```
entry:
     %row_ctr = alloca i32, align 4
     \%0 = bitcast i32* \%row_ctr to i8*
     call void @llvm.lifetime.start(i64 4, i8* %0) #3
     %global_state = getelementptr inbounds %struct.jpeg_compress_struct,
     ... %struct.jpeg_compress_struct* %cinfo, i64 0, i32 4
     %1 = load i32, i32* %global_state, align 4, !tbaa !3
     %cmp = icmp eq i32 %1, 101
     br i1 %cmp, label %if.end, label %if.then, !prof!11
                                                         F
                     T
    if.end:
     %next_scanline = getelementptr inbounds %struct.jpeg_compress_struct,
    ... %struct.jpeg_compress_struct* %cinfo, i64 0, i32 36
     %5 = load i32, i32* %next_scanline, align 8, !tbaa !18
     %image_height = getelementptr inbounds %struct.jpeg_compress_struct,
    ... %struct.jpeg_compress_struct* %cinfo, i64 0, i32 7
     %6 = load i32, i32* %image_height, align 4, !tbaa !19
     %cmp4 = icmp ult i32 %5, %6
     br i1 %cmp4, label %if.end9, label %if.then5, !prof!11
                                                          F
    if.end9:
     %progress = getelementptr inbounds %struct.jpeg_compress_struct,
     ... %struct.jpeg_compress_struct* %cinfo, i64 0, i32 2
     %10 = load %struct.jpeg_progress_mgr*, %struct.jpeg_progress_mgr**
     ... %progress, align 8, !tbaa !21
     %cmp10 = icmp eq %struct.jpeg_progress_mgr* %10, null
     br i1 %cmp10, label %if.end19, label %if.then11, !prof!11
                                                          F
if.end19:
%master = getelementptr inbounds %struct.jpeg_compress_struct,
... %struct.jpeg_compress_struct* %cinfo, i64 0, i32 51
%16 = load %struct.jpeg_comp_master*, %struct.jpeg_comp_master** %master,
... align 8, !tbaa !26
%call_pass_startup = getelementptr inbounds %struct.jpeg_comp_master,
... %struct.jpeg_comp_master* %16, i64 0, i32 3
%17 = load i32, i32* %call_pass_startup, align 8, !tbaa !27
%tobool = icmp eq i32 %17, 0
br i1 %tobool, label %if.end22, label %if.then20, !prof!11
                  T
                                                            F
if.end22:
 %19 = load i32, i32* %image_height, align 4, !tbaa !19
 %20 = load i32, i32* %next scanline, align 8, !tbaa !18
 %sub = sub i32 %19, %20
 %cmp25 = icmp ult i32 %sub, %num_lines
 %sub.num_lines = select i1 %cmp25, i32 %sub, i32 %num_lines
 store i32 0, i32* %row_ctr, align 4, !tbaa !16
 %main = getelementptr inbounds %struct.jpeg_compress_struct,
... %struct.jpeg_compress_struct* %cinfo, i64 0, i32 52
 %21 = load %struct.jpeg_c_main_controller*, %struct.jpeg_c_main_controller**
... %main, align 8, !tbaa !30
 %process_data = getelementptr inbounds %struct.jpeg_c_main_controller,
... %struct.jpeg_c_main_controller* %21, i64 0, i32 1
 %22 = load void (%struct.jpeg_compress_struct*, i8**, i32*, i32)*, void
... (%struct.jpeg_compress_struct*, i8**, i32*, i32)** %process_data, align 8,
...!tbaa!31
 call void %22(%struct.jpeg_compress_struct* nonnull %cinfo, i8** %scanlines,
```

```
call void @llvm.lifetime.end(i64 4, i8* %0) #3 ret i32 %23
```

CFG for 'jpeg_write_scanlines' function

... i32* nonnull %row_ctr, i32 %sub.num_lines) #3 %23 = load i32, i32* %row ctr, align 4, !tbaa !16

%add = add i32 %24, %23

%24 = load i32, i32* %next_scanline, align 8, !tbaa !18

store i32 %add, i32* %next scanline, align 8, !tbaa !18