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Predicting clinical outcomes in intensive care unit polytrauma patients: A performance evaluation of prognostic scoring systems

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Introduction: Trauma management remains an ongoing challenge for healthcare systems, associated with high morbidity and mortality rates. In ICU, predicting the clinical outcome of polytrauma patients is crucial for guiding the treatment plan and ensuring the overall quality of care. The aim was to evaluate the performance of 16 prognostic scoring systems in multiple trauma patients admitted to the ICU.

Materials and Methods: A prospective cohort study was conducted on patients with multiple traumas aged ≥ 18 years who were admitted to the ICU of a tertiary care hospital between 2024 and 2026. Anatomical, physiological and combined scores were evaluated as predictors of mortality using logistic regression models and analysis of areas under the receiver operating characteristic (ROC) curve (AUC).

Results: A total of 120 patients were enrolled (80% men, mean age 49.5 years). Traffic accidents were the leading cause (56.7%). Non-survivors (n=34) were significantly older (60.26 vs. 45.19 years, $p < 0.001$) and had a higher pre-injury ASA-PS score ($p = 0.001$). Anatomical indices did not differ substantially between the groups ($p > 0.05$), in contrast to all physiological and combined indicators [$p < 0.001$, except for Revised Trauma Score (RTS), $p = 0.001$]. The highest AUCs among the physiological scores were observed for the Simplified Acute Physiology Score (SAPS) II (0.835) and the APACHE II (0.834), among the combined scores the Base-deficit and New Injury Severity Score (BNISS) (0.784) and the New Trauma and Injury Severity Score (NTRISS) (0.782), while the anatomical scores had AUCs < 0.60. These findings remained largely consistent when mortality was redefined using a 30-day survival cutoff.

Conclusions: SAPS II, APACHE II, NTRISS and BNISS are superior in predicting the outcome of polytrauma patients in ICU compared with 16 other prognostic scoring systems.

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Standardising micronutrient blood testing for bariatric patients admitted under general surgery

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Introduction: Bariatric procedures alter nutrient intake and absorption, creating lifelong risks of clinically significant micronutrient deficiency. BOMSS recommends ongoing, procedure-specific nutritional monitoring, yet acute surgical admissions may provide inconsistent assessment. The aim was to improve micronutrient testing and documentation of bariatric history in patients admitted under General Surgery by introducing a BOMSS-aligned clerking bundle.

Methods: This single-centre prospective audit included forty consecutive adults with previous bariatric surgery admitted electively or as emergencies under General Surgery. Data included procedure type, supplement adherence, latest nutritional surveillance, deficiency symptoms and thiamine risk. Compliance required documented bariatric history and procedure- and risk-appropriate testing, or a recorded reason for not testing. The pathway ranged from targeted investigations after restrictive surgery to a core micronutrient panel after sleeve gastrectomy or standard Roux-en-Y gastric bypass. Zinc, copper and selenium were added when indicated. Vomiting, dysphagia, poor intake, rapid weight loss, alcohol misuse, oedema or neurological features prompted immediate thiamine treatment without awaiting results. The pathway was incorporated into the clerking proforma, supported by ward prompts and junior-doctor teaching, and reassessed after implementation.

Results: Baseline assessment identified inconsistent procedure-appropriate testing, incomplete bariatric documentation and infrequent thiamine-risk recording. In the initial re-audit of admissions, all patients had appropriate testing and bariatric-history documentation completed. However, the sample was smaller and reflects early uptake rather than sustained compliance.

Conclusions: A procedure-specific BOMSS-aligned clerking pathway was associated with better micronutrient testing and documentation while avoiding a universal admission panel. Larger re-audit cycles should assess sustained adherence, deficiency detection, treatment and follow-up.

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Effect of subtotal versus total gastrectomy on quality of life and clinical outcomes: A Retrospective Study

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Introduction: Gastrectomy is associated with functional and nutritional consequences that may affect postoperative quality of life (QoL). The aim was to compare QoL and clinical outcomes following subtotal gastrectomy (SG) versus total gastrectomy (TG).

Materials: This retrospective study included 89 patients who underwent gastrectomy for adenocarcinoma between January 2023 and March 2026.

Methods: QoL was assessed using the EORTC QLQ-STO22 questionnaire, while nutritional status was evaluated according to the GLIM criteria and changes in body mass index (BMI). Linear and logistic regression models were applied, adjusted for age and duration of follow-up.

Results: TG was performed in 71 patients (79.8%), whereas SG in 18 (20.2%). The median age was 70 years, and the median follow-up was 10 months. SG was associated with lower scores for dysphagia ($\beta = -14.6$, $p = 0.003$), reflux symptoms ($\beta = -13.0$, $p = 0.002$), and dietary restrictions ($\beta = -11.1$, $p = 0.011$). The median percentage decrease in BMI was lower following SG than TG (−9.1% vs. −16.9%, $p = 0.005$). SG was associated with a higher postoperative BMI ($\beta = 1.72$ kg/m^2, 95% CI 0.11–3.33, $p = 0.037$). Malnutrition was observed in 38.9% of patients following SG and 63.4% following TG, although no statistically significant association was observed (OR=0,43, p=0,191). Follow-up of ≥12 months was associated with lower odds of severe malnutrition (OR = 0.18, $p < 0.001$).

Conclusions: SG was associated with fewer symptoms and less postoperative BMI loss. These findings highlight the importance of the surgical approach and systematic nutritional follow-up to optimize quality of life and nutritional status after gastrectomy.

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Medical student perspectives on an emergency department virtual reality patient-safety simulation

Lawko Ahmed, Nikolaos Filippou, Violetta Raffay, Andreas Larentzakis, Victoria Polydorou, Ioannis Anastasiou, Andreas Yiallouris, Stavroula Bernitsa, Gabriela Tsalamandris, Andreas Sarantopoulos, Chrysovalanto Grigoriou, Dimitrios Ntourakis

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Introduction: Virtual Reality (VR) may provide an immersive and safe environment for undergraduate patient-safety education. However, its educational value depends on learners' engagement, technical usability, opportunity for interaction, and clarity of assessment tasks. The aim was to explore third-year medical students' perspectives on the educational value, usability and limitations of an emergency-department VR patient-safety simulation.

Material: A post-simulation evaluation was completed by 165 third-year medical students after a VR scenario regarding emergency department readmission within 24 hours of discharge.

Method: Students completed a questionnaire containing structured patient-safety items and an open-text feedback field. Free-text entries were reviewed descriptively. Of 112 text entries, 99 substantive comments were categorized into non-mutually exclusive themes.

Results: Educational value or learning was identified in 53 comments. Students described VR as useful, engaging, interesting, realistic or helpful for understanding emergency-department workflow, communication, clinical assessment and patient-safety principles. Twenty-one comments demonstrated systems-thinking reflection, including recognition of documentation, medication, communication, clinical-assessment, organizational and patient-related contributors to readmission. Technical and access problems were reported in 18 comments, including lagging, login difficulties, limited navigation, unreadable text and restricted access to charts or laboratory results. Questionnaire/task-clarity concerns were identified in 18 comments; students described questions as unclear, overly broad or poorly suited to True/False responses. Ten comments requested greater interactivity and active decision-making, while three preferred conventional face-to-face learning.

Conclusions: Students perceived VR as a promising and engaging approach to patient-safety learning and with their feedback reflecting systems- based perspective on emergency-department readmission. Technical limitations, restricted interactivity and unclear assessment design reduced usability. Future VR activities should improve technical reliability, learner agency, structured debriefing and assessment clarity.

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Breast implant illness: From clinical doubts to documentation of systematic complications - A Systematic Literature Review

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Introduction: Breast Implant Illness (BII) is a debatable clinical state characterized by a variety of systemic symptoms commonly reported by patients with breast implants. This condition has an impact on the patient's decision-making of implant removal. The possible pathophysiologic mechanisms include immune responses, microbial colonization, and psychological factors. The aim was to outline the description of causes and symptoms associated with BII and emphasizes on how breast implant explantation may affect symptom resolution.
Methods: We conducted a systematic review from inception to May 2026 following the PRISMA guidelines using PubMed, Google Scholar and Scopus databases. Out of 891 initially identified studies, 12 matched our criteria and were included in the final analysis.
Results: The final analysis pooled data from over 5,000 female patients with a median age of 45. The first symptoms appeared after 6 years of postoperative breast implantation including mainly fatigue, arthralgias and myalgias. 82% of the patients after explantation surgery appeared resolution of these symptoms. Positive microbial cultures were detected in 22% of the cases, while antinuclear antibodies (ANA) were estimated also in 20% of them. Additionally, longer implant duration is associated with slower recovery of patients, whereas implant type did not have any effects.
Conclusion: This systematic review reveals the significance for further management, better surgical protocols and deeper understanding for the pathophysiology and semiology of BII. However, there have not been currently enough evidenced-based studies to validate BII as a recognized clinical state by the medical community.

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Dog bite injuries: A three-year retrospective study of 180 cases in a rural hospital

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Introduction: Dog bites represent a considerable public health concern worldwide, ranging from minor soff tissue injuries to severe and potentially g life-threatening complications such as sepsis or rabies transmission. Timely and appropriate management is crucial to prevent adverse outcomes, while preventive strategies remain equally important at the community level. The aim of the study was a retrospectively review and analyze dog bite injuries managed in the Emergency Deportment of a three rota year reporiod (2023-2026), with a focus on demographic distribution, anatomical location, clinical severity, therapeutic interventions and patient outcomes.
Material & Methods: A total of 180 cases of dog bite injuries were retrospec tively evaluated. Data collected included patient age, sex, site of injury, complications, management strategies, and outcomes. Statistical analysis emphasized the frequency of secondary infections and the need for surgical intervention.
Results: The majority of victims were children and young adults. Extremities and the face were the most frequently affected anatomical sites. Secondary wound infections were documented in 30% of cases, and 15% of patients required surgical management. All patients received appropriate wound care, tetanus prophylaxis, and rabies vaccination when indicated.
Conclusions: Dog bites, though often underestimated, carry significant health risks. The findings of this study highlight the necessity of standardized management protocols and prompt intervention to reduce complications. Preventive measures, including community education, responsible pet ownership, and systematic canine vaccination programs, are essential to lowering both the incidence and severity of dog bite injuries.

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Major oncologic surgery in very elderly patients

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Introduction: The aim of this study is to evaluate the outcomes of major oncologic procedures performed in our department between 1-10-2022 and 1-10-2026 in very elderly patients.

Materials and Methods: We retrospectively studied 258 patients who underwent elective major oncologic surgery of the digestive system. Patients aged ≥ 80 years comprised Group A, whereas patients aged 65–79 years comprised Group B. Patient demographic characteristics, morbidity, reoperations, length of hospital stay, ICU admission, and mortality were evaluated.

Results: Group A consisted of 60 patients with a mean age of 83.8±2.3 years, whereas Group B consisted of 198 patients with a mean age of 71.3±5.1 years. In Group A, 42 patients (70%) were ASA III and 7 (11.7%) were ASA IV, whereas in Group B, 135 patients (68.2%) were ASA II, 40 (20.2%) were ASA III, and 10 (5.1%) were ASA IV. Postoperative Clavien–Dindo grade III–V complications were observed in 15 (25%) and 22 (11.1%) patients in Groups A and B, respectively. Reoperation was performed in 4 patients (6.7%) in Group A versus 3 patients in Group B (1.5%). The mean length of hospital stay in Groups A and B was 17.2 versus 13.7 days, respectively (p=0.406), while in-hospital mortality was 16.7% and 9.6%, respectively.

Conclusions: Very elderly patients had higher morbidity and a longer mean hospital stay compared with younger elderly patients. However, the observed differences do not establish an independent effect of age on patient outcomes.

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Splenic artery ligation or embolization for portal vein flow modulation and management of small-for-size syndrome following major/extended hepatectomy

D. Chasiotis, A. Koltsida, K. Bikas, D. Tomais, S. Papaeleftheriou, D. Matsagkos, N. Chatziathanasiou, K. Starka, T. Bidetti, G. Taimpiris, F. Mamakis, V. Tseliou, O. Katsimente, I. Massalis, D. Manganas

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Introduction: Small-for-size syndrome (SFSS) is a serious complication following major hepatectomy with portal hyperperfusion of the future liver remnant (FLR) being considered as the major causative factor. Splenic artery ligation (SAL) or embolization (SAE) reduces splenic arterial inflow and, consequently, splenic venous outflow into the portal vein, thereby decreasing portal venous flow and hepatocellular adenosine washout. Consequently, it results in intrahepatic arterial vasodilation and perfusion, thus promoting liver regeneration.
Methods: We present three patients with intrahepatic cholangiocarcinoma, colorectal liver metastasis (with preoperative right portal vein embolization) and perihilar cholangiocarcinoma, who underwent extended right hepatectomies, with two of them having required hepaticojejunostomies as well. Preoperative and postoperative liver volumetry was performed in all three patients to assess FLR. These patients developed postoperatively clinical and biochemical features suggestive of SFSS, including ascites, direct hyperbilirubinemia and prolonged prothrombin time. Intraoperative SAL was performed in the first two patients, whereas postoperative SAE was performed in the third patient by the Interventional Radiology team.
Results: Splenic artery flow modulation either with SAL or SAE was not associated with any complication. All three patients demonstrated improvement in postoperative liver function, recovered well and were uneventfully discharged. Post-procedural volumetric assessment provided information regarding the increase of the liver remnant volume.
Conclusions: SAL or SAE represents an effective strategy for portal flow modulation and management of SFSS following major/extended hepatectomies. Pre- and postoperative liver volumetry contributes highly to the assessment of the risk of postoperative liver dysfunction. A multidisciplinary approach involving hepatobiliary surgeons and interventional radiologists may facilitate timely management of SFSS.

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Imaging predictors of recurrence and recurrence severity following conservative management of acute hinchey Ia–Ib diverticulitis: A Retrospective Study

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Introduction: Acute diverticulitis is a common cause of hospitalization, with recurrence potentially associated with significant complications. As current indications for elective surgery increasingly emphasize individualized decision-making, identifying predictors of recurrence is of particular clinical importance. The aim was to evaluate the incidence and severity of recurrence following conservative management of acute diverticulitis and investigate potential clinical, laboratory, and imaging predictors.

Methods: We retrospectively analyzed 53 patients hospitalized with acute diverticulitis, including 43 classified as Hinchey Ia and 7 as Hinchey Ib. Among 50 patients initially managed conservatively, recurrence within 12 months, recurrence severity, readmissions, and subsequent surgical interventions were recorded. Clinical, laboratory, and computed tomography (CT) findings were specifically evaluated as potential predictors of recurrence in patients with Hinchey Ia diverticulitis.

Results: Recurrence occurred in 25/50 patients (50%), including 21/43 (48.8%) with Hinchey Ia and 4/7 (57.1%) with Hinchey Ib disease. Seven recurrences (28%) were complicated, while 17 readmissions, four emergency operations, and five elective procedures were recorded. Among Hinchey Ia patients, recurrence was associated with greater bowel wall thickness (13.5 vs. 12 mm, p=0.040) and a higher number of previous episodes (p=0.017). No significant associations were identified with age, inflammatory markers, or the length and location of the affected bowel segment. Among patients experiencing recurrence, admission C-reactive protein (CRP) levels were significantly higher in those with complicated recurrence (138 vs. 46.25 mg/L, p=0.010).

Conclusions: Increased bowel wall thickness was associated with recurrence in patients with Hinchey Ia diverticulitis. Incorporating baseline CT findings into clinical assessment may support individualized counseling and decision-making regarding elective surgical management, pending validation in larger studies.

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Beyond age: Preoperative inflammatory and nutritional markers and major complications after hepato-pancreato-biliary cancer surgery in older adults

Sophia Tsokkou, Menelaos Papakonstantinou, Paraskevi Chatzikomnitsa, Areti-Danai Gkaitatzi, Dimitrios Giakoustidis, Vasileios Papadopoulos, Alexandros Giakoustidis

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Introduction: Older adults undergoing hepato-pancreato-biliary (HPB) cancer surgery face a high risk of major complications, yet chronological age poorly reflects physiological reserve. We examined whether routine preoperative inflammatory and nutritional markers are associated with major complications in this population.
Methods: This single-center retrospective study included 52 patients aged ≥65 years who underwent HPB resection for malignancy. The primary outcome was Clavien–Dindo grade ≥IIIa complications. The prognostic nutritional index (PNI), albumin, neutrophil-to-lymphocyte ratio, platelet-to-lymphocyte ratio (PLR), systemic immune-inflammation index (SII), SII/albumin, C-reactive protein (CRP)-to-albumin ratio (CAR) and CRP-to-lymphocyte ratio (CLR) were compared between patients with and without major complications and entered into separate logistic models adjusted for age and ASA class.
Results: Major complications occurred in 17 patients (32.7%), and 90-day mortality was 15.4%. Age did not differ between groups (median 74 years with vs. 73 years without major complications; p = 0.681), whereas complication rates varied by diagnosis (77.8% in cholangiocarcinoma; p = 0.004). Higher CAR (OR 2.59 per unit, 95% CI 1.11–6.02), CLR (OR 1.37, 95% CI 1.04–1.79) and lower albumin (OR 0.26 per g/dL, 95% CI 0.08–0.88) were associated with major complications; PNI showed a borderline association (OR 0.91, 95% CI 0.82–1.00; p = 0.054). CAR and CLR yielded AUCs of 0.76, similar to CRP (0.74). Associations attenuated after adjustment for cholangiocarcinoma and did not survive false-discovery-rate correction.
Conclusions: In older patients undergoing HPB cancer surgery, preoperative CRP-based indices and hypoalbuminemia, rather than age, were the clearest risk signals. Validation in larger multicenter cohorts is needed.

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Spleen-preserving pancreatectomy with adequate lymphadenectomy: A single-center experience

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Introduction: Spleen preserving pancreatectomy is increasingly performed for benign pancreatic diseases or diseases with low malignant potential. Spleen preservation can offer immunological benefits and reduce long-term post-splenectomy complications. The aim of this study was to present our department's experience in spleen preserving distal (SPDP) and total (SPTP) pancreatectomy.

Methods: A retrospective analysis was performed on patients that underwent spleen-preserving pancreatectomy at the 1st Department of Surgery of Laikon General Hospital from 01/01/2022 to 31/08/2026. Splenic vessels were preserved in all cases.

Results: A total of 13 patients (7 females/ 6 males) underwent spleen-preserving pancreatectomy (5SPDP and 8 SPTP). Indications included pNET (4/13 patients), trauma (1/13 patients) and IPMN (8/13 patients). The mean number of resected lymph nodes was 13 in SPDP and 35 in SPTP. Severe morbidity (Clavien-Dindo > III) occurred in 3 patients. No patient developed splenic vessel thrombosis or splenic infraction. 4 patients developed clinically significant pancreatic fistula following SPDP. 1 postoperative death was recorded which was unrelated to any surgical complication.

Conclusions: Spleen-preserving pancreatectomy is feasible and safe in selected patients without undermining the adequate lymphadenectomy. Spleen-preserving provides significant immunological benefits and prevents the risk of overwhelming post-splenectomy infection. Large prospective studies are essential to elucidate the long-term outcomes of these patients.

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Spleen-preserving strategies in splenic injury: Patient selection and contemporary surgical management

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Introduction: The management of splenic injury has evolved towards selective non-operative management and spleen-preserving interventions in hemodynamically stable patients. However, the optimal strategy depends on injury severity, associated injuries, and the patient's clinical condition. The aim was to examine current approaches to spleen preservation following splenic injury, with emphasis on patient selection, indications for splenic artery embolization, and the role of surgical management.

Materials and Methods: A literature search was conducted in PubMed, and relevant clinical guidelines were reviewed. Non-operative management, splenic artery embolization, and surgical treatment were evaluated in relation to hemodynamic stability, injury grade, treatment failure, and complications.

Results: Non-operative management demonstrated high success rates in hemodynamically stable patients, although success rates were lower in high-grade injuries (IV–V). Splenic artery embolization was associated with increased rates of splenic salvage in high-grade injuries and in patients with contrast extravasation. Failure of non-operative management occurred predominantly during the first few days. Surgical management, including splenectomy or splenorrhaphy, was primarily indicated in hemodynamically unstable patients or following failure of conservative treatment.

Conclusions: Contemporary management of splenic injury requires an individualized approach that balances hemorrhage control with preservation of splenic function. Synthesis of the available evidence may help clarify the respective roles of observation, embolization, and surgical intervention.

Keywords: splenic injury; organ preservation; splenic artery embolization; trauma surgery; hemorrhage control.

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Post-pancreatectomy Haemorrhage: The Interplay of Clinically Relevant Pancreatic Fistula, Infection and Bleeding

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Introduction: Post-pancreatectomy haemorrhage (PPH) remains one of the most lethal complications after pancreaticoduodenectomy, often occurring in the context of a complex postoperative course involving pancreatic fistula and infection. We investigated the association between clinically relevant postoperative pancreatic fistula (CR-POPF), clinically relevant PPH (CR-PPH) and failure to rescue (FTR).

Methods: We retrospectively analysed 166 consecutive pancreaticoduodenectomies performed between 2018 and 2026. POPF and PPH were classified according to the ISGPS definitions, with grades B/C considered clinically relevant. The primary endpoint was PPH-specific FTR, defined as 90-day all-cause mortality among patients with CR-PPH. Fisher's exact test and effect size estimates with 95% confidence intervals were used.

Results: CR-POPF occurred in 61/166 patients (36.7%), PPH of any grade in 32/166 (19.3%) and CR-PPH in 25/166 (15.1%). CR-PPH developed in 18/61 patients with CR-POPF (29.5%) compared with 7/105 without CR-POPF (6.7%), giving a risk ratio of 4.43 (95% CI 1.96–9.99; p<0.001). Among patients with CR-PPH, 64.0% had an infected POPF, 76.0% surgical site infection, 64.0% bacteraemia and 60.0% sepsis/septic shock. PPH-specific FTR was 20.0% (5/25; 95% CI 8.9–39.1%), rising to 25.0% (4/16) in patients with infected CR-POPF and CR-PPH. Conventional FTR after Clavien–Dindo grade ≥III complications was 23.3% (14/60), providing a comparator for the entire cohort.

Conclusions: CR-POPF was strongly associated with CR-PPH. Haemorrhage frequently formed part of a broader septic fistula phenotype, with mortality in one in five patients. These findings support a complication-trajectory-based approach, focusing on early recognition, escalation of management and effective rescue of high-risk patients, rather than the isolated recording of individual complications.



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