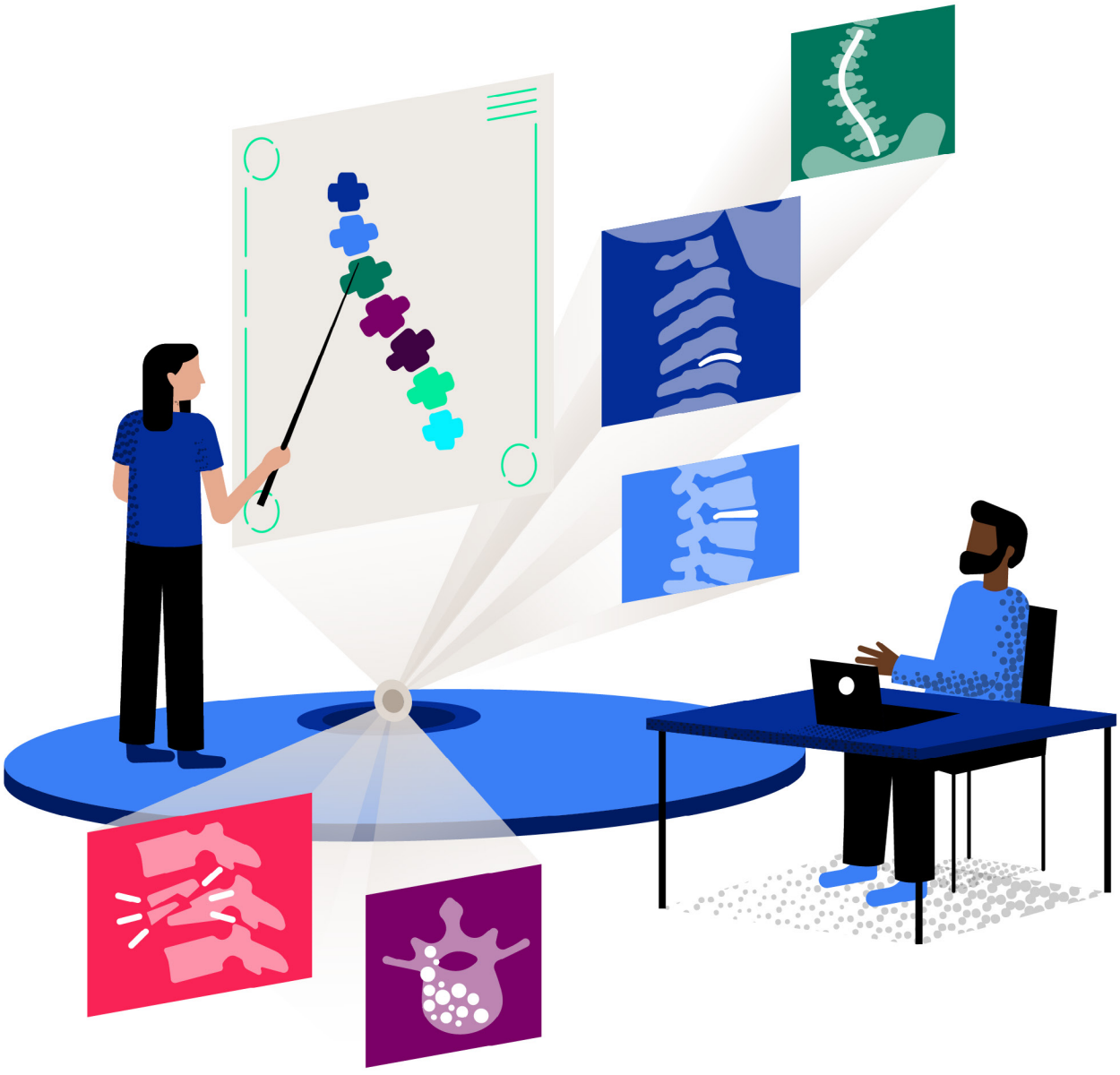
AO SPINE

Global Spine Diploma Program

AO Spine North America

Spine Fellowship • Knowledge • Growth



Welcome to the first **global diploma training program for spine surgery**

The Global Spine Diploma Program is the first globally developed, systematic training for spine surgeons, creating a new worldwide standard. It helps orthopedic and neurosurgeons to bring their knowledge and skills across multiple spinal pathologies to a new level. A syllabus describing the curriculum content, educational methods, and resources has been developed to achieve defined learning objectives.

Boost your career...

With the Global Spine Diploma Program by AO Spine, you participate in the worldwide advancement of spinal care. Acquire vast knowledge in spine surgery, conveyed by faculty-trained experts.

The program is CME accredited by UEMS-EACCME®.

...conveniently at your own pace

The outstanding online learning environment and the clearly defined syllabus assure efficient learning to get the most out of your time. Following a weekly schedule with a fixed time period, learning mainly takes place in the form of self-study. This gives you maximum flexibility to study at any place, respecting your individual agenda.

Curriculum-based

Efficient and flexible learning

Program duration 12 months

Expert faculty with regular live sessions

Value for money

CME accredited by UEMS-EACCME®

The AO Spine curriculum
Learn with a clear plan

The syllabus of the Global Spine Diploma Program follows the AO Spine curriculum, which forms the basis for all educational AO Spine events and programs. The curriculum-based approach ensures targeted development of cognitive, procedural, nontechnical, and nonoperative skills.

"Competence is the broader holistic view of professional practice that encompasses critical thinking, judgement, and experience when choosing which competencies to apply to a given clinical situation."

De Cossart and Fish 2005

Up-to-date content

Our contributors review and align the AO Spine curriculum with current challenges in global spine surgery on a regular basis. The 2020 update introduced a whole new approach based on Entrustable Professional Activities (EPA). With this line of action, we ensure the curriculum remains fit for purpose as a framework for continuing professional development (CPD) in the surgical management of spinal disorders.

EPA: from competencies to competence

EPAs describe the units of day-to-day work of spine surgeons, being linked to the specific competencies that are required to perform this work. They convey broader skills beyond medical and surgical expertise. Each EPA is defined by key competencies in all of the pathology domains.

The domains of pathology

- Trauma
- Oncology
- Degeneration
- Infection
- Pediatric deformity
- Spinal fragility fractures
- Adult deformity
- Inflammatory spondyloarthropathy

The core EPAs

1. Make a diagnosis
2. Formulate a treatment plan
3. Explain treatment options to patients
4. Collaborate with multidisciplinary teams
5. Perform an appropriate procedure when indicated
6. Review patient progress and prevent or manage complication
7. Participate in quality improvement activities

We know your time is precious

The Global Spine Diploma Program follows the ultimate syllabus to complete your profession. An attractive mix of different learning formats, self-study, and synchronous training parts assures flexible learning. The amount of time required is approximately 2–4 hours weekly, including self-study time. Total program duration is 40 weeks distributed over your fellowship year.

Flexible and state-of-the-art learning

The Moodle-based learning management system features state-of-the-art multimedia-based learning tools for efficient self-study at an individual pace. In parallel, participants attend instructor-led training sessions and can join informal forum discussions. Small groups of participants are supervised by a faculty-trained expert.

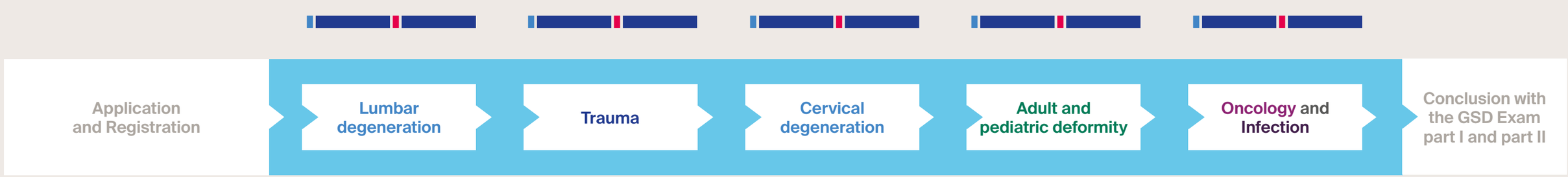
Exhaustive and up-to-date content

The modular training structure offers participants the chance to gain breadth of competencies and depth of experience at the same time. The program is structured into five modules, eight weeks each, total duration 40 weeks.

Proof of knowledge

During each of the five core modules, the participants' progress is checked with a case presentation and subsequent discussion. The presentation is peer reviewed by one faculty and one group member.

A vast mix of different learning formats: In parallel to small learning groups with individual mentoring, participants learn self-directed, which allows them to follow their own time schedule.



Global Spine Diploma Program Modules—What's inside

There are **five modules**. Each consists of a **live case discussion** and a **live webinar** at fixed times, plus **online resources** and **forum discussions** to be completed at your own pace.

Assessment tasks for modules include contributing to forum discussions, participation in live case presentation sessions, and accessing online resources.

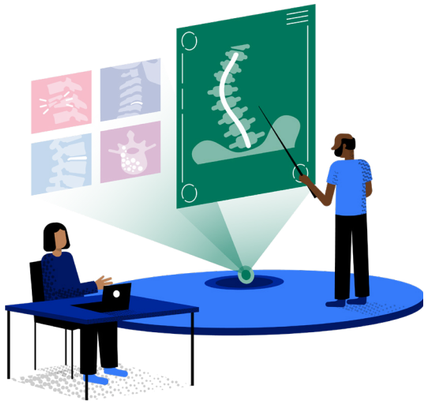
Each regional group has a moderator who will organize the live case sessions and the weekly discussion forums.

Lumbar degeneration

Module outline
Week 1: Clinical and radiological assessment
Week 2: Biopsychosocial model of pain
Week 3: Non-operative treatment
Week 4: Lumbar disc herniation
Week 5: Degenerative spondylolisthesis
Week 6: Lumbar stenosis
Week 7: Lumbar fusion—open and MISS
Week 8: Outcomes and complications

Cervical degeneration

Module outline
Week 1: Clinical and radiological assessment
Week 2: Non-operative management
Week 3: Cervical radiculopathy
Week 4: Degenerative cervical myelopathy
Week 5: Anterior surgery for DCM
Week 6: Posterior surgery for DCM
Week 7: Cervical rheumatoid disease
Week 8: Outcomes and complications



Adult and pediatric deformity

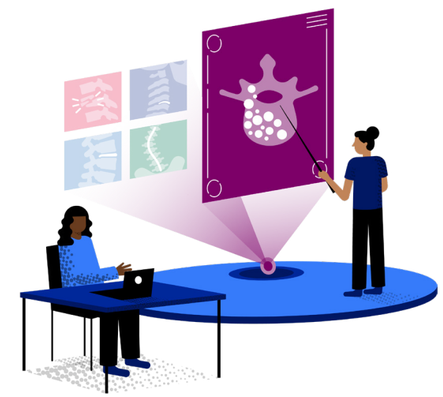
Module outline
Week 1: Adult deformity—assessment and treatment planning
Week 2: Surgical procedures—choosing the approach: anterior, posterior, or both
Week 3: Surgical procedures—augmentation and proximal junctional fixation
Week 4: Outcomes and complications
Week 5: Paediatric deformity—assessment and treatment planning
Week 6: Surgical procedures—idiopathic scoliosis
Week 7: Spondylolisthesis
Week 8: Complications and outcomes

Trauma

Module outline
Week 1: Acute spinal trauma—initial management
Week 2: Radiological assessment and injury classification systems
Week 3: Upper cervical injuries
Week 4: Lower cervical injuries
Week 5: Thoracolumbar injuries
Week 6: Osteoporotic and ankylotic fractures
Week 7: Sacral and spinopelvic injuries
Week 8: Outcomes and complications

Oncology and Infection

Module outline
Week 1: Assessment of the patient with a spinal tumor
Week 2: Treatment planning
Week 3: Surgical procedures—primary
Week 4: Surgical procedures—metastatic
Week 5: Assessing the patient with spinal infection
Week 6: Postoperative infection
Week 7: Pyogenic spondylodiscitis
Week 8: Spinal tuberculosis



The AO Spine curriculum
Key competencies

EPA	Trauma	Degeneration	Pediatric deformity	Adult deformity
Make a diagnosis	Examine the patient for a possible spinal cord injury and reexamine serially if a neurological deficit is found	Analyze the patient history, comorbidities, disability, and quality of life	Analyze the patient history and understand the conditions associated with childhood spinal deformity	Analyze the patient history, comorbidities, disability, and quality of life
	Suspect a spinal injury in the unconscious polytrauma patient	Examine the patient, including neurological assessment, to exclude myelopathy/radiculopathy	Examine the child with spinal deformity, including neurology, abdominal reflexes, and syndromic features	Examine the patient for spinal imbalance and neurological deficit
	Maintain spinal immobilization until spinal trauma is excluded	Select the appropriate diagnostic tests and exclude non-spinal conditions	Order and interpret appropriate imaging to assess spinal alignment	Order appropriate imaging, including bone density
	Arrange appropriate imaging	Measure and interpret spinal alignment and spinopelvic parameters	Describe the classifications of pediatric deformities: scoliosis, kyphosis, spondylolisthesis	Measure and interpret spinal alignment and spinopelvic parameters
	Recognize the radiographic features of instability and cord injury	Correlate clinical and imaging findings, distinguishing between aging changes and pathology		Describe the classifications of adult deformities
Formulate a treatment plan	Classify the spinal injury using the AO Spine classification systems	Critically review the best available evidence when considering operative and nonoperative interventions	Critically review the best available evidence to support surgical intervention for severe or progressive deformity	Critically review the best available evidence to support surgical intervention
	Use evidence-based decision-making for treatment of the spinal injury, including spinal cord injury management	Describe the biopsychosocial model of pain and recognize the risks for chronification	Monitor mild to moderate deformities and identify factors that indicate the possibility of progression	Assess the need for medical optimization of the patient before surgery, including osteoporosis treatment
			Understand the natural history of untreated deformity and future disability	Plan for augmentation of instrumentation and dealing with the proximal junction
				Discriminate between deformity with and without stenosis and the different management required
Explain treatment options to patients	Describe the risks and benefits of surgical versus conservative management	Recognize the indications for, and limitations of, surgical intervention	Discuss with patients/parents the risks and benefits of surgery compared with conservative treatment	Discuss with patients the risks and benefits of surgery compared with conservative treatment
	Consider the patient's preferences and expectations	Consider the patient's preferences and expectations	Consider the patient's/parents' concerns and expectations	Consider the patient's preferences and expectations
Collaborate with MDTs	Be involved in rehabilitation planning	Recognize the importance of a multidisciplinary approach in nonoperative treatment, including pain management	Involve medical colleagues in preoperative assessment and postoperative care	Involve medical colleagues in preoperative optimization and postoperative care
		Describe the importance of postoperative activity and rehabilitation		
Perform appropriate procedures	Reduction/stabilization/ decompression/fusion when indicated	Reduction/stabilization/ decompression/fusion when indicated	Consider the need for reduction, osteotomies, instrumentation, distal fixation, posterior and/or anterior fusion	Address spinal balance and consider osteotomies, stabilization, augmentation, distal fixation, proximal junction, posterior and/or anterior fusion
	Use safety protocols to protect the patient and team members	Use safety protocols to protect the patient and team members	Use safety protocols to protect the patient and team members	Use safety protocols to protect the patient and team members
	Preserve function at uninjured levels where possible	Describe the biological agents and other techniques available to increase fusion rate		
Manage or prevent complications	Postinjury, intraoperative, and postoperative	Intraoperative and postoperative	Monitor spinal cord function intraoperatively	Be prepared for the challenges of revision surgery
			Identify postoperative complications early and treat promptly	
Participate in quality improvement	Perform surgical audit on outcomes and complications	Use validated outcome measures to assess effectiveness of interventions	Use validated outcome measures to monitor safety and quality	Use validated outcome measures to assess effectiveness of interventions
	Enroll patients in a trauma registry/ database	Enroll patients in a surgical registry/ database	Enroll patients in a surgical registry/ database	Enroll patients in a surgical registry/ database

EPA	Oncology	Infection	Inflammatory spondyloarthropathy and Arthritis	Spinal fragility fractures and Osteoporosis
Make a diagnosis	Clinically assess and stage patients with spinal neoplasm	Describe the clinical features of and differences between pyogenic spondylodiscitis, epidural abscess, and spinal tuberculosis	Assess the patient history, physical findings, disability, and quality of life	Recognize that acute vertebral and sacral fragility fractures may be associated with significant morbidity in the elderly
	Classify spinal column neoplasms	Describe the general risk factors for spine infections	Describe the classification of inflammatory spondyloarthropathy	List diagnostic tests and imaging modalities for assessing bone density
	Describe the pathology of tumors of the spinal column and spinal cord	Order and interpret hematological, microbiological, and imaging tests to confirm spinal infection	List diagnostic tests and imaging modalities	Recognize the radiographic features of spinal fragility fractures
	List diagnostic imaging appropriate for tumors of the spine	Isolate and identify the causative organism by aspiration or biopsy, if possible	Recognize the radiographic features of spinal instability or ankylosis	Classify osteoporotic fractures of the spine and sacrum
	Describe mechanical instability as it relates to spinal column tumors			
	Establish a diagnosis based on histological verification (biopsy)			
Formulate a treatment plan	Critically review the evidence supporting surgical versus nonsurgical treatment of spinal tumors	Identify preoperative risk factors for developing surgical-site infections after spine surgery and discuss the preventive strategies to minimize risks	Describe the principles of medical management of inflammatory arthritis	Describe the medical management of osteoporosis
	For primary tumors, discuss the balance between cure and morbidity	Consider surgical intervention for neurological compression, spinal instability, and debridement	List surgical indications in the management of spondyloarthropathy	Critically review the best evidence for surgical management of acute spinal fragility fractures
	For metastatic tumors, discuss the balance between prognosis and quality of life		Describe surgical strategies in ankylosing spondylitis for kyphosis correction, fracture fixation	
			Describe surgical strategies in rheumatoid arthritis for occipitocervical decompression/ stabilization	
Explain treatment options to patients	List the options for radiotherapy and chemotherapy for primary and secondary tumors	Discuss with patients the indications for surgical intervention in spinal infection and the potential risks and benefits	Discuss with patients the indications for surgical intervention in spondyloarthropathy and the potential risks and benefits	Discuss the relative risks and benefits of medical versus surgical treatment of acute vertebral fragility fractures
	Discuss with patients and family the surgical and nonsurgical options in view of expected prognosis, risks, outcomes, and quality of life		Consider the patient's preferences and expectations	Consider the patient's preferences and expectations
	Review the unique considerations in the management of pediatric spinal column tumors			
Collaborate with MDTs	Discuss the importance of a multidisciplinary team approach to the management of spinal column tumors	Collaborate with the infectious diseases team to prescribe appropriate antimicrobial therapy according to the sensitivities of the isolated organism and evidence-based guidelines	Involve rheumatology colleagues in preoperative optimization and postoperative care	Participate in joint care with an orthogeriatric service
Perform appropriate procedures	Discuss the surgical principles of resection of primary vertebral tumors	Debridement, decompression, reconstruction, fusion	Reduction, stabilization, decompression, osteotomies, fusion	Vertebroplasty, kyphoplasty, sacroplasty
	Describe the principles of surgical tumor resection for metastatic tumors	Use safety protocols to protect the patient and team members	Use safety protocols to protect the patient and team members	Use safety protocols to protect the patient and team members
	Review the role of minimally invasive surgical techniques/separation surgery for treatment of spinal metastases	Describe the place of instrumentation in spinal infection	Preserve function at unaffected levels where possible	Consider prophylactic treatment at unaffected levels where indicated
	Discuss reconstruction options for resected spinal tumors			
	Use safety protocols to protect the patient and team members			
Manage or prevent complications	Recognize the increased risk of wound problems in patients with debility, prior surgery, or radiation	Manage post-infective complications, including deformity, loss of fixation, pseudarthrosis	Intraoperative and postoperative	Intraoperative (cement leakage) and postoperative (neuro deficit)
	Anticipate intraoperative complications	Emphasize and review patient compliance with frequency and duration of treatment		Describe strategies for preventing future fractures
	Recognize recurrent disease postoperatively	Perform regular clinical and hematological review until resolution of the infection		
Participate in quality improvement	Use validated outcome measures to monitor safety and quality	Regularly review the incidence and outcomes of spinal infections in the local healthcare setting	Perform surgical audit on outcomes and complications	Perform surgical audit on outcomes and complications
	Enroll patients in a tumor registry/ database		Enroll patients in a registry/database	Enroll patients in a registry/database

Expand your network

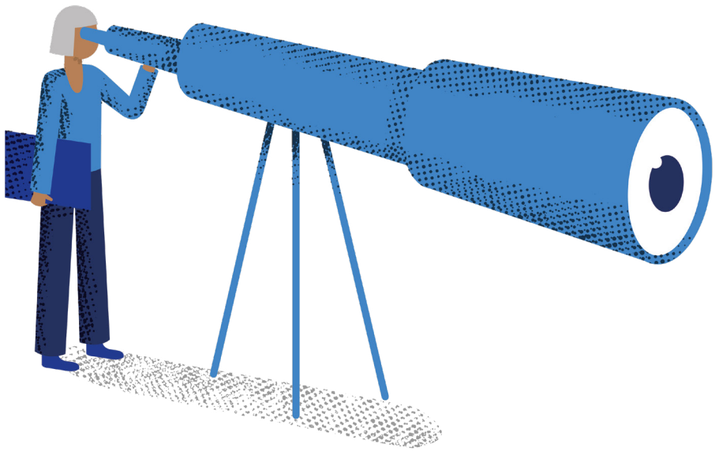
The Global Spine Diploma Program is driven, written, and taught by world-renowned surgeons, tailored to surgeons' needs. With their vast experience, local and international faculty members give mentoring support during the full program duration.

Learn from the best

Continuously improve your expertise, not only during the Global Spine Diploma Program itself, but also after completion: The program opens the door to a large network of the world's leading spine surgery experts and other training participants. Training mentors make sure that spine surgeons of tomorrow who completed the program use well-established, evidence-based, approaches and techniques.

Expert online-faculty members

Each faculty member has undergone a dedicated faculty training program. Based on adult learning principles, this program promotes excellence in teaching, facilitation of surgeon learning, and curriculum development, and provides constructive feedback to the participating faculty members. The skills and strategies developed in this program have a positive impact on all our educational activities and contribute to our mission to deliver high-quality education—ultimately translating into clinical practice for the benefit of patients.



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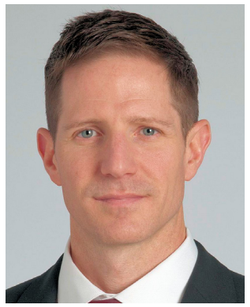

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Questions?

Our AO Spine staff are happy to answer them and provide you with additional information.

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