

EOSINOPHILIC ESOPHAGITIS CLINICAL THERAPY TRIAL

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Principal Investigator: Carla M. Davis, MD



Institutional Review Board for Baylor College of Medicine and Affiliated Hospitals

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Section Aa: Title & PI

A1. Main Title

EOSINOPHILIC ESOPHAGITIS CLINICAL THERAPY TRIAL

A2. Principal Investigator

Name:	CARLA DAVIS	Phone:	832-824-1319
Id:	671938	Fax:	
Department:	PEDIATRICS: ALLERGY&IMMUNOLOGY	Email:	carlad@bcm.tmc.edu
Center:		Mail Stn:	BCM320

A3. Administrative Contact

Name:	DAISY TRAN	Phone:	832-824-1319
Id:	162122	Fax:	832-825-1260
		Email:	dtran1@texaschildrens.org
		Mail Stn:	BCM320

A3a. Financial Conflict of Interest

Does any member of study personnel (Investigator (including investigator's spouse and/or dependent children)) that are involved in the design, conduct, or reporting of the research have a Significant Financial Interest (SFI) that would reasonably appear to be affected by the research for which funding is sought and/or associated with an entity/business that would reasonably appear to be affected by the research?

Yes

Section Ab: General Information

A4. Co-Investigators

Name:	ANTHONY OLIVE	Phone:	832-824-3600
Id:	019201	Fax:	
Department:	PEDIATRICS: GASTROENTEROLOGY	Email:	aolive@bcm.tmc.edu
Center:		Mail Stn:	
Name:	SARA ANVARI	Phone:	832-824-3832
Id:	138843	Fax:	832-825-1260
Department:	PEDIATRICS: ALLERGY&IMMUNOLOGY	Email:	sanvari@bcm.tmc.edu
Center:		Mail Stn:	BCM320
Name:	MARIELLA SELF	Phone:	832-822-3750
Id:	147648	Fax:	832-825-3747
Department:	PSYCHIATRY & BEHAVIORAL SCIENCES	Email:	mmself@bcm.tmc.edu
Center:		Mail Stn:	BCM350
Name:	JAVIER CHINEN	Phone:	832-824-1319
Id:	690761	Fax:	
Department:	PEDIATRICS: ALLERGY&IMMUNOLOGY	Email:	jchinen@bcm.tmc.edu

Center:

Mail Stn: BCM320

Name: JILLIAN DAVIS
 Id: Non-Baylor
 Institution: Texas Children's Hospital
 Address: 6701 Fannin St, CCC- 10th Floor, Houston, TX 77030

Phone:
 Fax:
 Email: jrdavis2@texaschildrens.org

A5. Funding Source:

Baylor College of Medicine (Internal Funding Only)

A6a. Institution(s) where work will be performed:

BCM: Baylor College of Medicine
 TCH: Texas Children's Hospital
 TCH: Texas Children's Hospital, Clinic
 TCH: Texas Children's Hospital Clinical Research Center

A6b. Research conducted outside of the United States:

Country:
 Facility/Institution:
 Contact/Investigator:
 Phone Number:

If documentation of assurances has not been sent to the Office of Research, please explain:

A7. Research Category:**A8. Therapeutic Intent**

Does this trial have therapeutic intent?

Yes

A9. ClinicalTrials.gov Registration**Section B: Exempt Request****B. Exempt From IRB Review**

Not Applicable

Section C: Background Information

Eosinophilic esophagitis (EoE) is an increasingly recognized disorder characterized by eosinophilic infiltration of the esophageal mucosa. The condition appears to be related to eosinophilic reaction to ingested aeroallergen or food allergens. Recent estimates in pediatrics suggests an incidence of 5.6 per 10,000 population. The incidence of EoE is now felt to be greater than the incidence of inflammatory bowel disease in the United States. The condition is more prominent in male children with about 70% of cases related to this gender. Approximately 50% of cases have a personal history of atopy or food allergy. Approximately 75% of cases have a family history of atopic disease. There appears to be seasonal variation with fewer cases reported in winter months.

A variety of clinical presentations are associated with EoE but more common ones include dysphagia, a history of food impaction and lack of response to proton pump inhibitors. Toddlers commonly present with feeding disorders. School aged children are more likely to have vomiting or abdominal pain whereas teenagers are more likely to present with dysphagia and food impaction.

Endoscopically, approximately two thirds of cases present with grossly abnormal findings and one third with normal findings. Common findings include strictures, mucosal rings, linear furrowing, a narrowed esophagus, whitish papules, a "feline" esophagus and esophageal polyps. The diagnosis of EoE can only be made endoscopically with the presence 15 eosinophils/high powered field or greater in the mucosa. There is no non-invasive diagnostic test to make the diagnosis.

A variety of strategies have been used to treat the condition, and a recent survey of over 1800 gastroenterologists and allergists showed considerable variability in preferred treatment options for EoE (Spergel, et al). More common strategies have included food antigen elimination, topical steroids and systemic steroids. To our knowledge, placebo-controlled,

randomized, prospective clinical trials comparing the efficacy of a topical steroid preparation to food antigen elimination have not been conducted. Limited studies have been performed on the natural history of the disease. There is no evidence to date that continued inflammation in the esophagus in EoE leads to irreversible damage. Symptoms and esophageal inflammation have been shown to respond to food antigen elimination and topical steroid therapy, but how these therapies compare directly to one another is unknown.

This is a comparative study between test based elimination diet (based on skin prick and patch testing) versus budesonide steroid therapy in EoE patients.

Section D: Purpose and Objectives

The primary purpose/objective of this protocol is to compare topical steroid therapy to test based antigen (dietary food) elimination for subjects who have EoE. The primary outcome will be endoscopy score (eosinophil count/hpf).

Under this primary purpose are three secondary objectives:

1. To evaluate the effect of each type of therapy on the quality of life of EoE patients.
2. To identify a protein associated with responsiveness to topical steroid therapy or dietary food elimination.
3. Exploratory immune analysis studies.

Section E: Protocol Risks/Subjects

E1. Risk Category

Category 2: Research involving greater than minimal risk, but presenting the prospect of direct benefit to the individual subjects.

E2. Subjects

Gender:

Both

Age:

Adolescent (13-17 yrs), Child (3-12 yrs)

Ethnicity:

All Ethnicities

Primary Language:

English, Spanish

Groups to be recruited will include:

Patients

Which if any of the following vulnerable populations will be recruited as subjects?

Children

Vulnerable populations require special protections. How will you obtain informed consent, protect subject confidentiality, and prevent undue coercion?

Informed consent and documentation of children's assent will be obtained according to federal regulations and BCM policies. The investigational nature and objectives of the trial, the procedures and treatments involved and their attendant risks and discomforts will be carefully explained to the patient's parent(s) or guardian(s) prior to enrollment or treatment. Questions and concerns will be addressed thoroughly.

Assent will be obtained for each child who is capable of providing assent based on age, maturity, and psychological state. Assent will be documented using the ?child clause? within the consent form document for children aged 7-17. Adequate time will be allowed to decide on their participation status.

Confidentiality will be protected within the limits allowed by law. It will be emphasized that the study is completely voluntary and that participation or lack of participation will not compromise the quality of clinical care or patient-physician relationship in any way.

E3. Pregnant woman/fetus

Will pregnant women and/or fetuses (as described in 45 CFR 46 Subpart B) be enrolled in the research?

No

E4. Neonates

Will neonates of uncertain viability or nonviable neonates (as described in 45 CFR 46 Subpart B) be enrolled in the research?

No

E5. Children

Will children be enrolled in the research?

Yes

Section F: Design/Procedure

F1. Design

Select one category that most adequately describes your research:

c) Pilot

Discuss the research design including but not limited to such issues as: probability of group assignment, potential for subject to be randomized to placebo group, use of control subjects, etc.

This study is a randomized, prospective clinical trial comparing the efficacy of a topical steroid preparation to an antigen (food) elimination diet. Randomization will be supported by a computer program and will be performed using a block randomization method stratified by gender. It will produce comparable groups, and eliminate the source of bias in treatment assignments.

A total of 40 participants per site (subjects positive for food allergens) will be recruited for this study. Study participants will be randomly assigned to steroid therapy or elimination diet as described below, and the duration of each treatment phase will be 16 weeks. At the end of the first treatment arm, participants have the option of entering an 8 week washout period followed by the initiation of the second treatment arm. The eosinophil score must be greater than or equal to 15 on endoscopic biopsy at Visit 4 in order to continue treatment. If participant's EGD biopsy at visit 3 (end of first treatment arm) is 15 eosinophils/HPF or greater, the subject may immediately enter the second treatment arm without the 8 week washout period.

The subjects who are positive for food allergens will be randomized to group A and B.

Group A will receive oral viscous budesonide at a dose of 1 mg daily or 2 mg daily depending on the age. Children < 10 years will receive 1 mg daily. Children 10 years and older will receive 2 mg daily.

Group B will receive a test based elimination diet (elimination of the foods to which the subject is allergic).

Inclusion Criteria:

1. Signed written informed consent and assent (if applicable) prior to performing any study specific procedures
2. Male or Female subjects aged 3 to 17 years.
3. Diagnosis of EoE within 2 months of enrollment (15 eosinophils per high powered field or greater in both proximal or distal esophageal specimens).
4. Subjects who have failed at least a two-month trial of a proton pump inhibitor.
5. A female subject of childbearing potential agrees to routinely use contraception from the time of signing informed consent and assent until 30 days from end of study.
6. Positive allergy testing on prick and/or patch testing.<https://brain.bcm.edu/Images/cont.jpg>

Exclusion Criteria:

1. Patients who are responsive to at least a two month trial of a proton pump inhibitor.
2. Diagnosis of inflammatory bowel disease or diagnosis of static encephalopathy
3. Prior abdominal surgery or other organ system disorder not including atopic diseases
4. Previous esophageal surgical procedure
5. Previous esophageal congenital disorders such as tracheal esophageal fistula and esophageal atresia
6. Positive for pregnancy.
7. Previous therapy within 6 weeks with oral or swallowed steroids or strict dietary elimination of major allergens.
8. Presence of increased eosinophils in the stomach, small intestine, large intestine, and colon based on Debrosse et al.

F2. Procedure

Overview:

Prior to treatment, subjects will undergo initial endoscopic biopsy for diagnosis of EoE, food allergy skin prick and patch testing, a symptom score questionnaire, a quality of life inventory, clinical labs and total IgE and specific IgE to a set of foods known to cause EoE. At the end of the 16 week treatment phase, subjects will undergo repeat endoscopic biopsy, a symptom score questionnaire, a quality of life inventory, clinical labs and total IgE. Patients will be offered a wash out period of 8 weeks followed by a biopsy and another 16 week treatment phase with the other therapy.

Primary outcome will be the EoE endoscopy score (eosinophil/high powered field) on repeat biopsy after each treatment phase. Secondary outcomes will consist of symptom score, quality of life index, correlation of serum IgE with prick IgE, serum proteomics and immune analysis.

The following tests and procedures will occur at each visit:

Screening (<= 28 days prior to visit 1): - Informed Consent/Accent - Inclusion/exclusion criteria - Demographics - Medical/surgical history - Physical Exam - Vital Signs: temperature, pulse, respiration, blood pressure - Height and Weight - Clinical labs: CBC with differentials, Serum IgE, Chemistry 7 (sodium, potassium, chloride, magnesium, bicarbonate, blood urea nitrogen, glucose and calcium), and Serum IgE to egg (white), cow??s milk, peanut, potato, rice, soy, wheat, corn, chicken, beef, oat, and barley (These are part of the standard of care) - Food Allergy Skin Prick test to egg (white), cow??s milk, peanut, potato, rice, soy, wheat, corn, chicken, beef, oat, and barley - Food Allergy Patch Test to egg (white), cow??s milk, peanut, potato, rice, soy, wheat, corn, chicken, beef, oat, and barley - EGD with biopsy performed within the last 2 months of screening visit to confirm diagnosis of EoE. EGD is part of the subject?s standard of care.

Visit 1 (Week 0 +/- 10 days); - Review Inclusion/exclusion criteria - Randomization into treatment group - Physical Exam - Vital Signs: temperature, pulse, respiration, blood pressure - Height and Weight - Urine pregnancy test for female subjects of child bearing potential - Immune analysis (TCH only) - Sample for proteomics analysis (TCH only) - Two Quality of Life (QOL) questionnaires (Pediatric Eosinophil Esophagitis Health Related QOL (PEEHRQOL) and Pediatric QOL (PedsQOL)) and one Symptom Score (Pediatric Eosinophilic Esophagitis Symptom Severity Module (PEESS)) will be administered - Concomitant Medications - Adverse Event assessment - Nutritional assessment: They will be asked to complete a 3 day food diary to assess efficacy and compliance. Not necessary to document portions, just specific types and brands of foods - Medication diary completion guidelines will be reviewed with the subject

Call 1 (Week 2), Call 2 (Week 6), Call 3 (Week 20) - Concomitant medication assessment - Adverse event assessment - Review of Diet Compliance with the nurse/study staff (Call 1 and 2 only) - Drug accountability and review of drug diary compliance (Call 1 and 2 only)

Visit 2 (Week 4 +/- 10 days); Visit 3 (Week 16 +/- 10 days or End of First treatment Arm): - Physical exam to assess any changes from previous visit - Height, Weight and Vital signs will be recorded - Clinical labs: CBC w/ differentials and Chemistry 7 (Visit 3 only) - EGD with biopsy - routine care (Visit 3 only: should be performed within 2 weeks of completing study treatment) - Blood sample for additional proteomic and immune analysis (TCH site only and visit 3 only). - QOL inventory questionnaire and Symptom score will be administered - Concomitant medication assessment - Adverse event and nutritional assessment - Drug accountability and review of drug diary compliance - Nutritional assessment

Optional Second Treatment Arm Study Visit Schedule (Must have 15 eosinophils/hpf or greater to this arm) Visit 4 (Week 24 +/- 10 days Begin Second Treatment Arm): - Second Treatment group assignment and initiation (8 week after last treatment) - Physical Exam - Vital Signs: temperature, pulse, respiration, blood pressure - Height and Weight - EGD with biopsy: must have 15 eosinophils/hpf or greater to begin second treatment arm - QOL inventory questionnaire and Symptom score will be administered - Concomitant medication assessment - Adverse event - Nutritional assessment - Medication diary completion guidelines will be reviewed with the subject - Nutritional assessment: They will be asked to complete a 3 day food diary to assess efficacy and compliance. Not necessary to document portions, just specific types and brands of foods - Urine pregnancy test for female subjects of child bearing potential (research only) - Clinical labs: CBC with differentials and Chemistry 7 (sodium, potassium, chloride, magnesium, bicarbonate, blood urea nitrogen, glucose and calcium). These are part of the standard of care - Blood sample for additional proteomic and immune analysis (TCH site only and research only)

Call 4 (Week 26), Call 5 (Week 30), Call 6 (Week 44): - Concomitant medication assessment - Adverse event assessment - Review of Diet Compliance with the nurse/study staff (Call 4 and 5 only) - Drug accountability and review of drug diary compliance (Call 4 and 5 only)

Visit 5 (Week 28 +/- 10 days); Visit 6 (Week 40 +/- 10 days or End of Second treatment Arm): - Physical exam to assess any changes from previous visit. - Vital Signs: temperature, pulse, respiration, blood pressure - Height and Weight - EGD with biopsy - routine care (Visit 6 only: should be performed within 2 weeks of completing study treatment) - Blood sample for additional proteomic and immune analysis (TCH site only and visit 6 only) - QOL inventory questionnaire and Symptom score will be administered - Concomitant medication assessment - Adverse event and nutritional assessment - Drug accountability and review of drug diary compliance - Nutritional assessment - Clinical labs: CBC with differential and Chemistry 7 (sodium, potassium, chloride, magnesium, bicarbonate, blood urea nitrogen, glucose and calcium). These are part of the standard of care. (Visit 6 only)

Section G: Sample Size/Data Analysis

G1. Sample Size

How many subjects (or specimens, or charts) will be used in this study?

Local: 40 Worldwide: 366

Please indicate why you chose the sample size proposed:

The primary outcome of interest whether or not the patients' symptoms improve at the end of 16 weeks of both treatment arms. Improvement is defined by a score <15 on the EoE endoscopy score. Scores greater than or equal to 15 indicate no improvement. Previous research suggests that large differences between groups are expected. In a study comparing topical steroids with placebo, 50% of the topical steroid group improved compared with 9% of the placebo.

{Reference Proportion} refers to the proportion of patients in the food elimination diet group that respond to treatment. So, if half (0.50) of the food elimination diet group responds to treatment, then a sample size of 183 patients per group would be required to detect a 0.15 difference in proportions between the food elimination diet and steroid therapy groups with 80% power using Fisher's exact test assuming alpha=0.05.

In other words, if $p_{\text{diet}}=0.50$ and $p_{\text{steroid}}=0.65$, then 183 patients would be needed per group to detect this difference with 80% power.

G2. Data Analysis

Provide a description of your plan for data analysis. State the types of comparisons you plan (e.g. comparison of means, comparison of proportions, regressions, analysis of variance). Which is the PRIMARY comparison/analysis? How will the analyses proposed relate to the primary purposes of your study?

Baseline demographic and clinical information will be summarized by means with standard deviations, medians with minimum and maximum values, or frequencies with percentages as appropriate. Summary statistics will be stratified by treatment group. Univariable analysis will compare treatment groups using an independent, two-sample t-test, Wilcoxon rank sum test, or Fisher's exact test. Due to the relatively small sample sizes, differences between the treatment groups may exist due to chance.

The primary outcome measure will be response to treatment defined by an eosinophilic score <15 at the end of each of the study therapies. Fisher's exact test will be used to compare the percent of treatment response between the two study groups, and statistical significance will be assessed at the 0.05 level. A multiple logistic regression model will also be used to estimate odds ratios and adjust the effect of treatment arm for clinically important variables and variables significant at the 0.05 level in the univariable analysis.

Secondary outcome measures include quality of life scores and protein response to therapy. Treatment groups will be compared using independent, two-sample t-tests. Approximate normality will be assessed using quantile-quantile plots and data transformations will be used to address substantial departures from normality. A multiple general linear model will also be used to adjust for interesting covariates. Statistical significance will be assessed at the 0.05 level.

Reference Proportion refers to the proportion of patients in the food elimination diet group that respond to treatment. So, if half (0.50) of the food elimination diet group responds to treatment, then a sample size of 183 patients per group would be required to detect a 0.15 difference in proportions between the food elimination diet and steroid therapy groups with 80% power using Fisher's exact test assuming alpha=0.05. In other words, if $p_{\text{diet}}=0.50$ and $p_{\text{steroid}}=0.65$, then 183 patients would be needed per group to detect this difference with 80% power.

Section H: Potential Risks/Discomforts

H1. Potential Risks/Discomforts

Describe and assess any potential risks/discomforts; (physical, psychological, social, legal, or other) and assess the likelihood and seriousness of such risks:

Study Procedures:

The risks of the study are the same as the risk of treatment for EoE with the exception of the blood collection. Allergy testing, dietary elimination, steroid therapy and endoscopic procedures are part of the standard of care for these patients. There is minimal psychological risk with the administration of the questionnaires which will be addressed and monitored by the study investigators. The risks of blood collection include pain, bleeding, swelling and infection at the site of collection. The risk of skin prick and patch testing is minimal, including pain and swelling at the site of the skin tests.

Confidentiality:

Anything that can identify the subject will be kept in a private, protected file. A code number will be assigned to the subject, his/her blood sample, and information collected from his/her medical record. The study doctor and authorized staff will be able to link the code number to the subject's name. Other doctors who may receive a sample of your blood for research purposes will be given only the code number that will not identify the subject as an individual. However, there is potential risk of loss of confidentiality but every effort will be made to minimize this risk.

H2. Data and safety monitoring plan

Do the study activities impart greater than minimal risk to subjects?

Yes

NOTE: The answer to the questions in H2 requires the completion of the form: 'Section H – Data and Safety Monitoring Plan' as an attachment in Section S.

H3. Coordination of information among sites for multi-site research

Is the BCM Principal Investigator acting as the SPONSOR-INVESTIGATOR for this multi-site research?

Yes

Is BCM the COORDINATING CENTER for this multi-site research?

Yes

If the answer to EITHER of the questions above is "Yes", please complete the following questions:

If this is a multicenter study and the BCM PI is an INVESTIGATOR with responsibilities of SPONSOR or if BCM is the COORDINATING CENTER, describe the management of information among the sites related to participant protections. Your description should include reporting of unanticipated problems, protocol modifications, IRB and/or institutional approvals, and interim results among the sites.

Each site will obtain IRB approval at their center for this study.

Unanticipated problems will be reported to Dr. Carla M. Davis and Ms. Daisy Tran at BCM. The issues will be discussed with the PI of the site and, if protocol modifications are made, all sites will be contacted and given the new protocol.

Results will be sent to BCM in real time or every 3-6 months. Interim results will be assessed every 6 months.

When research is conducted in collaboration with outside entities or organizations, the PI must obtain the necessary approvals from those entities. The BCM IRB may request documentation that such approvals have been obtained. Please list and describe the planned sites for this multi-site research for which the BCM PI is either Sponsor-Investigator and/or Coordinating Center. Sites that do not meet the requirements for inclusion in section A6a of the protocol summary and BCM informed consent documents should be listed here.

University of Michigan Coral Gables Allergy-FL University of Iowa University of Missouri-Kansas City School of Medicine Asthma and Allergy Specialist, PA -NC Albany Medical College-NY Stony Brook University, NY Allergy and Asthma Consultant-IN University of Texas-Houston

Section I: Potential Benefits

Describe potential benefit(s) to be gained by the individual subject as a result of participating in the planned work.

The subjects will obtain information about EoE, learn their specific food and aeroallergen hypersensitivities, and have treatment to ameliorate disease by participating.

Describe potential benefit(s) to society of the planned work.

Since there is not a preferred way to treat EoE patients currently, this will clarify which patients may benefit from which therapy. This would potentially decrease the cost of therapy for these patients in the future. Also, a noninvasive way for diagnosing EoE would potentially be developed which would eliminate the need for endoscopic biopsies.

Do anticipated benefits outweigh potential risks? Discuss the risk-to-benefit ratio.

The potential benefit of decreased disease for EoE patients and the advancement of more targeted treatment options would outweigh the risk of blood collection.

Section J: Consent Procedures

J1. Waiver of Consent

Will any portion of this research require a waiver of consent and authorization?

No

J1a. Waiver of requirement for written documentation of Consent

Will this research require a waiver of the requirement for written documentation of informed consent?

No

J2. Consent Procedures

Who will recruit subjects for this study?

PI
PI's staff

Describe how research population will be identified, recruitment procedures, any waiting period between informing the prospective participant and obtaining consent, steps taken to minimize the possibility of coercion or undue influence and consent procedures in detail.

Patients will be identified through the Gastroenterology and Allergy/Immunology Clinics at Texas Children's Hospital. Flyers (attached in section S) will be posted in clinic areas within Texas Children's Hospital and advertisement will be

posted on BCM intranet site to help identify potential subjects. A consent form will be given to the patient to read prior to obtaining consents and the first study visit. This will allow the patient to have minimal coercion or undue influence. Spanish speaking investigator or staff will obtain consent for all Spanish speaking participants using a short form attached in section S.

Are foreign language consent forms required for this protocol?

Yes

Which of the following ways will you document informed consent in languages other than English?

Short-Form consent documents

J3. Privacy and Intrusiveness

Will the research involve observation or intrusion in situations where the subjects would normally have an expectation of privacy?

No

J4. Children

Will children be enrolled in the research?

Yes

J5. Neonates

Will non-viable neonates or neonates of uncertain viability be involved in research?

No

J6. Consent Capacity - Adults who lack capacity

Will Adult subjects who lack the capacity to give informed consent be enrolled in the research?

No

J7. Prisoners

Will Prisoners be enrolled in the research?

No

Section K: Research Related Health Information and Confidentiality

Will research data include identifiable subject information?

Yes

Information from health records such as diagnoses, progress notes, medications, lab or radiology findings, etc.

No

Specific information concerning alcohol abuse:

No

Specific information concerning drug abuse:

No

Specific information concerning sickle cell anemia:

No

Specific information concerning HIV:

No

Specific information concerning psychiatry notes:

No

Demographic information (name, D.O.B., age, gender, race, etc.):

Yes

Full Social Security #:

No

Partial Social Security # (Last four digits):

No

Billing or financial records:

No

Photographs, videotapes, and/or audiotapes of you:

No

Other:

No

At what institution will the physical research data be kept?

The physical research data will be kept at each site and the coordinating center, Texas Children's Hospital.

How will such physical research data be secured?

The physical data will be secured in locked cabinets or offices, only accessible by the local PI and co-investigators.

At what institution will the electronic research data be kept?

The electronic PHI data will be kept at each site and the coordinating center, Texas Children's Hospital. Databases will be kept on password protected computers behind locked office doors.

Such electronic research data will be secured via BCM IT Services- provided secured network storage of electronic research data (Non-Portable devices only):

No

Such electronic research data will be secured via Other:

Yes, (describe below):

The individual sites will keep the information as described above. The electronic data will be kept on password protected computers behind locked office doors.

Will there be anyone besides the PI, the study staff, the IRB and the sponsor, who will have access to identifiable research data?

No

Please describe the methods of transmission of any research data (including PHI, sensitive, and non-sensitive data) to sponsors and/or collaborators.

The transmission of PHI to the coordinating center will occur through secure/encrypted email.

Will you obtain a Certificate of Confidentiality for this study?

No

Please further discuss any potential confidentiality issues related to this study.

All sites will be informed of their responsibility to protect subject PHI and the need to transmit information in a secure/encrypted email. This will decrease the risk that exists of confidentiality loss in the transmission of data.

Section L: Cost/Payment

Delineate clinical procedures from research procedures. Will subject's insurance (or subject) be responsible for research related costs? If so state for which items subject's insurance (or subject) will be responsible (surgery, device, drugs, etc). If appropriate, discuss the availability of financial counseling.

The subject/subject's insurance will be responsible for costs related to the EGD's and the medical (budesonide) therapies, which are considered standard care for individuals with EoE. Subjects will be identified as study candidates after the initial EGD, which will have been performed and justified based on symptoms. The follow-up EGD after the treatment period is currently the standard of care to assess treatment efficacy.

The subject/subject's insurance will be responsible for costs related to the allergy testing, which is accepted practice in individuals with EoE. The routine clinical lab work (serum chemistry (Chem 7), CBC w/ differentials, serum IgE, urine pregnancy test, and serum IgE to foods will also be billed to the subject/subject's insurance. However, serum proteomic and immune analysis will be covered by the study sponsor.

If subjects will be paid (money, gift certificates, coupons, etc.) to participate in this research project, please note the total dollar amount (or dollar value amount) and distribution plan (one payment, pro-rated payment, paid upon completion, etc) of the payment.

Dollar Amount:

0

Distribution Plan:

The subjects will not be paid for participation in this study.

Section M: Genetics

How would you classify your genetic study?

Pedigree Study

Discuss the potential for psychological, social, and/or physical harm subsequent to participation in this research. Please discuss, considering the following areas: risks to privacy, confidentiality, insurability, employability, immigration status, paternity status, educational opportunities, or social stigma.

There is the potential for loss of confidentiality and privacy of protected health information of the subject. This will be minimized by the use of coded samples. The diagnosis of EoE is not currently known to affect insurability, employability, immigration status, educational opportunities, and/or cause social stigma, but these effects may be a risk. The information gained from proteomic studies will only be used to determine the expression of disease as it is related to symptoms and response to treatment.

Will subjects be offered any type of genetic education or counseling, and if so, who will provide the education or counseling and under what conditions will it be provided? If there is the possibility that a family's pedigree will be presented or published, please describe how you will protect family member's confidentiality?

Proteome analysis will be performed which does not specifically correspond with gene expression. Since there is no genetic DNA analysis in this study, counseling will not be offered.

Section N: Sample Collection

SAMPLE: Blood

What is the purpose of the sample collection?

- Clinical labs: CBC with differentials and platelet counts, Chem 7, specific and total IgE - Serum proteomic analysis - Immune analysis

For blood draws, specify the amount drawn, in teaspoons, at each visit and across the course of the subjects entire participation time.

Research tests: - Serum proteomic analysis: Appx. 1 tsp per visit; 2 tsp total (Visit 1, 3, 4 and 6) - Immune analysis: Appx. 2 tsp per visit; 4 tsp total (Visit 1, 3, 4 and 6)

No more than 3 ml/kg of body weight will be drawn from subjects.

Is there the possibility that cell lines will be developed with this sample? No

Sample will be obtained from:

Clinical Labs, Other: Directly from subject

Will the sample be stripped of identifiers?

Yes

If sample will be released outside the hospital:

Will sample be released to anyone not listed as an investigator on the protocol? Will the information be identifiable, coded or de-identified?

The samples will be shared with BCM/TCH investigators, upon IRB approval, in a de-identified manner.

Will sample material be sold or transferred to any third parties? Will the information be de-identified?

The sample will not be sold or transferred to any third parties.

If sample will be banked for future use:

Where will the sample be banked and for how long?

The immune analysis samples will be banked indefinitely. The proteomic study sample will be discarded once analysis is complete.

Does the banking institution have an approved policy for the distribution of samples?

Yes. IRB approval will be obtained before sharing the samples with BCM/TCH investigators.

If the entire sample will NOT be used during the course of this research study:

Will the remaining tissue be discarded? If not what will be done with the remaining sample after study completion and how long will the sample be kept?

The sample remaining after the immune analysis will be kept indefinitely.

Will samples be made available to the research subject (or his/her medical doctor) for other testing?

No

If a subject withdraws from the study:

Will subject have the option to get the remaining portion of their sample back?

No

Will samples be destroyed? If not, will they be kept anonymously? What will happen to the sample if the subject revokes authorization?

The samples will be destroyed if the subject withdraws from the study.

Will data obtained from their sample be deleted? What will happen to the sample if the subject revokes authorization?

The data obtained from the sample will be deleted if the subject requests. Otherwise it will be used with their consent. This consent will be obtained by the investigator.

Will study data or test results be recorded in the subject's medical records?

No

Will results of specific tests and/or results of the overall study be revealed to the research subject and or his/her doctor?

Results of the endoscopy, allergy tests, clinical labs will be reported to the research subject. The proteomic and immune analysis results will not be reported to the subject or entered in their medical record.

Please identify all third parties, including the subject's physician, to receive the test results.

No third parties will receive the test results.

SAMPLE: Tissue

What is the purpose of the sample collection?

The purpose of this sample collection is for determination of the endoscopy score.

For blood draws, specify the amount drawn, in teaspoons, at each visit and across the course of the subjects entire participation time.

NA

Is there the possibility that cell lines will be developed with this sample? No

Sample will be obtained from:

Other: The subject

Will the sample be stripped of identifiers?

No

If sample will be released outside the hospital:

Will sample be released to anyone not listed as an investigator on the protocol? Will the information be identifiable, coded or de-identified?

The sample will not be released.

Will sample material be sold or transferred to any third parties? Will the information be de-identified?

The sample material will not be sold or transferred.

If sample will be banked for future use:

Where will the sample be banked and for how long?

The sample will not be banked.

Does the banking institution have an approved policy for the distribution of samples?

Not Applicable

If the entire sample will NOT be used during the course of this research study:

Will the remaining tissue be discarded? If not what will be done with the remaining sample after study completion and how long will the sample be kept?

The entire sample will be used.

Will samples be made available to the research subject (or his/her medical doctor) for other testing?

No

If a subject withdraws from the study:

Will subject have the option to get the remaining portion of their sample back?

No

Will samples be destroyed? If not, will they be kept anonymously? What will happen to the sample if the subject revokes authorization?

The samples will be kept in the TCH Pathology Department because this is a clinical sample, not solely research.

Will data obtained from their sample be deleted? What will happen to the sample if the subject revokes authorization?

The data will be deleted from the research database, but will be kept in TCH Pathology for clinical purposes.

Will study data or test results be recorded in the subject's medical records?

No

Will results of specific tests and/or results of the overall study be revealed to the research subject and or his/her doctor?

Results of the endoscopic biopsy pathology will be revealed to the subject.

Please identify all third parties, including the subject's physician, to receive the test results.

No third parties will receive the test results.

SAMPLE: Urine

What is the purpose of the sample collection?

Pregnancy testing

For blood draws, specify the amount drawn, in teaspoons, at each visit and across the course of the subjects entire participation time.

NA

Is there the possibility that cell lines will be developed with this sample? No

Sample will be obtained from:

Other: Subject

Will the sample be stripped of identifiers?

No

If sample will be released outside the hospital:

Will sample be released to anyone not listed as an investigator on the protocol? Will the information be identifiable, coded or de-identified?

The sample will not be released to anyone not listed as an investigator on the protocol.

Will sample material be sold or transferred to any third parties? Will the information be de-identified?

The sample will not be sold or transferred.

If sample will be banked for future use:

Where will the sample be banked and for how long?

The sample will not be banked.

Does the banking institution have an approved policy for the distribution of samples?

NA

If the entire sample will NOT be used during the course of this research study:

Will the remaining tissue be discarded? If not what will be done with the remaining sample after study completion and how long will the sample be kept?

There will be no remaining tissue.

Will samples be made available to the research subject (or his/her medical doctor) for other testing?

No

If a subject withdraws from the study:

Will subject have the option to get the remaining portion of their sample back?

No

Will samples be destroyed? If not, will they be kept anonymously? What will happen to the sample if the subject revokes authorization?

Samples will be destroyed.

Will data obtained from their sample be deleted? What will happen to the sample if the subject revokes authorization?

The data will be deleted from the research database, but will be kept in TCH Pathology for clinical purposes.

Will study data or test results be recorded in the subject's medical records?

No

Will results of specific tests and/or results of the overall study be revealed to the research subject and or his/her doctor?

Results of the urine pregnancy test will be revealed to the subject.

Please identify all third parties, including the subject's physician, to receive the test results.

No third parties will receive the test results.

Section O: Drug Studies

Does the research involve the use of ANY drug* or biologic? (*A drug is defined as any substance that is used to elicit a pharmacologic or physiologic response whether it is for treatment or diagnostic purposes)

Yes

Does the research involve the use of ANY gene transfer agent for human gene transfer research?

No

O1. Current Drugs

Drug : Budesonide

Is this study placebo-controlled?

No

Will the research involve a radioactive drug?

No

Section P: Device Studies

Does this research study involve the use of ANY device?

No

Section Q: Consent Form(s)

Parental Consent and Child Assent

Section R: Advertisements

Mode of Advertising: Other

Exact language of Advertisement:

Overview: The primary objective of this protocol is to compare topical swallowed steroid therapy to test based antigen (dietary food) elimination for subjects who have EoE. The secondary objective is to evaluate the effect of each type of therapy on the quality of life of EoE patients, identify a protein associated with responsiveness to topical steroid therapy or dietary food elimination, and perform immune analysis studies. Inclusion: - Age 3-17 years - Diagnosis of EoE within 2 months of enrollment - Failed at least a one-month trial of a proton pump inhibitor - Positive allergy testing results based on skin and/or patch test Exclusion: x Responsive to at least a one month trial of a proton pump inhibitor x Diagnosis of inflammatory bowel disease or static encephalopathy x Prior abdominal surgery or other organ system disorder x Previous esophageal surgical procedure x Previous esophageal congenital disorders x Previous therapy within 6 weeks with oral or swallowed steroids x Presence of eosinophils in the lower gastrointestinal tract (stomach, small intestine, large intestine or colon)

Study Visits: At the screening visit, subjects will undergo initial endoscopic biopsy for diagnosis of EoE, food allergy skin prick test, patch test, several questionnaires, and clinical labs. If eligible to participate, the subject will return back to be randomized into 1 of 2 treatment groups. Subjects in Group A will receive oral viscous budesonide at a dose of 1 or 2mg

depending on the age. Subjects in Group B will receive a test based elimination diet based on skin prick, patch test, and serum IgE to foods. Participants will then be provided with a diary to keep track of specific types of brands of foods ingested for 3 days. Visit 2 will occur at 4 weeks visit 3 will occur at 16 weeks after the start of the treatment phase. At the end of the 16 week treatment phase, the participant will undergo repeat endoscopic biopsy, questionnaires, and clinical lab work. In addition, participants will receive a call at week 2, 6, and 20 to review medication and diet compliance. Participants have the option of participating in a second arm with the other therapy after 8 weeks off therapy. Client Cost: Allergy skin prick test, patch test, budesonide therapy, clinical labs, and endoscopy with biopsy Client Compensation: No monetary compensation Enrollment: 60

Mode of Advertising: Other: Flyer

Exact language of Advertisement:

Eosinophilic Esophagitis Studies: Does your child have eosinophilic esophagitis (EoE)? If so, your child may be eligible to participate in one of two studies. The first study is aimed at eliminating the four most common food triggers then reintroducing the foods slowly over time. The second study is aimed at comparing swallowed steroids to test based elimination diet in the management of EoE.