Please see the Prescribing Information, including BOXED WARNING, for more information.
Objectives

- Provide an overview of important safety information
- Provide an overview of the TOUCH Prescribing Program for Multiple Sclerosis (MS) and Crohn’s disease (CD)
- Review the process steps to complete TOUCH Prescribing Program components including use of TOUCH On-Line
- Review specific MS TOUCH and/or CD TOUCH Prescribing Program materials
- Review the responsibilities of each participant in the TOUCH Prescribing Program
TYSABRI® (natalizumab) is indicated as monotherapy for the treatment of relapsing forms of multiple sclerosis, to include clinically isolated syndrome, relapsing-remitting disease, and active secondary progressive disease, in adults.

TYSABRI increases the risk of progressive multifocal leukoencephalopathy (PML).

When initiating and continuing treatment with TYSABRI, physicians should consider whether the expected benefit of TYSABRI is sufficient to offset this risk.

See Prescribing Information regarding the risk of PML with TYSABRI.
TYSABRI® is indicated for inducing and maintaining clinical response and remission in adult patients with moderately to severely active Crohn’s disease with evidence of inflammation who have had an inadequate response to, or are unable to tolerate, conventional CD therapies and inhibitors of TNF-α.

TYSABRI should not be used in combination with immunosuppressants (e.g., 6-mercaptopurine, azathioprine, cyclosporine, or methotrexate) or inhibitors of TNF-α.
TYSABRI® increases the risk of PML, an opportunistic viral infection of the brain that usually leads to death or severe disability.

Risk factors for the development of PML include presence of anti-JCV antibodies, duration of therapy, and prior use of immunosuppressants. These factors should be considered in the context of expected benefit when initiating and continuing treatment with TYSABRI.

Healthcare professionals should monitor patients on TYSABRI® for any new sign or symptom that may be suggestive of PML.

TYSABRI dosing should be withheld immediately at the first sign or symptom that may be suggestive of PML.
BOXED WARNING

➤ For diagnosis, an evaluation that includes a gadolinium-enhanced magnetic resonance imaging (MRI) scan of the brain and, when indicated, cerebrospinal fluid analysis for JC viral DNA are recommended.

➤ Because of the risk of PML, TYSABRI is available only through a restricted program under a Risk Evaluation and Mitigation Strategy (REMS) called the TOUCH Prescribing Program.
Contraindications

➢ TYSABRI is contraindicated in patients who have or have had PML.
➢ TYSABRI is contraindicated in patients who have had a hypersensitivity reaction to TYSABRI.
Warnings and Precautions - PML

- Three factors that are known to increase the risk of PML in TYSABRI-treated patients have been identified:
  - The presence of anti-JCV antibodies. Patients who are anti-JCV antibody positive have a higher risk for developing PML.
  - Longer treatment duration, especially beyond 2 years.
  - Prior treatment with an immunosuppressant (e.g., mitoxantrone, azathioprine, methotrexate, cyclophosphamide, mycophenolate mofetil)

- These factors should be considered in the context of expected benefit when initiating and continuing treatment with TYSABRI.

- Retrospective analyses of postmarketing data from various sources, including observational studies and spontaneous reports obtained worldwide, suggest that the risk of developing PML may be associated with relative levels of serum anti-JCV antibody compared to a calibrator as measured by ELISA (often described as an anti-JCV antibody index value).
Warnings and Precautions – PML

- Infection by the JC virus (JCV) is required for the development of PML.
- Anti-JCV antibody testing should not be used to diagnose PML.
- Anti-JCV antibody negative status indicates that antibodies to the JC virus have not been detected.
- Patients who are anti-JCV antibody negative have a lower risk of PML than those who are positive. Patients who are anti-JCV antibody negative are still at risk for the development of PML due to the potential for a new JCV infection, or a false negative test result.
MRI findings may be apparent before clinical signs or symptoms suggestive of PML.

Periodic monitoring for radiographic signs consistent with PML should be considered to allow for an early diagnosis of PML.

Consider monitoring patients at high risk for PML more frequently.

Lower PML-related mortality and morbidity have been reported following TYSABRI discontinuation in patients with PML who were initially asymptomatic compared to patients with PML who had characteristic clinical signs and symptoms at diagnosis.
Warnings and Precautions – PML

- The reported rate of seroconversion in patients with MS (changing from anti-JCV antibody negative to positive) is 3 to 8 percent annually. In addition, some patients’ serostatus may change intermittently. Therefore, patients with a negative anti-JCV antibody test result should be retested periodically.

- For purposes of risk assessment, a patient with a positive anti-JCV antibody test at any time is considered anti-JCV antibody positive regardless of the results of any prior or subsequent anti-JCV antibody testing. When assessed, anti-JCV antibody status should be determined using an analytically and clinically validated immunoassay.

- After plasma exchange (PLEX), wait at least two weeks to test for anti-JCV antibodies to avoid false negative test results caused by the removal of serum antibodies.

- After infusion of intravenous immunoglobulin (IVIg), wait at least 6 months (5 half-lives) for the IVIg to clear in order to avoid false positive anti-JCV antibody test results.
Warnings and Precautions – Herpes Infections

Herpes Encephalitis and Meningitis

➢ TYSABRI increases the risk of developing encephalitis and meningitis caused by herpes simplex and varicella zoster viruses.

➢ Serious, life-threatening, and sometimes fatal cases have been reported in the postmarketing setting in multiple sclerosis patients receiving TYSABRI.

➢ Monitor patients receiving TYSABRI for signs and symptoms of meningitis and encephalitis. If herpes encephalitis or meningitis occurs, TYSABRI should be discontinued, and appropriate treatment for herpes encephalitis/meningitis should be administered.
Acute Retinal Necrosis

- A higher risk of Acute Retinal Necrosis (ARN) has been observed in patients being administered TYSABRI.
- Some ARN cases occurred in patients with central nervous system (CNS) herpes infections (e.g., herpes meningitis or encephalitis).
- Serious cases of ARN led to blindness of one or both eyes in some patients.
- Following clinical diagnosis of ARN, consider discontinuation of TYSABRI. The treatment reported in ARN cases included anti-viral therapy and, in some cases, surgery.
Warnings and Precautions – Hepatotoxicity

➤ Clinically significant liver injury, including acute liver failure requiring transplant, has been reported in patients treated with TYSABRI® in a postmarketing setting.

➤ Signs of liver injury, including markedly elevated serum hepatic enzymes and elevated total bilirubin, occurred as early as 6 days after the first dose; and signs of liver injury have also been reported for the first time after multiple doses.

➤ In some patients, liver injury recurred upon rechallenge, providing evidence that TYSABRI caused the injury.

➤ The combination of transaminase elevations and elevated bilirubin without evidence of obstruction is generally recognized as an important predictor of severe liver injury that may lead to death or the need for a liver transplant in some patients.

➤ TYSABRI should be discontinued in patients with jaundice or other evidence of significant liver injury (e.g., laboratory evidence).
Warnings and Precautions – Hypersensitivity/Antibody Formation

➢ TYSABRI has been associated with hypersensitivity reactions, including serious systemic reactions (e.g., anaphylaxis), which occurred at an incidence of <1%.

➢ Patients who receive TYSABRI after an extended period without treatment may be at higher risk of hypersensitivity reactions.

➢ If a hypersensitivity reaction occurs, discontinue the use of TYSABRI, and initiate appropriate therapy.

➢ Do not re-treat with TYSABRI.

➢ Patients who receive TYSABRI for a short exposure (1 to 2 infusions) followed by an extended period without treatment are at higher risk of developing anti-natalizumab antibodies and/or hypersensitivity reactions on re-exposure, compared to patients who received regularly scheduled treatment.
The immune system effects of TYSABRI® may increase the risk for infections.

Concurrent use of antineoplastic, immunosuppressant, or immunomodulating agents may further increase the risk of infections, including PML and other opportunistic infections, over the risk observed with use of TYSABRI alone.

The safety and efficacy of TYSABRI in combination with antineoplastic, immunosuppressant, or immunomodulating agents have not been established.

For patients with Crohn’s disease who start TYSABRI while on chronic corticosteroids, commence steroid withdrawal as soon as a therapeutic benefit has occurred. If the patient cannot discontinue systemic corticosteroids within 6 months, discontinue TYSABRI.
Warnings and Precautions – Thrombocytopenia

- Cases of thrombocytopenia, including immune thrombocytopenic purpura (ITP), have been reported with the use of TYSABRI in the postmarketing setting.

- Symptoms of thrombocytopenia may include easy bruising, abnormal bleeding, and petechiae.

- Delay in the diagnosis and treatment of thrombocytopenia may lead to serious and life-threatening sequelae. If thrombocytopenia is suspected, TYSABRI should be discontinued.

- Cases of neonatal thrombocytopenia, at times associated with anemia, have been reported in newborns with in utero exposure to TYSABRI. A CBC should be obtained in neonates with in utero exposure to TYSABRI.
Adverse Reactions

The most frequently reported serious adverse reactions in the Study MS1 were infections (3.2% vs 2.6% placebo), acute hypersensitivity reactions (1.1% vs 0.3%), depression (1.0% vs 1.0%), and cholelithiasis (1.0% vs 0.3%).

The following serious adverse events in the induction Studies CD1 and CD2 were reported more commonly with TYSABRI than placebo and occurred at an incidence of at least 0.3%: intestinal obstruction or stenosis (2% vs. 1% in placebo), acute hypersensitivity reactions (0.5% vs. 0%), abdominal adhesions (0.3% vs. 0%), and cholelithiasis (0.3% vs. 0%).
The most common adverse reactions reported at an incidence of ≥10% were headache (38% vs 33%), fatigue (27% vs 21%), infusion reactions (24% vs 18%), urinary tract infections (21% vs 17%), arthralgia (19% vs 14%), depression (19% vs 16%), lower respiratory tract infection (17% vs 16%), pain in extremity (16% vs 14%), rash (12% vs 9%), gastroenteritis (11% vs 9%), abdominal discomfort (11% vs 10%), vaginitis* (10% vs 6%), and diarrhea (10% vs 9%).

*Percentage based on female patients only.

Other common adverse reactions (incidence ≥ 10%) in the CD population were upper respiratory tract infections and nausea.

Based on animal data, TYSABRI may cause fetal harm. TYSABRI should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.
Program Overview

What is the TOUCH Prescribing Program?

What tools support the TOUCH Prescribing Program?
- MS TOUCH Educational Materials
- CD TOUCH Educational Materials

What is the enrollment process?

What is the process to infuse TYSABRI®?

How are patients tracked?

What is TOUCH On-Line?
What is the TOUCH Prescribing Program?

A program that makes TYSABRI® available only to prescribers, infusion centers, pharmacies associated with infusion centers, and patients who are enrolled in the program.
What is the TOUCH Prescribing Program designed to do?

➢ To inform prescribers, infusion center healthcare providers, and patients about the risk of progressive multifocal leukoencephalopathy (PML) associated with TYSABRI® including the increased risk of PML with the presence of anti-JCV antibodies, longer treatment duration, and prior immunosuppressant use.

➢ To warn against concurrent use with antineoplastic, immunosuppressant, or immunomodulating agents and in patients who are immunocompromised.

➢ To promote early diagnosis of PML and timely discontinuation of TYSABRI in the event of suspected PML.
What are the program requirements?

Prescribers
- Must be registered in and meet all the requirements of the TOUCH Prescribing Program to
  - Prescribe TYSABRI®

Infusion Sites
- Infuse TYSABRI

Pharmacies
- Must be enrolled in and meet all the requirements of the TOUCH Prescribing Program to
  - Dispense TYSABRI

Patients
- Receive TYSABRI
There are 3 main components of the TOUCH Prescribing Program:

**Enroll**
- Prescribers and Patients
- Infusion Sites
- Pharmacies

**Infuse**
- TYSABRI® is only administered to enrolled patients with a current status of ‘Authorized’
- Pre-infusion Patient Checklist is completed and submitted to the TOUCH Prescribing Program

**Track**
- Patients are tracked longitudinally to gather important safety information

NOTE: This overview of the TOUCH Prescribing Program components does not include a complete list of the program requirements.
Program Overview

➢ What is the TOUCH Prescribing Program?

➢ What tools support the TOUCH Prescribing Program?
  - MS TOUCH Educational Materials
  - CD TOUCH Educational Materials

➢ What is the enrollment process?

➢ What is the process to infuse TYSABRI®?

➢ How are patients tracked?

➢ What is TOUCH On-Line?
Tools to Support the TOUCH Prescribing Program – MS

- Enrollment Forms
  - Prescriber/Patient
  - Infusion Site
  - Pharmacy

- Patient Medication Guide

- Notice of Patient Authorization

- Pre-infusion Patient Checklist

- Helpful Information for Evaluation of New Neurological Symptoms in Patients Receiving TYSABRI®

- TOUCH Prescribing Program Overview
Tools to Support the TOUCH Prescribing Program – Crohn’s Disease

- Enrollment Forms
  - Prescriber/Patient
  - Infusion Site
  - Pharmacy
- Patient Medication Guide
- Notice of Patient Authorization
- Pre-infusion Patient Checklist
- Understanding PML for Gastroenterologists
- TOUCH Prescribing Program Overview
How Do I Communicate With TOUCH?

WEB
www.touchprogram.com

PHONE
1-800-456-2255
Monday – Friday

PAPER
Fax: 1-800-840-1278
Satisfying TOUCH Prescribing Program Requirements

➢ The TOUCH Prescribing Program has been designed to facilitate appropriate use of TYSABRI®

➢ In order to assess if the Program is meeting its goals, registered sites and enrolled participant’s compliance may be reviewed by the FDA, and/or audited by Biogen and/or a third party designated by Biogen

➢ Compliance with the requirements of the TOUCH Prescribing Program is necessary to maintain authorization to prescribe, dispense, infuse, or receive TYSABRI. Failure to comply with these requirements may result in de-enrollment from the TOUCH Prescribing Program and termination of such authorization.
Program Overview

What is the TOUCH Prescribing Program?

What tools support the TOUCH Prescribing Program?
- MS TOUCH Educational Materials
- CD TOUCH Educational Materials

What is the enrollment process?

What is the process to infuse TYSABRI®?

How are patients tracked?

What is TOUCH On-Line?
Prescriber/Patient Enrollment
How do prescribers and patients enroll?

1. Education
   - Prescriber and Patient discuss TYSABRI® as a treatment option

2. Treatment Decision
   - Patient reads the Patient Medication Guide and discusses the benefits and risks of TYSABRI with his/her prescriber.

3. Enrollment
   - Prescriber and patient complete, sign, and fax ALL PAGES of the Prescriber/Patient Enrollment Form to the TOUCH Prescribing Program to initiate therapy.
   - Prescriber reviews Pre-infusion Patient Checklist with the patient.

4. Authorization
   - TOUCH Case Manager confirms that all paperwork is complete and updates patient status to ‘Authorized’
   - TOUCH Case Manager sends a Notice of Patient Authorization and a copy of the Prescriber/Patient Enrollment Form to the authorized Infusion Site.

OR

- Prescriber and patient enroll, infuse, and track the therapy.
Enrollment Tools

- Enroll
- Infuse
- Track
Helpful Information for Evaluation of New Neurological Symptoms in Patients Receiving TYSABRI®

Key topics include:

➤ Importance of careful evaluation of any new or recurrent symptoms
➤ Differentiating between the signs, symptoms, and lesion characteristics typical of MS and PML
➤ PML diagnostic algorithm incorporating MRI and CSF assessment
➤ Action steps if PML is suspected
➤ Guidance on the treatment of relapse and other neurological symptoms

The information provided in this brochure is an educational resource and is not intended to be a substitute for consultation and review of relevant reference materials and medical literature. Treatment decisions should be made based on the context of the situation and clinical judgment.
Enrollment Tools

Enroll

Infuse

Track
Understanding PML

Flashcard provided by Biogen
Resource for: Gastroenterologists, Internists, or other non-Neurology specialists

Key topics include:

- Characteristics of PML
- Guidance on recognizing PML in context of Crohn’s disease
- Action steps if PML is suspected

The information provided in this brochure is an educational resource and is not intended to be a substitute for consultation and review of relevant reference materials and medical literature. Treatment decisions should be made based on the context of the situation and clinical judgment.
Infusion Site Enrollment

Enroll

Infuse

Track
A Biogen representative provides mandatory indication-specific TOUCH Prescribing Program training to Infusion Site*

TOUCH Prescribing Program confirms that all paperwork is complete, assigns a Site Authorization Number, and provides Site Authorization Confirmation to the Infusion Site

Infusion Site completes and faxes the Infusion Site Enrollment Form to TOUCH Prescribing Program

* NOTE: Infusion Sites must select to receive training and education materials on MS TOUCH, CD TOUCH, or both.

A patient will be matched ONLY with Infusion Sites that have been trained on the program materials related to his/her indication.
Certified Pharmacy Enrollment
A Biogen representative provides training to the Certified Pharmacy regarding the TOUCH Prescribing Program.

TOUCH Prescribing Program confirms that all paperwork is complete, assigns a Site Authorization Number, and provides Site Authorization Confirmation to the Certified Pharmacy.

Certified Pharmacy completes and faxes the Pharmacy Enrollment Form to TOUCH Prescribing Program.

*A pharmacy is defined as a certified pharmacy located within a hospital, group practice, or infusion site and is associated with an infusion site.
Program Overview

➤ What is the TOUCH Prescribing Program?

➤ What tools support the TOUCH Prescribing Program?
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➤ What is the enrollment process?

➤ What is the process to infuse TYSABRI®?

➤ How are patients tracked?

➤ What is TOUCH On-Line?
Infusion Overview
What process must be completed in order to infuse TYSABRI®?

TYSABRI should NOT be prepared until the Pre-infusion Patient Checklist has been successfully completed.

**Prior to EVERY infusion of TYSABRI:**

1. **Confirm** that the patient is currently ‘Authorized’ to receive TYSABRI on TOUCH On-Line*

2. **Provide** the patient with the Patient Medication Guide

3. **Complete** the Pre-infusion Patient Checklist on TOUCH On-Line*

4. If the patient answered YES to question 1, 2 or 3, in Step 3 of the Pre-infusion Patient Checklist, **DO NOT INFUSE**. Contact the healthcare provider who prescribed TYSABRI and review the patient’s answers. Confirm authorization for infusion.


**Infusion**

ONLY upon successful completion of the Pre-infusion Patient Checklist:

- Start an IV line
- Mix TYSABRI

Infuse TYSABRI over 1 hour and observe patients during all infusions. Post-infusion, for the first 12 infusions, observe patients for 1 hour after the infusion is complete. For patients who have received 12 infusions without evidence of a hypersensitivity reaction, observe patients post-infusion for the 13th and subsequent infusions according to clinical judgment.

Submit completed Pre-infusion Patient Checklist via TOUCH On-Line* within 1 business day.

Reference ID: 4902920
Checking Patient Authorization Status

Only patients with a status ‘Authorized’ can receive TYSABRI®

➢ Check patient status as ‘Authorized’ on TOUCH On-Line

Paper process: Notice of Patient Authorization is faxed to both Prescriber and Infusion Site; a copy must be placed in the patient record.

Today’s Infusions

(show the next 3 days)

<table>
<thead>
<tr>
<th>Patient Enrollment #</th>
<th>Last Name</th>
<th>First Name</th>
<th>Date of Birth</th>
<th>Status</th>
<th>Last Infusion Date</th>
<th>Next Infusion Date</th>
<th>Pre-Infusion Patient Checklist Status</th>
</tr>
</thead>
</table>

1 patient found.

Reference ID: 4902920
Pre-infusion Patient Checklist

All Infusion Sites must complete, sign, and submit the Pre-infusion Patient Checklist at every infusion visit.

Submit form within 1 business day of patient’s visit via TOUCH On-Line.

Paper process: Fax page one to 1-800-840-1278 and place original in the patient’s record.

NOTE: Pre-infusion Patient Checklist must be completed and submitted whether or not the patient is infused.
Program Overview

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➤ How are patients tracked?
➤ What is TOUCH On-Line?
Tracking Overview

- Enroll
- Infuse
- Track
Tracking Overview

Infusion Site

Pre-infusion Patient Checklist

OR

Prescriber

Patient Status Report and Reauthorization Questionnaire

OR

Prescriber

Initial and 6-Month Discontinuation Questionnaire

MS

Crohn’s disease

NOTE: Missing or incomplete TOUCH Prescribing Program forms will prompt continued follow-up by a TOUCH Compliance Manager.
Prescriber Must Reauthorize the Use of TYSABRI® Every 6 Months

TYSABRI Patient Status Report and Reauthorization Questionnaire

Prescriber will receive a Patient Status Report and Reauthorization Questionnaire every 6 months

Completion of this form is required as it determines whether the prescriber authorizes the patient to receive TYSABRI for the next 6 months

Reference ID: 4902920
If a patient discontinues TYSABRI®, important health information is collected and tracked over time

The prescriber will be sent Discontinuation Questionnaires, which must be completed and submitted to the TOUCH Prescribing Program via TOUCH On-Line.

Paper process: Upon notification of patient discontinuation, the Discontinuation Questionnaire will be faxed to the prescriber

- Fax completed form to 1-800-840-1278 and place original in the patient’s file

*NOTE: Discontinuation Questionnaires are ONLY sent upon notification of discontinuation and again six months following discontinuation of TYSABRI
Tracking Tools

Enroll
Infuse
Track
The TOUCH Prescribing Program will track all patients over time, so that Biogen can inform the FDA, prescribers, and patients in a timely manner of information regarding the safety of TYSABRI®.
Tracking Tools

Enroll
Infuse
Track
Tracking Overview – Crohn’s Disease

The TOUCH Prescribing Program will track all patients over time, so that Biogen can inform the FDA, prescribers, and patients in a timely manner of information regarding the safety of TYSABRI®.

Pre-infusion Patient Checklist (Every 28 days)

Patient Status Report and Reauthorization Questionnaire (Every 6 months)

Initial and 6-Month Discontinuation Questionnaire*

*NOTE: Discontinuation Questionnaires are ONLY sent upon notification of discontinuation and again six months following discontinuation of TYSABRI.
What is the TOUCH Prescribing Program?

What tools support the TOUCH Prescribing Program?
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What is TOUCH On-Line?
TOUCH On-Line Overview

TOUCH On-Line is a Web-based tool designed to:

- Provide real-time access to TYSABRI® patient data
- Maintain compliance with the TOUCH Prescribing Program
- Streamline communication to/from Prescribers and Infusion Sites

TOUCH On-Line is available only to enrolled TOUCH participants

TOUCH On-Line is accessed with secure user name and password
The TOUCH Prescribing Program makes TYSABRI® available only to prescribers, infusion sites, pharmacies associated with infusion sites, and patients who are enrolled in the program.

There are 3 main components of the program: Enroll – Infuse – Track.

TYSABRI must be administered only to patients who are enrolled in and meet all the conditions of the TOUCH Prescribing Program.

Indication-specific training and educational materials are required for a site to become authorized on MS TOUCH, CD TOUCH or both.

TOUCH On-Line is a web-based tool available only to authorized infusion sites and prescribers enrolled in TOUCH.

Only authorized infusion sites and their associated certified pharmacies may acquire TYSABRI.