

# Englist.me



## Vocabulary Builder Reference from...

*Lei Li: The incredible cancer-detecting potential of photoacoustic imaging | TED Talk*

[https://www.ted.com/talks/lei\\_li\\_the\\_incredible\\_cancer\\_detecting\\_potential\\_of\\_photoacoustic\\_imaging](https://www.ted.com/talks/lei_li_the_incredible_cancer_detecting_potential_of_photoacoustic_imaging)

### Advanced Words Only

#### IMPORTANT

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## Session 1: Word List

### mammography

*n.* the process of using X-rays to examine the breast for the early detection of breast cancer

*synonym*: breast imaging, mammogram, breast X-ray

(1) diagnostic **mammography**, (2) digital **mammography**

Women should get regular **mammography** screenings as a preventative measure for breast cancer.

### photoacoustic

*adj.* of or relating to a process that involves the generation of sound waves through the absorption of light energy, particularly in specific medical or scientific imaging techniques

(1) **photoacoustic** microscopy, (2) **photoacoustic** tomography

The new **photoacoustic** device can detect tumors that may have been missed in traditional imaging methods.

### painless

*adj.* causing little or no physical discomfort; not causing pain or discomfort

*synonym*: pain-free, effortless, easy

(1) **painless** childbirth, (2) **painless** procedure

Thanks to the new dental anesthesia technique, filling is now **painless**.

## circulate

*v.* to move continuously or freely around a place or closed system

*synonym*: flow, disperse, rotate

(1) **circulate** a rumor, (2) **circulate** an agenda before the meeting

The fan **circulates** the air in the room quickly.

## surpass

*v.* to be or do better than someone or something; to excel or go beyond the limits or standards of something

*synonym*: excel, outdo, outperform

(1) **surpass** imagination, (2) **surpass** \$20 billion in sales

The athlete's record-breaking performance **surpassed** all expectations.

## grandparent

*n.* a parent of one's father or mother

(1) great- **grandparent**, (2) person of **grandparent** age

She was close to her paternal **grandparents** and often spent summers with them.

## devote

*v.* to commit or dedicate oneself or one's time, effort, or energy to a particular task or purpose

*synonym*: commit, dedicate, apply

(1) **devote** all of my energies, (2) **devote** my own life

He **devoted** himself to studying the history of ancient civilizations.

## biomedical

*adj.* relating to the application of the natural sciences, especially biology, and physiology, to clinical medicine and healthcare

*synonym*: medical, clinical, health-related

(1) **biomedical** assay, (2) cutting-edge **biomedical**

**Biomedical** engineering focuses on developing new medical technologies and innovations to improve patient health outcomes.

## carpaccio

*n.* a dish consisting of thinly sliced raw meat or fish usually served as an appetizer with a dressing or sauce

(1) beef **carpaccio**, (2) mushroom **carpaccio**

The restaurant is known for its delicious **carpaccio** dish made with raw beef.

## microsecond

*n.* one millionth (= 0.000,001) of a second

(1) at a **microsecond** rate, (2) 10 millimeters per **microsecond**

This process all happens within a **microsecond**.

## blur

*n.* a faint or indistinct image or sound; something that is not clear or distinct; (verb) to become unclear; to lose clear vision

*synonym*: smudge, smear, fuzz

(1) **blur** image, (2) motion **blur**

The camera's focus was off, and the image was a **blur** of colors and shapes.

## inject

*v.* to put a liquid such as a drug or other substance into a person's or an animal's body using a needle and syringe (= small tube)

*synonym*: shoot, infiltrate, insinuate

(1) **inject** under the skin, (2) **inject** a personal opinion into a debate

Let's try to **inject** a bit of enthusiasm into your performance.

## rev

*n.* a measure of the rate at which an engine or motor rotates, often expressed in revolutions per minute (RPM); (verb) to increase the number of rotations per minute

*synonym*: revolution, RPM, speed

(1) low- **rev** engine, (2) **rev** up the crowd

He stepped on the gas pedal, and the engine released a loud **rev**.

## pucker

*v.* to form small wrinkles or folds in a surface, typically on the skin; to draw together or contract into folds or wrinkles, especially forcibly; (noun) a fold, crease, or

gathering of fabric or skin, usually caused by drawing together or tightening of the material

*synonym* : wrinkle, crease, ruffle

(1) **pucker** my mouth, (2) **pucker** mark

The sour lemon made me **pucker** my lips.

## medicinal

*adj.* of or relating to the treatment or cure of disease

*synonym* : curative, therapeutic, healing

(1) **medicinal** chemistry, (2) traditional **medicinal**

The **medicinal** properties of this herb have been known to help with various ailments.

## coherence

*n.* the quality of being logical and consistent

*synonym* : consistency, harmony, unity

(1) **coherence** in a speech, (2) lack **coherence**

The story's **coherence** could have been better when the author included too many unrelated details.

## tomography

*n.* a diagnostic imaging technique used to produce detailed images of structures inside the body, typically by using X-rays, CT scans, or ultrasound

*synonym* : imaging, scanning, x-ray

(1) acoustic **tomography**, (2) **tomography** image

The **tomography** scan showed a clear image of the patient's internal organs.

## centimeter

*n.* a unit of measurement of length in the metric system, equivalent to one-hundredth of a meter

(1) **centimeter** measurement, (2) thirty **centimeters** tall

The room was only one **centimeter** wider than the piano, making it a tight fit.

## vivo

*adj.* alive or existing in a living organism or system; relating to or involving "live" organisms or systems, particularly in scientific research or experimentation

*synonym* : alive, living, animate

(1) **vivo** imaging, (2) in **vivo** research

The **vivo** colors of the flowers made the garden come alive.

## Session 2: Spelling

- |   |   |
|---|---|
| 1. beef ca_____io                           | <i>n.</i> a dish consisting of thinly sliced raw meat or fish usually served as an appetizer with a dressing or sauce                     |
| 2. pa_____ss childbirth                     | <i>adj.</i> causing little or no physical discomfort; not causing pain or discomfort  |
| 3. lack co_____ce                           | <i>n.</i> the quality of being logical and consistent   |
| 4. traditional me_____al                    | <i>adj.</i> of or relating to the treatment or cure of disease  |
| 5. in____t a personal opinion into a debate | <i>v.</i> to put a liquid such as a drug or other substance into a person's or an animal's body using a needle and syringe (= small tube) |
| 6. at a mic_____nd rate                     | <i>n.</i> one millionth (= 0.000,001) of a second   |
| 7. cutting-edge bio_____al                  | <i>adj.</i> relating to the application of the natural sciences, especially biology, and physiology, to clinical medicine and healthcare  |
| 8. mushroom ca_____io                       | <i>n.</i> a dish consisting of thinly sliced raw meat or fish usually served as an appetizer with a dressing or sauce                     |
| 9. su_____s imagination                     | <i>v.</i> to be or do better than someone or something; to excel or go beyond the limits or standards of something                        |
| 10. great-gra_____nt                        | <i>n.</i> a parent of one's father or mother  |

ANSWERS: 1. carpaccio, 2. painless, 3. coherence, 4. medicinal, 5. inject, 6. microsecond, 7. biomedical, 8. carpaccio, 9. surpass, 10. grandparent

11. in v\_\_o research *adj.* alive or existing in a living organism or system; relating to or involving "live" organisms or systems, particularly in scientific research or experimentation
12. tom\_\_\_\_\_hy image *n.* a diagnostic imaging technique used to produce detailed images of structures inside the body, typically by using X-rays, CT scans, or ultrasound
13. v\_\_o imaging *adj.* alive or existing in a living organism or system; relating to or involving "live" organisms or systems, particularly in scientific research or experimentation
14. diagnostic mam\_\_\_\_\_hy *n.* the process of using X-rays to examine the breast for the early detection of breast cancer
15. pho\_\_\_\_\_tic microscopy *adj.* of or relating to a process that involves the generation of sound waves through the absorption of light energy, particularly in specific medical or scientific imaging techniques
16. pu\_\_\_r my mouth *v.* to form small wrinkles or folds in a surface, typically on the skin; to draw together or contract into folds or wrinkles, especially forcibly; (noun) a fold, crease, or gathering of fabric or skin, usually caused by drawing together or tightening of the material
17. pho\_\_\_\_\_tic tomography *adj.* of or relating to a process that involves the generation of sound waves through the absorption of light energy, particularly in specific medical or scientific imaging techniques

ANSWERS: 11. vivo, 12. tomography, 13. vivo, 14. mammography, 15. photoacoustic, 16. pucker, 17. photoacoustic

18. bio\_\_\_\_\_al assay *adj.* relating to the application of the natural sciences, especially biology, and physiology, to clinical medicine and healthcare
19. thirty cen\_\_\_\_\_ers tall *n.* a unit of measurement of length in the metric system, equivalent to one-hundredth of a meter
20. su\_\_\_\_\_s \$20 billion in sales *v.* to be or do better than someone or something; to excel or go beyond the limits or standards of something
21. b\_\_r image *n.* a faint or indistinct image or sound; something that is not clear or distinct; *(verb)* to become unclear; to lose clear vision
22. de\_\_\_e my own life *v.* to commit or dedicate oneself or one's time, effort, or energy to a particular task or purpose
23. ci\_\_\_\_\_te an agenda before the meeting *v.* to move continuously or freely around a place or closed system
24. low-r\_v engine *n.* a measure of the rate at which an engine or motor rotates, often expressed in revolutions per minute (RPM); *(verb)* to increase the number of rotations per minute
25. r\_v up the crowd *n.* a measure of the rate at which an engine or motor rotates, often expressed in revolutions per minute (RPM); *(verb)* to increase the number of rotations per minute

ANSWERS: 18. biomedical, 19. centimeter, 20. surpass, 21. blur, 22. devote, 23. circulate, 24. rev, 25. rev



26. ci\_\_\_\_\_te a rumor *v.* to move continuously or freely around a place or closed system
27. cen\_\_\_\_\_er measurement *n.* a unit of measurement of length in the metric system, equivalent to one-hundredth of a meter
28. me\_\_\_\_\_al chemistry *adj.* of or relating to the treatment or cure of disease
29. 10 millimeters per mic\_\_\_\_\_nd *n.* one millionth (= 0.000,001) of a second
30. digital mam\_\_\_\_\_hy *n.* the process of using X-rays to examine the breast for the early detection of breast cancer
31. in\_\_\_\_t under the skin *v.* to put a liquid such as a drug or other substance into a person's or an animal's body using a needle and syringe (= small tube)
32. pu\_\_\_\_r mark *v.* to form small wrinkles or folds in a surface, typically on the skin; to draw together or contract into folds or wrinkles, especially forcibly; (noun) a fold, crease, or gathering of fabric or skin, usually caused by drawing together or tightening of the material
33. motion b\_\_\_\_r *n.* a faint or indistinct image or sound; something that is not clear or distinct; (verb) to become unclear; to lose clear vision
34. acoustic tom\_\_\_\_\_hy *n.* a diagnostic imaging technique used to produce detailed images of structures inside the body, typically by using X-rays, CT scans, or ultrasound

ANSWERS: 26. circulate, 27. centimeter, 28. medicinal, 29. microsecond, 30. mammography, 31. inject, 32. pucker, 33. blur, 34. tomography

35. de\_\_\_e all of my energies      *v.* to commit or dedicate oneself or one's time, effort, or energy to a particular task or purpose
36. pa\_\_\_\_\_ss procedure      *adj.* causing little or no physical discomfort; not causing pain or discomfort
37. person of gra\_\_\_\_\_nt age      *n.* a parent of one's father or mother
38. co\_\_\_\_\_ce in a speech      *n.* the quality of being logical and consistent

ANSWERS: 35. devote, 36. painless, 37. grandparent, 38. coherence

## Session 3: Fill in the Blanks

1. This process all happens within a \_\_\_\_\_.  
*n.* one millionth (= 0.000,001) of a second
2. The story's \_\_\_\_\_ could have been better when the author included too many unrelated details.  
*n.* the quality of being logical and consistent
3. The \_\_\_\_\_ properties of this herb have been known to help with various ailments.  
*adj.* of or relating to the treatment or cure of disease
4. The restaurant is known for its delicious \_\_\_\_\_ dish made with raw beef.  
*n.* a dish consisting of thinly sliced raw meat or fish usually served as an appetizer with a dressing or sauce
5. The new \_\_\_\_\_ device can detect tumors that may have been missed in traditional imaging methods.  
*adj.* of or relating to a process that involves the generation of sound waves through the absorption of light energy, particularly in specific medical or scientific imaging techniques
6. The \_\_\_\_\_ scan showed a clear image of the patient's internal organs.  
*n.* a diagnostic imaging technique used to produce detailed images of structures inside the body, typically by using X-rays, CT scans, or ultrasound
7. Thanks to the new dental anesthesia technique, filling is now \_\_\_\_\_.  
*adj.* causing little or no physical discomfort; not causing pain or discomfort

ANSWERS: 1. microsecond, 2. coherence, 3. medicinal, 4. carpaccio, 5. photoacoustic, 6. tomography, 7. painless

8. \_\_\_\_\_ engineering focuses on developing new medical technologies and innovations to improve patient health outcomes.  
*adj.* relating to the application of the natural sciences, especially biology, and physiology, to clinical medicine and healthcare
9. The athlete's record-breaking performance \_\_\_\_\_ all expectations.  
*v.* to be or do better than someone or something; to excel or go beyond the limits or standards of something
10. Let's try to \_\_\_\_\_ a bit of enthusiasm into your performance.  
*v.* to put a liquid such as a drug or other substance into a person's or an animal's body using a needle and syringe (= small tube)
11. The sour lemon made me \_\_\_\_\_ my lips.  
*v.* to form small wrinkles or folds in a surface, typically on the skin; to draw together or contract into folds or wrinkles, especially forcibly; (noun) a fold, crease, or gathering of fabric or skin, usually caused by drawing together or tightening of the material
12. He stepped on the gas pedal, and the engine released a loud \_\_\_\_\_.  
*n.* a measure of the rate at which an engine or motor rotates, often expressed in revolutions per minute (RPM); (verb) to increase the number of rotations per minute
13. He \_\_\_\_\_ himself to studying the history of ancient civilizations.  
*v.* to commit or dedicate oneself or one's time, effort, or energy to a particular task or purpose
14. Women should get regular \_\_\_\_\_ screenings as a preventative measure for breast cancer.  
*n.* the process of using X-rays to examine the breast for the early detection of breast cancer

ANSWERS: 8. Biomedical, 9. surpassed, 10. inject, 11. pucker, 12. rev, 13. devoted, 14. mammography

15. The room was only one \_\_\_\_\_ wider than the piano, making it a tight fit.  
*n.* a unit of measurement of length in the metric system, equivalent to one-hundredth of a meter
16. The fan \_\_\_\_\_ the air in the room quickly.  
*v.* to move continuously or freely around a place or closed system
17. She was close to her paternal \_\_\_\_\_ and often spent summers with them.  
*n.* a parent of one's father or mother
18. The \_\_\_\_ colors of the flowers made the garden come alive.  
*adj.* alive or existing in a living organism or system; relating to or involving "live" organisms or systems, particularly in scientific research or experimentation
19. The camera's focus was off, and the image was a \_\_\_\_ of colors and shapes.  
*n.* a faint or indistinct image or sound; something that is not clear or distinct; (verb) to become unclear; to lose clear vision

ANSWERS: 15. centimeter, 16. circulates, 17. grandparents, 18. vivo, 19. blur