

**ACGME Program Requirements for Graduate Medical Education  
in Gastroenterology  
Summary and Impact of Focused Requirement Revisions**

Requirement: Multiple

Requirement Revision (significant change only):

“Dual GI/TH pathway” is referenced throughout the program requirements.

1. Describe the Review Committee’s rationale for this revision:

**The dual gastroenterology/transplant hepatology (GI/TH) pathway is an optional pathway within a gastroenterology fellowship. The additional requirements that are integrated throughout the document operationalize the new dual pathway and were developed from an eight-year pilot program. The pilot program was an innovation in competency-based medical education demonstrating that competence could be achieved in gastroenterology and transplant hepatology in a three-year program compared to the standard four years (three years of gastroenterology and one year of transplant hepatology). Successful pilot fellows have been eligible to take both the gastroenterology and transplant hepatology certification exams after the three-year program to become certified in both specialties. The American Board of Internal Medicine (ABIM) recently approved the gastroenterology/transplant hepatology competency-based pilot program as a new permanent education/training pathway. Due to the shortened period of education and training, the new dual certification pathway is best suited for fellows interested in a clinically focused career in hepatology. The standard fourth-year fellowship pathway will remain available and is best suited for fellows who prefer to focus on other interests prior to transplant hepatology education and training, including research or an additional advanced degree. Some fellows may need additional time to achieve competence in gastroenterology and would also be best suited for the standard fourth-year fellowship pathway.**

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?

**This improves fellow education by offering a new, clinically focused, competency-based pathway to education/training and certification in gastroenterology and transplant hepatology.**

3. How will the proposed requirement or revision impact continuity of patient care?

**This will not affect continuity of patient care.**

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?

**This will not necessitate additional institutional resources. The dual GI/TH pathway should occur in an institution that also sponsors an accredited transplant hepatology fellowship program and therefore will have already invested the resources necessary for education and training in transplant hepatology.**

5. How will the proposed revision impact other accredited programs?

**This will not affect other accredited programs.**

Requirement: I.B.1.b)

Requirement Revision (significant change only):

To be eligible for the optional dual gastroenterology/transplant hepatology (GI/TH) pathway, the Sponsoring Institution should also sponsor an ACGME-accredited fellowship in transplant hepatology. <sup>(Core)</sup>

1. Describe the Review Committee's rationale for this revision:

**The dual GI/TH pathway requires close collaboration between the gastroenterology and transplant hepatology programs for the curriculum, experiences, and evaluation of fellows. Except in rare exceptions, this education and training should occur in the same institution that also sponsors a transplant hepatology fellowship program.**

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?

**This facilitates an educational experience that is similar to that of the transplant hepatology fellowship while still permitting the ongoing development of gastroenterology competence.**

3. How will the proposed requirement or revision impact continuity of patient care?

**This will not affect continuity of patient care.**

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?

**This will not necessitate additional institutional resources.**

5. How will the proposed revision impact other accredited programs?

**This will not affect other accredited programs.**

Requirement: I.D.4.a).(4)

Requirement Revision (significant change only):

Programs participating in the dual GI/TH pathway must perform 20 liver transplantations per year for each dual GI/TH fellow in addition to the number of liver transplantations required for the separate ACGME-accredited transplant hepatology fellowship program complement. <sup>(Detail)</sup>

1. Describe the Review Committee's rationale for this revision:

**This requirement appears in the Program Requirements for Transplant Hepatology (I.D.4.a).(4)) and was inserted into these requirements to ensure that the program has the clinical resources necessary for educating the dual GI/TH fellows along with the transplant hepatology fellows.**

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?

**This will ensure sufficient clinical resources for educating the dual GI/TH fellows.**

3. How will the proposed requirement or revision impact continuity of patient care?

**This will not affect continuity of patient care.**

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?

**This will not necessitate additional institutional resources.**

5. How will the proposed revision impact other accredited programs?

**This will not affect other accredited programs.**

Requirement: II.B.4.c)-d)

Requirement Revision (significant change only):

In addition to the program director, there must be at least three core faculty members certified in gastroenterology by the ABIM or the AOBIM. <sup>(Core)</sup>

For programs approved for more than six fellows, there must be at least one core faculty member certified in gastroenterology by the ABIM or the AOBIM for every 1.5 fellows. <sup>(Core)</sup>

1. Describe the Review Committee's rationale for this revision:

**The Committee is supplementing the "Core Faculty" section of the Common Program Requirements with its long-standing requirements that there be a minimum number of faculty members who are certified in the subspecialty.**

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?

**This will not affect resident/fellow education, patient safety, and/or patient care quality.**

3. How will the proposed requirement or revision impact continuity of patient care?

**This will not affect continuity of patient care.**

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?

**This will not necessitate additional institutional resources.**

5. How will the proposed revision impact other accredited programs?

**This will not affect other accredited programs.**

Requirement: II.B.4.e) and f)

Requirement Revision (significant change only):

At least one core faculty member certified in gastroenterology by the ABIM or the AOBIM must have demonstrated expertise and primary focus in hepatology. <sup>(Core)</sup>

At least one core faculty member certified in gastroenterology by the ABIM or the AOBIM must have demonstrated expertise in all aspects of endoscopy, including advanced procedures.  
<sup>(Core)</sup>

1. Describe the Review Committee's rationale for this revision:

**This updates previous requirements that existed prior to the revised Common Program Requirements. It ensures that gastroenterology fellows have access to core faculty members with expertise in hepatology and in advanced endoscopic procedures. These are important educational components of the gastroenterology curriculum and critical to the achievement of competence in gastroenterology. (This requirement is not specific to the dual GI/TH pathway.)**

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?

**Gastroenterology fellows will substantially benefit from the contribution of these expert core faculty members to their curriculum and educational experiences.**

3. How will the proposed requirement or revision impact continuity of patient care?

**This will not affect continuity of patient care.**

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?

**This will not necessitate additional institutional resources unless the institution does not already employ faculty members with these areas of expertise.**

5. How will the proposed revision impact other accredited programs?

**This will not affect other accredited programs.**

Requirement: III.A.1.b).(2) (a) and (b)

Requirement Revision (significant change only):

To be eligible for appointment to the dual GI/TH pathway in the second or third year of education, fellows must be:

on a trajectory to achieving competence in gastroenterology by the end of the 36-month educational program based on progress along the subspecialty-specific Milestones. <sup>(Core)</sup>

approved by the gastroenterology Clinical Competency Committee, the gastroenterology program director and the transplant hepatology program director. <sup>(Core)</sup>

1. Describe the Review Committee's rationale for this revision:

**Fellows interested in the dual GI/TH pathway must progress relatively quickly through the gastroenterology Milestones to meet the requirements for both gastroenterology and transplant hepatology in 36 months. This trajectory toward achieving competence in gastroenterology cannot be assessed before beginning gastroenterology fellowship and should be determined during the first and/or second year.**

**The development of competence in gastroenterology is best determined by the gastroenterology Clinical Competency Committee and the gastroenterology program director, while the transplant hepatology program director should assist in determining a fellow's suitability and eligibility for the dual GI/TH pathway.**

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?

**This will ensure that fellows interested in the dual GI/TH pathway will be able to achieve competence in both gastroenterology and transplant hepatology in 36 months. It should also identify fellows who may not succeed in this combined pathway and may need additional time in the gastroenterology fellowship to progress along the subspecialty-specific Milestones.**

3. How will the proposed requirement or revision impact continuity of patient care?

**This will not affect continuity of patient care.**

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?

**This will not necessitate additional institutional resources.**

5. How will the proposed revision impact other accredited programs?

**This will not affect other accredited programs.**

Requirement: IV.B.1.b)(1).(c) and (c).(i)-(ix)

Requirement Revision (significant change only):

Fellows in the dual GI/TH pathway must also demonstrate competence in:

the comprehensive management of patients high on the transplant list and in the intensive care setting with complications of end-stage liver disease, including refractory ascites, hepatic hydrothorax, hepatorenal syndrome, hepatopulmonary and portal pulmonary syndromes, and refractory portal hypertensive bleeding; <sup>(Core)</sup>

the diagnosis and management of hepatocellular carcinoma and cholangiocarcinoma, including transplantation and non-transplantation, and surgical and non-surgical approaches; <sup>(Core)</sup>

the ethical considerations relating to liver transplant donors, including questions related

to living donors, non-heart beating donors, criteria for brain death, and appropriate selection of recipients; <sup>(Core)</sup>

the evaluation and management of both inpatients and outpatients with acute and chronic end-stage liver disease; <sup>(Core)</sup>

the management of chronic viral hepatitis in the pre-transplantation, peri-transplantation, and post-transplantation settings; <sup>(Core)</sup>

the management of fulminant liver failure; <sup>(Core)</sup>

nutritional support of patients with chronic liver disease; <sup>(Core)</sup>

the prevention of acute and chronic end-stage liver disease; and, <sup>(Core)</sup>

the psychosocial evaluation of all transplant candidates, in particular those with a history of substance abuse. <sup>(Core)</sup>

1. Describe the Review Committee's rationale for this revision:

**These requirements appear in the Program Requirements for Transplant Hepatology (IV.B.1.b).(1).(b)) and were inserted here so there is clarity as to the patient care competencies in transplant hepatology that must be achieved in the dual GI/TH pathway in addition to gastroenterology competencies already specified.**

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?

**This informs the educational and clinical experiences necessary to achieve competence in transplant hepatology in the dual GI/TH pathway.**

3. How will the proposed requirement or revision impact continuity of patient care?

**This will not affect continuity of patient care.**

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?

**This will not necessitate additional institutional resources.**

5. How will the proposed revision impact other accredited programs?

**This will not affect other accredited programs.**

Requirement: IV.B.1.b).(2).(b)

Requirement Revision (significant change only):

Fellows in the dual GI/TH pathway must demonstrate competence in:

the performance of native and allograft liver biopsies and interpretation of results; and, <sup>(Core)</sup>

Each fellow must perform a minimum of 20. <sup>(Detail)</sup>

the use of interventional radiology in the diagnosis and management of portal hypertension, as well as biliary and vascular complications. <sup>(Core)</sup>

1. Describe the Review Committee's rationale for this revision:

**These requirements appear in the Program Requirements for Transplant Hepatology (IV.B.1.b).(2).(a)) and were inserted here so there is clarity as to the procedural skills in transplant hepatology that must be achieved in the dual GI/TH pathway in addition to gastroenterology procedural skills already specified.**

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?

**This informs the educational and clinical experiences necessary to achieve competence in transplant hepatology in the dual GI/TH pathway.**

3. How will the proposed requirement or revision impact continuity of patient care?

**This will not affect continuity of patient care.**

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?

**This will not necessitate additional institutional resources.**

5. How will the proposed revision impact other accredited programs?

**This will not affect other accredited programs.**

Requirement: IV.B.1.c).(4) and (4).(a)-(k)

Requirement Revision (significant change only):

Fellows in the dual GI/TH pathway must demonstrate knowledge of:

drug hepatotoxicity and the interaction of drugs with the liver; <sup>(Core)</sup>

the impact of various modes of therapy and the appropriate use of laboratory tests and procedures; <sup>(Core)</sup>

the natural history of chronic liver disease; <sup>(Core)</sup>

factors involved in nutrition and malnutrition and their management; <sup>(Core)</sup>

the organizational and logistic aspects of liver transplantation, including the role of nurse coordinators and other support staff (including social work), organ procurement, and UNOS policies, including those regarding organ allocation; <sup>(Core)</sup>

principles and application of artificial liver support; <sup>(Core)</sup>

principles of donor selection and rejection (e.g., hemodynamic management, donor

organ steatosis, and indication for liver biopsy); (Core)

principles of living donor selection, including appropriate surgical, psychosocial and ethical considerations; (Core)

principles and practice of pediatric liver transplantation; (Core)

transplant immunology, including blood group matching, histocompatibility, tissue typing, and infectious and malignant complications of immunosuppression; and, (Core)

indications, contraindications, limitations, complications, alternatives and techniques of native and allograft biopsies and non-invasive methods of fibrosis assessment. (Core)

1. Describe the Review Committee's rationale for this revision:

**These requirements appear in the Program Requirements for Transplant Hepatology (IV.B.1.c).(3)) and were inserted here to describe the medical knowledge competencies in transplant hepatology that must be achieved in the dual GI/TH pathway in addition to gastroenterology competencies already specified.**

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?

**This informs the educational and clinical experiences necessary to achieve competence in transplant hepatology in the dual GI/TH pathway.**

3. How will the proposed requirement or revision impact continuity of patient care?

**This will not affect continuity of patient care.**

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?

**This will not necessitate additional institutional resources.**

5. How will the proposed revision impact other accredited programs?

**This will not affect other accredited programs.**

Requirement: IV.C.3.a) and a).(1)-(3)

Requirement Revision (significant change only):

Dual GI/TH pathway:

In addition to the minimum of 18 months devoted to clinical experience in gastroenterology, a minimum of 12 months must be devoted to clinical experience in transplant hepatology. (Core)

All 12 months of transplant hepatology must include clinical experiences and appropriate protected (block or concurrent) time for research. (Core)

Fellows must not begin education and training in transplant hepatology in the dual GI/TH pathway until the second year of the educational program. <sup>(Core)</sup>

1. Describe the Review Committee's rationale for this revision:

**IV.C.3.a).(1) further defines the dual GI/TH pathway by outlining the additional clinical experience required in transplant hepatology.**

**IV.C.3.a).(2) is copied from the transplant hepatology requirements (IV.C.3.) that apply to the dual GI/TH pathway.**

**IV.C.3.a).(3) emphasizes that the trajectory toward achieving competence in gastroenterology cannot be assessed before beginning the gastroenterology fellowship and should be determined during the first and/or second year.**

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?

**This improves fellow education by offering a new, clinically focused, competency-based pathway to education/training and certification in gastroenterology and transplant hepatology.**

3. How will the proposed requirement or revision impact continuity of patient care?

**This will not affect continuity of patient care.**

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?

**This will not necessitate additional institutional resources. The dual GI/TH pathway should occur in an institution that also sponsors an accredited transplant hepatology fellowship program and therefore will have already invested the resources necessary for education and training in transplant hepatology.**

5. How will the proposed revision impact other accredited programs?

**This will not affect other accredited programs.**

Requirement: IV.C.6. and 6.a)-i)

Requirement Revision (significant change only):

Dual GI/TH pathway:

Fellows must have continuity ambulatory clinic experience that exposes them to the breadth and depth of gastroenterology and transplant hepatology. <sup>(Core)</sup>

Each fellow must participate in primary evaluation, presentation, and discussion at selection conferences of potential transplant candidates. <sup>(Core)</sup>

Each fellow must participate at selection conferences of at least 10 potential transplant candidates. <sup>(Detail)</sup>

Each fellow must provide follow-up for new liver transplant recipients for a minimum of three months from the time of their transplantation. <sup>(Core)</sup>

Each fellow must provide follow-up for at least 20 new liver transplant recipients for a minimum of three months from the time of their transplantation. <sup>(Detail)</sup>

Fellows must gain familiarity and expertise with the management of common long-term problems such as cardiovascular disease, acute and chronic kidney injury, screening for malignancies, and diagnosis and treatment of recurrent disease. <sup>(Core)</sup>

Each fellow must participate in the follow-up of liver transplant recipients who have survived more than one year after transplantation. <sup>(Core)</sup>

Each fellow must participate in the follow-up of at least 20 or more liver transplant patients who have survived more than one year after transplantation. <sup>(Detail)</sup>

There must be a minimum six-month follow-up period for each patient to ensure longitudinal care of transplant recipients. <sup>(Detail)</sup>

Each fellow must actively participate in transplant recipients' medical care, including management of acute cellular rejection, recurrent disease, infectious diseases, and biliary tract complications, and must serve as a primary member of the transplantation team and participate in making decisions about immunosuppression. <sup>(Core)</sup>

The fellows and faculty members in the program must share patient co-management responsibilities with transplant surgeons from the pre-operative phase to the outpatient period. <sup>(Detail)</sup>

The program must ensure close interactions and education with an experienced liver transplant pathologist. <sup>(Detail)</sup>

Fellows must observe in one cadaveric liver procurement and three liver transplant surgeries. <sup>(Core)</sup>

Fellows must have formal instruction and clinical experience in interpretation of the following diagnostic and therapeutic techniques and procedures:

review of native and allograft liver biopsies; and, <sup>(Core)</sup>

A minimum of 200 reviews of such biopsies must be done <sup>(Detail)</sup>

the appropriate use of ultrasound localized, laparoscopy-guided and transjugular liver biopsies. <sup>(Core)</sup>

Fellows must have formal didactic instruction in the pathogenesis, manifestations, and complications of end-stage liver disease and hepatic transplantation, including the behavioral adjustments of patients to their problems. <sup>(Core)</sup>

1. Describe the Review Committee's rationale for this revision:

**These requirements appear in the Program Requirements for Transplant Hepatology (IV.C.7.-14.) and were inserted here to describe the curriculum organization and fellow experiences in transplant hepatology required in the dual GI/TH pathway in addition to the gastroenterology curriculum and experiences already specified.**

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?

**This specifies the curriculum and informs the educational and clinical experiences necessary in transplant hepatology in the dual GI/TH pathway.**

3. How will the proposed requirement or revision impact continuity of patient care?

**This will not affect continuity of patient care.**

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?

**This will not necessitate additional institutional resources.**

5. How will the proposed revision impact other accredited programs?

**This will not affect other accredited programs.**

Requirement: IV.C.8.a)

Requirement Revision (significant change only):

The core curriculum for fellows in the dual GI/TH pathway must include a didactic program based upon the core knowledge content of transplant hepatology in addition to the didactic program based upon the core knowledge content in gastroenterology. (Core)

1. Describe the Review Committee's rationale for this revision:

**This requirement appears in the Program Requirements for Transplant Hepatology (IV.C.5.) and was inserted here to ensure that the core curriculum in the dual GI/TH pathway includes transplant hepatology core knowledge in addition to the gastroenterology didactic program already specified.**

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?

**This specifies the didactic curriculum for transplant hepatology in the dual GI/TH pathway.**

3. How will the proposed requirement or revision impact continuity of patient care?

**This will not affect continuity of patient care.**

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?

**This will not necessitate additional institutional resources.**

5. How will the proposed revision impact other accredited programs?

**This will not affect other accredited programs.**

Requirement: IV.C.10.a)

Requirement Revision (significant change only):

Fellows in the dual GI/TH pathway must be instructed in practice management relevant to transplant hepatology in addition to gastroenterology. <sup>(Detail)</sup>

1. Describe the Review Committee's rationale for this revision:

**This requirement appears in the Program Requirements for Transplant Hepatology (IV.C.6.) and was inserted here to ensure that fellows in the dual GI/TH pathway are instructed in practice management relevant to transplant hepatology in addition to instruction in gastroenterology practice management.**

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?

**This informs the curriculum in transplant hepatology in the dual GI/TH pathway.**

3. How will the proposed requirement or revision impact continuity of patient care?

**This will not affect continuity of patient care.**

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?

**This will not necessitate additional institutional resources.**

5. How will the proposed revision impact other accredited programs?

**This will not affect other accredited programs.**

Requirement: V.A.1.a).(3) and (3).(a)-(g)

Requirement Revision (significant change only):

Dual GI/TH pathway:

Evaluation of performance must include evaluation of competence in transplant hepatology in addition to gastroenterology, including progress along the subspecialty-specific Milestones for each specialty independently. <sup>(Core)</sup>

The gastroenterology program director must obtain input from the transplant hepatology program director and transplant hepatology Clinical Competency Committee to assist with evaluation of fellows. <sup>(Core)</sup>

The summative evaluation must include each fellow's readiness to participate or continue in the dual GI/TH pathway, if applicable. <sup>(Core)</sup>

The gastroenterology program director must obtain input from the transplant hepatology program director to provide a final evaluation for each fellow completion of the program. <sup>(Core)</sup>

The final evaluation of fellows must:

verify that the fellow has demonstrated the knowledge, skills, and behaviors necessary to enter autonomous practice in transplant hepatology and gastroenterology; and, <sup>(Core)</sup>

consider recommendations from both transplant hepatology and gastroenterology Clinical Competency Committees. <sup>(Core)</sup>

The Clinical Competency Committee must obtain input from the transplant hepatology program director and transplant hepatology Clinical Competency Committee to determine each fellow's progress on achievement of the subspecialty-specific Milestones in transplant hepatology and advise the program director regarding each fellow's progress. <sup>(Core)</sup>

The fellows should evaluate transplant hepatology faculty members as it relates to the transplant hepatology educational program. <sup>(Detail)</sup>

1. Describe the Review Committee's rationale for this revision:

**This emphasizes that education and training in the dual GI/TH pathway should occur with substantial cooperation and collaboration between the gastroenterology and transplant hepatology programs, especially when evaluating dual GI/TH fellows.**

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?

**This will allow fellows in the dual GI/TH pathway to be evaluated by the transplant hepatology program faculty members and Clinical Competency Committee.**

3. How will the proposed requirement or revision impact continuity of patient care?

**This will not affect continuity of patient care.**

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?

**This will not necessitate additional institutional resources.**

5. How will the proposed revision impact other accredited programs?

**This will require the cooperation and collaboration of the transplant hepatology fellowship program director, faculty members, and Clinical Competency Committee.**