2. Checking an Embryo Isn't the Same as Disturbing It

A good part of the thread turned on a distinction that's easy to blur: looking at an embryo on Day 3, and changing its media on Day 3, are two different actions with two different consequences. The old habit of swapping media on Day 3 traces back to ammonia building up as glutamine breaks down, something modern single-step media largely solve for by using a more stable, dipeptide form of glutamine. Once that chemistry is accounted for, renewing the drop doesn't achieve much, and a few pointed out it may even strip away useful factors the embryo has already secreted into its own microdroplet.

Practice on this varied quite a bit. Several labs still change the dish or media on Day 3 out of habit or SOP; others deliberately don't, sticking with a single, uninterrupted culture medium instead. The advice that the group more or less settled on: keep the Day 1 fertilisation check no matter what, since that's where 1PN and 3PN embryos get caught and no Day 5 blastocyst makes up for missing it, look on Day 3 if it helps with ranking, but don't feel obligated to touch the media if the lab is running a single-step system meant to go the whole course untouched.

A related, more logistical question came up too: what happens when two patients' egg collections land on back-to-back days and end up sharing the same incubator chamber? The answer here was less about changing protocol and more about discipline, keeping incubator openings as few and as brief as possible, staying consistent about it, and keeping the clinical team in the loop regardless of how the schedules overlap.

3. What Actually Matters on Day 5

Someone put a direct question to the group: if you could change one thing about the Gardner system [1], what would it be? That opened into a wider conversation about which morphological features actually carry the most weight when grading a Day 5 blastocyst. There was clear agreement that expansion, the inner cell mass, and the trophectoderm all matter, but not everyone weighted them the same way. Several embryologists put the inner cell mass slightly ahead of the rest, especially when deciding whether to freeze a borderline embryo, leaning toward keeping it if the ICM looks strong even when the trophectoderm doesn't, and letting it go only when both are weak. Others prioritised the degree of expansion first, treating ICM and trophectoderm as the next tier down.

One participant laid out all three parameters side by side and asked the group outright to rank them. Nobody gave a single, agreed answer, which was, in its own way, the point: even trained, experienced eyes don't weight the same three features identically, and that gap is exactly where grading drift tends to start.

4. Where the Grading Actually Slips

The group was fairly candid that inter-observer variability is real and ongoing, not something that gets fixed once and stays fixed, a pattern also borne out in the wider literature on Day 5 embryo selection [3]. A few concrete measures came up. One lab keeps a printed reference-image chart on the wall so everyone calibrates against the same picture. Another does double-blinded checks on the trickier embryos, two embryologists grading independently before comparing notes. More than one participant mentioned that even with identical written grading criteria, borderline cases still throw up small disagreements between staff, which is really why regular calibration sessions matter more than the rulebook alone.

5. Time-Lapse: Does It Actually Change the Grade?

One question didn't get a fully settled answer: does continuous time-lapse footage change the grade an embryo ends up with, compared to a single microscope look on Day 5? The general sense from labs not currently using time-lapse was that it probably wouldn't shift the Day 5 morphology score much, since the final picture looks much the same either way, but that it would likely help more with kinetics-based selection than with the static grade itself, which lines up with how time-lapse parameters are generally used in the literature, more for predicting implantation than for re-scoring static morphology [4]. Nobody in the group had hard numbers to settle it either way, and it was left open.

6. AI Grading: Useful, But Not Trusted Alone

AI-assisted grading came up as the most forward-looking part of the discussion, and also the one with the most open questions attached. The concern wasn't really whether AI works, most agreed it shows real promise, and published models have reported good accuracy at predicting viability from static images [5]. It was whether a model trained on one population, in one lab, under one imaging setup, holds up somewhere else, a generalisability concern that has also been flagged in recent reviews of AI in embryology [6]. Patient demographics, genetic background, local protocols, even camera and lighting differences between labs were all raised as reasons a model validated in one place might not translate cleanly to another.

The working view that formed was cautious rather than dismissive: AI needs human oversight, and the embryologist should be the one finalising the grade, AI input included. One example made the limits fairly concrete: in cycles where only a single blastocyst forms and it's mediocre, an AI tool might flag it as a poor candidate, but there's often no better option on the table, so the recommendation isn't really actionable in that moment. A few labs said they aren't using AI tools at all yet, and are still resolving grading disagreements the old-fashioned way, by talking it through with a colleague.

KEY TAKEAWAYS

- The classical D1-D3-D5/D6 schedule remains dominant, not because any one checkpoint improves embryo biology, but because it balances useful information against unnecessary handling.
- Checking an embryo and changing its media are different acts. Modern single-step media largely remove the old chemical rationale for a routine Day 3 media swap.
- Day 5/6 grading has shifted from isolated morphology scoring toward ranking a whole cohort, which is part of why earlier checkpoints still carry value even when they don't change the final grade.
- Expansion, ICM, and trophectoderm are used everywhere as the three pillars of Day 5 grading, but labs differ in how they weight them, ICM tended to be prioritised most often for freeze-or-discard calls.
- Inter-observer variability is treated as an ongoing, manageable problem rather than a solved one, addressed through wall reference charts, double-blinded scoring, and regular calibration conversations.
- AI-assisted grading is seen as promising but not yet trusted to decide alone, mainly because of open questions about how well it generalises across populations and laboratories.

CONCLUSION

If there's one thread running through this discussion, it's that no single protocol or grading habit is universally right. What matters more is how deliberately a lab manages the parts of the process that are inherently subjective. Even embryologists working from the same named grading system don't always weight expansion, ICM, and trophoctoderm the same way, and the group's answer to that wasn't to hope it evens out on its own, but to build in checks: shared reference images, blinded re-grading of tricky cases, and regular conversations about where people actually disagree.

AI came up as something the group is watching with real interest but isn't leaning on yet. The general feeling was that it's a useful second opinion, not a replacement for the person making the final call, especially with generalisability across populations and labs still an open question. If anything, this discussion suggests that tightening up grading consistency going forward will come less from new technology and more from labs simply keeping up the habits several already described: a chart on the wall, a blind cross-check on the hard cases, and time set aside to talk through where the borderline calls landed.

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