**Appendix 1**

Appendices are identified by section number in Manual 15a, and are found in the secure section of the ARIC study Website under Researchers -> Cohort Studies -> Current and Archived Visit Documents -> Manuals

[Appendix 1. Summary of Results Template Letters 2](#_Toc150247614)

[A. Template Letter – No echocardiogram results 2](#_Toc150247615)

[B. Template Letter – Echocardiogram results, no significant findings 3](#_Toc150247616)

[C. Template Letter – Echocardiogram results, significant findings 5](#_Toc150247617)

**Appendix 1. Summary of Results Template Letters**

1. **Template Letter – No echocardiogram results**

**Summary of Results for Participants and their Physicians**

**Date: [run date]**

**Participant’s name:** **Birth Date:**

**Date of visit to the ARIC field center:** **ID:**

**Results from Your Echocardiogram**

Date of echocardiogram: **[Mon DD, YYYY]**

Your echocardiogram results are not available.

**THANK YOU FOR YOUR PARTICIPATION IN ARIC.**

1. **Template Letter – Echocardiogram results, no significant findings**

**Summary of Results for Participants and their Physicians**

**Date: [run date]**

**Participant’s name:** **Birth Date:**

**Date of visit to the ARIC field center:** **ID:**

**Results from Your Echocardiogram**

Date of echocardiogram: **[Mon DD, YYYY]**

Your echocardiogram was for research purposes only, is not as extensive as a clinical echocardiogram, was analyzed in the absence of any clinical information regarding you, and is not meant to substitute for a clinical echocardiogram. The assessments below of cardiac structure and function are being provided as a courtesy, along with reference ranges. These findings could be further evaluated with a clinical echocardiogram if clinically indicated.

<If all the following conditions in Table 1 are true:

Table 1.

|  |  |  |
| --- | --- | --- |
| **Reading Center Results Item (ECH)** | **Description of Variable** | **Conditions** |
| ECH4 | LV diastolic diameter (cm) | ECH4 < 6 for Male; < 5.4 for Female |
| ECH10 | LV ejection fraction (%) | ECH10 > 54 |
| ECH14 | LV mean wall thickness (cm) | ECH14 < 1.1 for Male; < 1.0 for Female |
| ECH19 | MR jet area-to-left atrial area ratio | ECH19 <= 30 |
| ECH31 | AV peak velocity | ECH31 <= 300 |
| ECH48 | Moderate or greater aortic insufficiency | ECH48 = N |
| ECH49 | Moderate or greater mitral stenosis | ECH49 = N |
| ECH50 | Moderate or greater pulmonary hypertension | ECH50 = N |
| ECH51 | Severe right ventricular enlargement | ECH51 = N |
| ECH52 | Other echo abnormalities | ECH52 = BLANK |
| ECA3a | Tamponade | ECA3a=N or NULL |
| ECA3b | Aortic dissection | ECA3b=N or NULL |
| ECA3c | Thrombosed or frankly dysfunctional prosthetic valve | ECA3c=N or NULL |
| ECA3d | Pseudoaneurysm | ECA3d=N or NULL |
| ECA3e | Intracardiac abscess or obvious vegetation | ECA3e=N or NULL |
| ECA3f | Intracardiac thrombus | ECA3f=N or NULL |
| ECA3g | Other critical result | ECA3g=N or NULL |
| EPC5 | Probable atrial fibrillation | EPC5=3 or NULL |

Then hide the abnormality table (Table 4) and display the following message:>

No significant findings were noted during the review of your echocardiogram results.

<Display the rows in the following table if the trigger conditions are met>

|  |  |  |
| --- | --- | --- |
| **Test or Measurement** | **Results** | **Brief Interpretation** |
| LV ejection fraction (%) | [ECH10] | Trigger condition: ECH10 > 54  Display: Normal |
| LV diastolic diameter (cm) | [ECH4] | Trigger condition: Male and ECH4 <6.0  Trigger condition: Female and ECH4 <5.4  Display: Normal |
| LV wall thickness (cm) | [ECH14] | Trigger condition: Male and ECH14 <1.1  Trigger condition: Male and ECH14 <1.0  Display: Normal |

**Reference Ranges:**

| **Parameter** | **Gender** | **Normal** | **Mildly Abnormal** | **Moderately Abnormal** | **Severely Abnormal** |
| --- | --- | --- | --- | --- | --- |
| LV ejection fraction (%) | Not gender specific | >54 | 45 – 54 | 30 – 44 | <30 |
| LV diastolic diameter (cm) | Men | <6 | 6.0-6.3 | 6.4-6.8 | ≥6.9 |
| Women | <5.4 | 5.4-5.7 | 5.8-6.1 | ≥6.2 |
| LV wall thickness (cm) | Men | <1.1 | 1.1-1.3 | 1.4-1.6 | ≥1.7 |
| Women | <1.0 | 1.0-1.2 | 1.3-1.5 | ≥1.6 |

< If comparison comments between Visit 7 and Visit 11 echocardiogram results are available, print the following message:>

Comparison of this echocardiogram to your prior ARIC echocardiogram at Visit 7 was notable for the following:

[ECH60 (Notes from Echocardiogram Reading Center)]

**THANK YOU FOR YOUR PARTICIPATION IN ARIC.**

1. **Template Letter – Echocardiogram results, significant findings**

**Summary of Results for Participants and their Physicians**

**Date: [run date]**

**Participant’s name:** **Birth Date:**

**Date of visit to the ARIC field center:** **ID:**

**Results from Your Echocardiogram**

Date of echocardiogram: **[Mon DD, YYYY]**

Your echocardiogram was for research purposes only, is not as extensive as a clinical echocardiogram, was analyzed in the absence of any clinical information regarding you, and is not meant to substitute for a clinical echocardiogram. The assessments below of cardiac structure and function are being provided as a courtesy, along with reference ranges. These findings could be further evaluated with a clinical echocardiogram if clinically indicated.

<Display the row with the interpretation when the trigger condition is met:>

|  |  |  |
| --- | --- | --- |
| **Test or Measurement** | **Results** | **Brief Interpretation** |
| LV ejection fraction (%) | [ECH10] | Trigger condition:ECH10 >= 45 or ECH10 <= 54  Display: Mildly Abnormal |
| Trigger condition:ECH10 >= 30 or ECH10 <= 44  Display: ***Your echocardiogram showed moderately reduced heart function. These findings should be discussed with your physician and follow-up studies may be warranted.*** |
| Trigger condition:ECH10 < 30  Display: ***Your echocardiogram showed severely reduced heart function. These findings should be discussed with your physician and follow-up studies may be warranted.*** |
| LV diastolic diameter (cm) | [ECH4] | Trigger condition: Male and ECH4 >= 6.0 or ECH4 <= 6.3  Display: Mildly Abnormal |
| Trigger condition: Female and ECH4 >= 5.4 or ECH4 <= 5.7  Display: Mildly Abnormal |
| Trigger condition: Male and ECH4 >= 6.4 or ECH4 <= 6.8  Display: ***Your echocardiogram showed moderately abnormal left ventricular (heart chamber) size. These findings should be discussed with your physician and follow-up studies may be warranted.*** |
| Trigger condition: Male and ECH4 >= 6.9  Display: ***Your echocardiogram showed severely abnormal left ventricular (heart chamber) size. These findings should be discussed with your physician and follow-up studies may be warranted.*** |
| Trigger condition: Female and ECH4 >= 5.8 or ECH4 <= 6.1  Display: ***Your echocardiogram showed moderately abnormal left ventricular (heart chamber) size. These findings should be discussed with your physician and follow-up studies may be warranted.*** |
| Trigger condition: Female and ECH4 >= 6.2  Display: ***Your echocardiogram showed severely abnormal left ventricular (heart chamber) size. These findings should be discussed with your physician and follow-up studies may be warranted.*** |
| LV wall thickness (cm) | [ECH14] | Trigger condition: Male and ECH14 >= 1.1 or ECH14 <=1.3  Display: Mildly Abnormal |
| Trigger condition: Female and ECH14 >= 1.0 or ECH14 <= 1.2  Display: Mildly Abnormal |
| Trigger condition: Male and ECH14 >= 1.4 <= 1.6  Display: ***Your echocardiogram showed moderately abnormal left ventricular (heart chamber) wall thickness. These findings should be discussed with your physician and follow-up studies may be warranted.*** |
| Trigger condition: Male and ECH14 >= 1.7  Display: ***Your echocardiogram showed severely abnormal left ventricular (heart chamber) wall thickness. These findings should be discussed with your physician and follow-up studies may be warranted.*** |
| Trigger condition: Female and ECH14 >= 1.3 or ECH14 <= 1.5  Display: ***Your echocardiogram showed moderately abnormal left ventricular (heart chamber) wall thickness. These findings should be discussed with your physician and follow-up studies may be warranted.*** |
| Trigger condition: Female and ECH14 >= 1.6  Display: ***Your echocardiogram showed severely abnormal left ventricular (heart chamber) wall thickness. These findings should be discussed with your physician and follow-up studies may be warranted.*** |

**Reference Ranges:**

| **Parameter** | **Gender** | **Normal** | **Mildly Abnormal** | **Moderately Abnormal** | **Severely Abnormal** |
| --- | --- | --- | --- | --- | --- |
| LV ejection fraction (%) | Not gender specific | >54 | 45 – 54 | 30 – 44 | <30 |
| LV diastolic diameter (cm) | Men | <6 | 6.0-6.3 | 6.4-6.8 | ≥6.9 |
| Women | <5.4 | 5.4-5.7 | 5.8-6.1 | ≥6.2 |
| LV wall thickness (cm) | Men | <1.1 | 1.1-1.3 | 1.4-1.6 | ≥1.7 |
| Women | <1.0 | 1.0-1.2 | 1.3-1.5 | ≥1.6 |

**Your echocardiogram showed the following abnormality:**

|  |  |  |
| --- | --- | --- |
| **Abnormality** | **Results** | **Brief Interpretation** |
| MR jet area-to-left atrial area ratio | [ECH19] | Trigger condition: ECH19 > 30  Display: ***Your echocardiogram showed moderate-to-severe or severe leakiness of one of the heart valves (the mitral valve). These findings should be discussed with your physician and follow-up studies may be warranted.*** |
| Moderate or greater mitral stenosis | [ECH49] | Trigger condition: ECH49 = Y  Display: ***Your echocardiogram showed moderate or greater stenosis (narrowing) of one of the heart valves (the mitral valve). These findings should be discussed with your physician and follow-up studies may be warranted.*** |
| Moderate or greater aortic insufficiency | [ECH48] | Trigger condition: ECH48 = Y  Display: ***Your echocardiogram showed moderate or greater leakiness of one of the heart valves (the aortic valve). These findings should be discussed with your physician and follow-up studies may be warranted.*** |
| AV peak velocity | [ECH31] | Trigger condition: ECH31 > 300  Display: ***Your echocardiogram showed moderate or greater stenosis (narrowing) of one of the heart valves (the aortic valve). These findings should be discussed with your physician and follow-up studies may be warranted.*** |
| Severe right ventricular enlargement | [ECH51] | Trigger condition: ECH51 = Y  Display: ***Your echocardiogram showed severe enlargement of the right side of the heart. These findings should be discussed with your physician and follow-up studies may be warranted.*** |
| Moderate or greater pulmonary hypertension | [ECH50] | Trigger condition: ECH50 = Y  Display: ***Your echocardiogram showed moderate or severe pulmonary hypertension. These findings should be discussed with your physician and follow-up studies may be warranted.*** |
| Tamponade | [ECA3a] | Trigger condition: ECA3a = Y  Display: ***A fluid collection around your heart causing increased pressure was found.*** |
| Aortic dissection | [ECA3b] | Trigger condition: ECA3b = Y  Display: ***Aortic dissection was found.*** |
| Thrombosed or frankly dysfunctional prosthetic valve | [ECA3c] | Trigger condition: ECA3c = Y  Display: ***Abnormal prosthetic valve function was noted.*** |

|  |  |  |
| --- | --- | --- |
| Pseudoaneurysm | [ECA3d] | Trigger condition: ECA3d = Y  Display: ***Pseudoaneurysm was found.*** |
| Intracardiac abscess or obvious vegetation | [ECA3e] | Trigger condition: ECA3e = Y  Display: ***Intracardiac abscess or vegetation was found.*** |
| Intracardiac thrombus | [ECA3f] | Trigger condition: ECA3f = Y  Display: ***Intracardiac thrombus was found.*** |
| Other critical result | [ECA3g] | Trigger condition: ECA3g = Y  Display: ***[ECA3g1] was found.*** |
| Other comments |  | Trigger condition: ECH52 is not null  Display: ***[ECH52] If not already known, these findings should be discussed with your physician and follow-up studies may be warranted.*** |
| Probable atrial fibrillation |  | Trigger condition: EPC5=1  Display: This is an irregular heart rhythm. It may feel like palpitations or “racing heart beats”.  At the time of your ARIC visit we indicated that you should see a medical professional to determine whether treatment should be started or changed. If you have not done so already, please see your physician as soon as possible. |
| Probable atrial fibrillation |  | Trigger condition: EPC5=2  Display: This is an irregular heart rhythm. It may feel like palpitations or “racing heart beats”.  At the time of your ARIC visit we indicated that you should see a medical professional if not already known to determine whether treatment should be started or changed. If you have not done so already, please see your physician for evaluation. |

< If comparison comments between Visit 7 and Visit 11 echocardiogram results are available, print the following message:>

Comparison of this echocardiogram to your prior ARIC echocardiogram at Visit 7 was notable for the following:

[ECH60 (Notes from Echocardiogram Reading Center)]

**THANK YOU FOR YOUR PARTICIPATION IN ARIC.**