CLOSER LOOK

Breakthrough T1D Clinical & Research Congress 2026 Day #1 Highlights – October 9 2026

7. Real world application of tech: Test for insulin effectiveness

Dr. Maren Schinz (Beyond Diagnostics, Switzerland) highlighted the lack of accessible methods for directly measuring insulin biological activity as an important unmet need in diabetes care.

- **For individuals with T1D, uncertainty regarding insulin quality and storage can pose a challenge.** Simply replacing potentially compromised insulin may not always be a practical solution. Dr. Schinz emphasized that insulin is exposed to multiple real-world stressors beyond temperature fluctuations, potentially compromising its biological activity and effectiveness.
- **To address this challenge, her team developed a cell-based bioassay that measures insulin receptor activation under conditions outside conventional laboratory settings.** Experimental findings indicated reduced insulin activity across all tested samples that were used in typical situations. Dr. Schinz introduced LumiQ, a rapid insulin quality-testing technology designed to quantify protein function rather than detect its presence, using an optical readout and a smartphone application to estimate the percentage loss of insulin activity within minutes. 91% of patients and 94% of healthcare providers reported that they would use the technology. Overall, this approach could provide patients and clinicians with a practical means of verifying insulin quality at the point of use, potentially improving confidence in insulin delivery and supporting more reliable diabetes management.